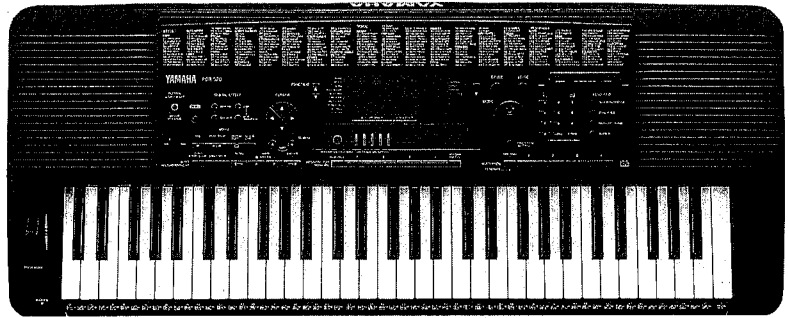


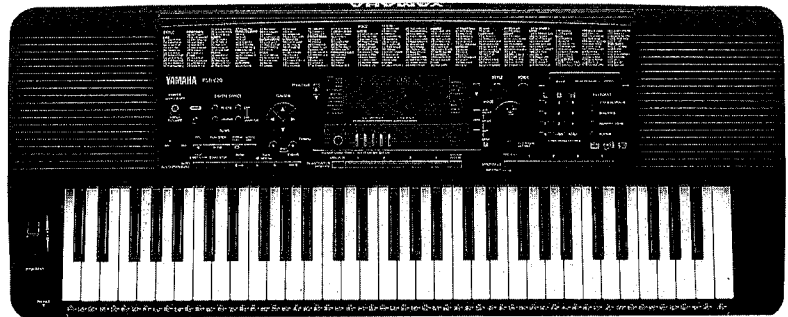
PORTATONE

PSR-520/PSR-620

SERVICE MANUAL



PSR-520



PSR-620

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PK 001550

YAMAHA CORP.

HAMAMATSU, JAPAN

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IMPORTANT NOTICE

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

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

IMPORTANT: 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 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 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-520

Keyboards:

61 Standard-size keys (C1-C6) with touch response.

Display:

Large multi-function LCD display

Setup:

Power: ON/OFF
Master Volume: MIN-MAX

Control & Ten Keys:

CURSOR Δ ∇ \triangleleft \triangleright , FUNCTION Δ ∇ , MODE ∇ , [0]-[9],
[+]/YES], [-]/NO], Data dial

Cartridge Slot

Demo:

Voice Demo: 17 songs
Style Demo: 8 songs

Mode:

NORMAL, SPLIT, SINGLE FINGERED

Voice:

AWM 141 voices+8 Keyboard Percussion Kits
Polyphony: 32
Split Voice: Volume, Octave, Reverb Level, Chorus
Level, Pan, Split Point
Dual Voice: Volume, Octave, Reverb Level, Chorus
Level, Pan
Touch Response: Touch Sensitivity
Harmony/Echo: 22 types
Sustain
Others: Keyboard Volume, Octave, Reverb Level,
Chorus Level, DSP Level, Pan

Auto Accompaniment:

100 Styles
Accomp Track: RHYTHM1/2, BASS, CHORD1/2, PAD,
PHRASE1/2
ACCOMP LARGE/SMALL
Accomp Track Settings: ON/OFF, Voice, Volume
Accompaniment Control: SYNC-START/STOP,
START/STOP, INTRO, MAIN A/B (AUTO FILL),
ENDING
Tempo
Fingering (FINGERED Mode): Normal, Bass, Full
Accompaniment Volume
Accompaniment Split Point

One Touch Setting:

400 One Touch Settings

Overall Controls:

Transpose, Metronome, Tuning

Pitch Bend Wheel:

Pitch Bend Range

Digital Effect:

Reverb: 12 types, Reverb Return Level
Chorus: 9 types, Chorus Return Level
DSP: 45 types, DSP Return Level
DSP Variation

Registration Memory:

32 Registration Bank, 1-4, Accom Freeze

Multi Pads:

21 Preset Multi Pad Kits+4 User Multi Pad Kits
4 Pads+Terminate

Song:

Song: 8 User Songs
Recording Tracks: ACCOMP, MELODY 1,2
Edit: Volume, Voice (MELODY TRACK), Song Clear
Minus One: 3 Modes
Minus One Right-hand Channel, Minus One Left-
hand Channel
Repeat

MIDI

Remote Channel, Keyboard Out, Song Out,
Accompaniment Out, External Clock, Local Control,
Initial Data Send, Bulk Data Send

Auxiliary Jacks:

DC IN 10-12V, PHONES, SUSTAIN, AUX OUT R and
L+R/L, MIDI IN/OUT

Amplifiers:

6.0 W + 6.0 W (when using PA-5B AC Power adapter)
4.5 W + 4.5 W (when using batteries)
Phones output: 100 Ω \pm 5 % Impedance

Speakers:

12 cm (4-3/4") \times 2

Power Consumption:

22 W (when using PA-5B AC power adapter)

Batteries:

Six SUM-1, "D" size, R-20 or equivalent batteries

Rated Voltage:

DC 10-12V

Dimensions (WxDxH):

972.8 \times 397.2 \times 146.4 mm (38-1/4" \times 15-5/8" \times 5-3/4")

Weight:

7.35 kg (16.2 lbs.) excluding batteries

Supplied Accessories:

- Music Cartridge
- Music Stand
- Owner's Manual

Optional Accessories:

- Headphones HPE-3, HPE-150
- AC Power Adapter PA-5, PA-5B, PA-5C
- Footswitch FC4, FC5
- Music Cartridge

Output Level:

-17 dBm \pm 2 dB (Select VOICE 30, press C3, D3, E3, F3
G3, A3 and B3 keys. when VOLUME: maximum, digital
level: default, touch response: off, 30 Ω load)

● PSR-620

Keyboards:

61 Standard-size keys (C1-C6) with touch response.

Display:

Large multi-function LCD display

Setup:

Power: ON/OFF
Master Volume: MIN-MAX

Control & Ten Keys:

CURSOR Δ ∇ \triangleleft \triangleright , FUNCTION Δ ∇ , MODE ∇ , [0]-[9],
[+]/YES], [-]/NO], Data dial

Cartridge Slot

Demo:

Voice Demo: 17 songs
Style Demo: 8 songs

Mode:

NORMAL, SPLIT, SINGLE FINGERED

Voice:

AWM 141 voices+8 Keyboard Percussion Kits
Polyphony: 32
Split Voice: Volume, Octave, Reverb Level, Chorus
Level, Pan, Split Point
Dual Voice: Volume, Octave, Reverb Level, Chorus
Level, Pan
Touch Response: Touch Sensitivity
Harmony/Echo: 22 types
Sustain
Others: Keyboard Volume, Octave, Reverb Level,
Chorus Level, DSP Level, Pan

Auto Accompaniment:

100 Styles
Accomp Track: RHYTHM1/2, BASS, CHORD1/2, PAD,
PHRASE1/2
ACCOMP LARGE/SMALL
Accomp Track Settings: ON/OFF, Voice, Volume
Accompaniment Control: SYNC-START/STOP,
START/STOP, INTRO, MAIN A/B (AUTO FILL),
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Tempo
Fingering (FINGERED Mode): Normal, Bass, Full
Accompaniment Volume
Accompaniment Split Point

One Touch Setting:

400 One Touch Settings

Overall Controls:

Transpose, Metronome, Tuning

Pitch Bend Wheel:

Pitch Bend Range

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Chorus: 9 types, Chorus Return Level
DSP: 45 types, DSP Return Level
DSP Variation

Registration Memory:

32 Registration Bank, 1-4, Accom Freeze

Multi Pads:

21 Preset Multi Pad Kits+1 User Multi Pad Kit
4 Pads+Terminate

Song:

Song: 1 User Song
Recording Tracks: ACCOMP, MELODY 1,2
Edit: Volume, Voice (MELODY TRACK), Song Clear
Minus One: 3 Modes
Minus One Right-hand Channel, Minus One Left-
hand Channel
Repeat

Disk

Disk Job: Load, Save, Delete, Format
Quick Play

MIDI

Remote Channel, Keyboard Out, Song Out,
Accompaniment Out, External Clock, Local Control,
Initial Data Send

Auxiliary Jacks:

DC IN 10-12V, PHONES, SUSTAIN, AUX OUT R and
L+R/L, MIDI IN/OUT

Amplifiers:

6.0 W + 6.0 W (when using PA-5B AC Power adapter)
4.5 W + 4.5 W (when using batteries)
Phones output: 100 Ω \pm 5 % Impedance

Speakers:

12 cm (4-3/4") \times 2

Power Consumption:

26 W (when using PA-5B AC power adapter)

Batteries:

Six SUM-1, "D" size, R-20 or equivalent batteries

Rated Voltage:

DC 10-12V

Dimensions (WxDxH):

972.8 \times 397.2 \times 146.4 mm (38-1/4" \times 15-5/8" \times 5-3/4")

Weight:

7.75 kg (17.1 lbs.) excluding batteries

Supplied Accessories:

- Music Cartridge
- Music Stand
- Owner's Manual

Optional Accessories:

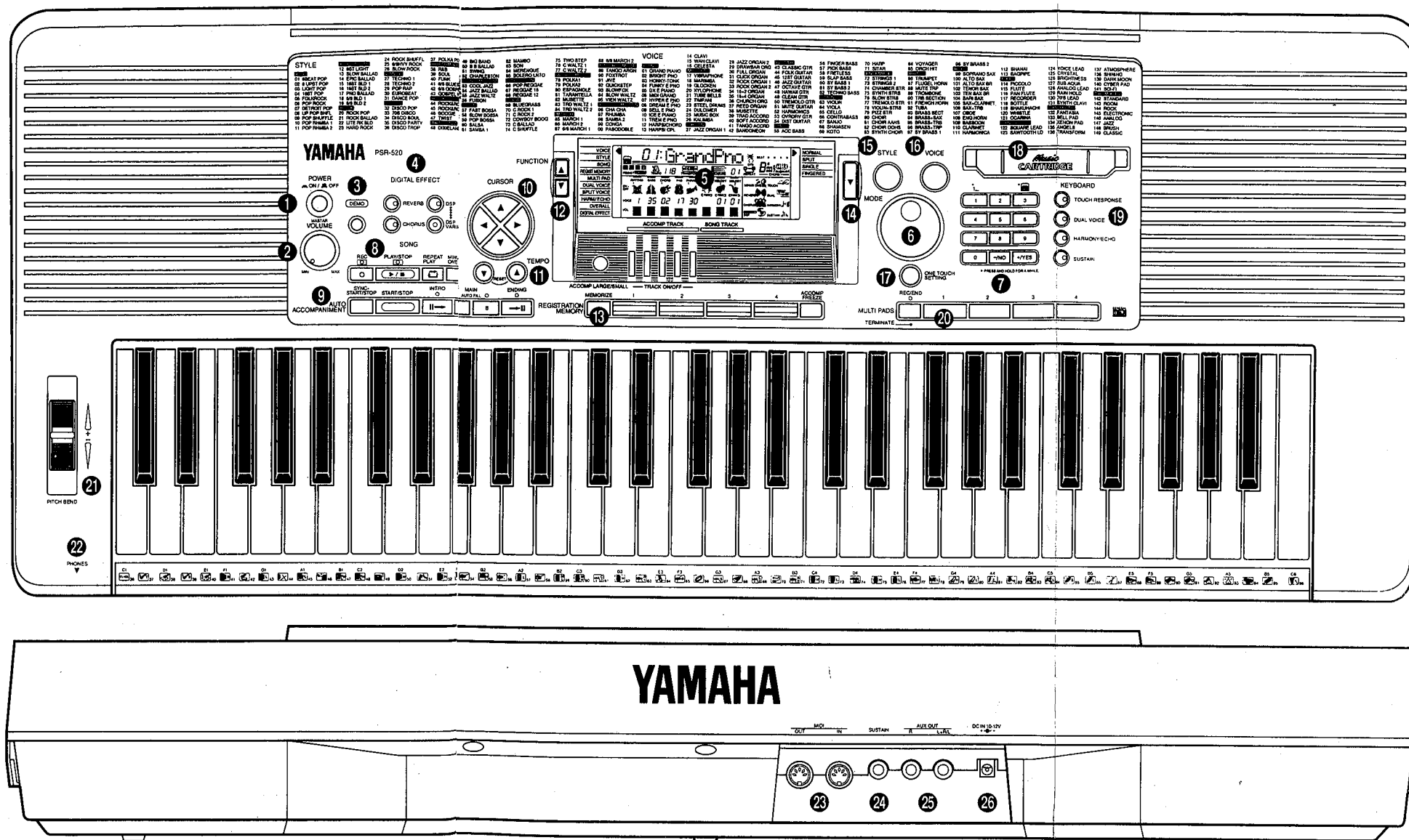
- Headphones HPE-3, HPE-150
- AC Power Adapter PA-5, PA-5B, PA-5C
- Footswitch FC4, FC5
- Music Cartridge

Output Level (at PHONES terminal):

-17 dBm \pm 2 dB (Select VOICE 30, press C3, D3, E3, F3
G3, A3 and B3 keys. when VOLUME: maximum, digital
level: default, touch response: off, 30 Ω load)

PANEL LAYOUT

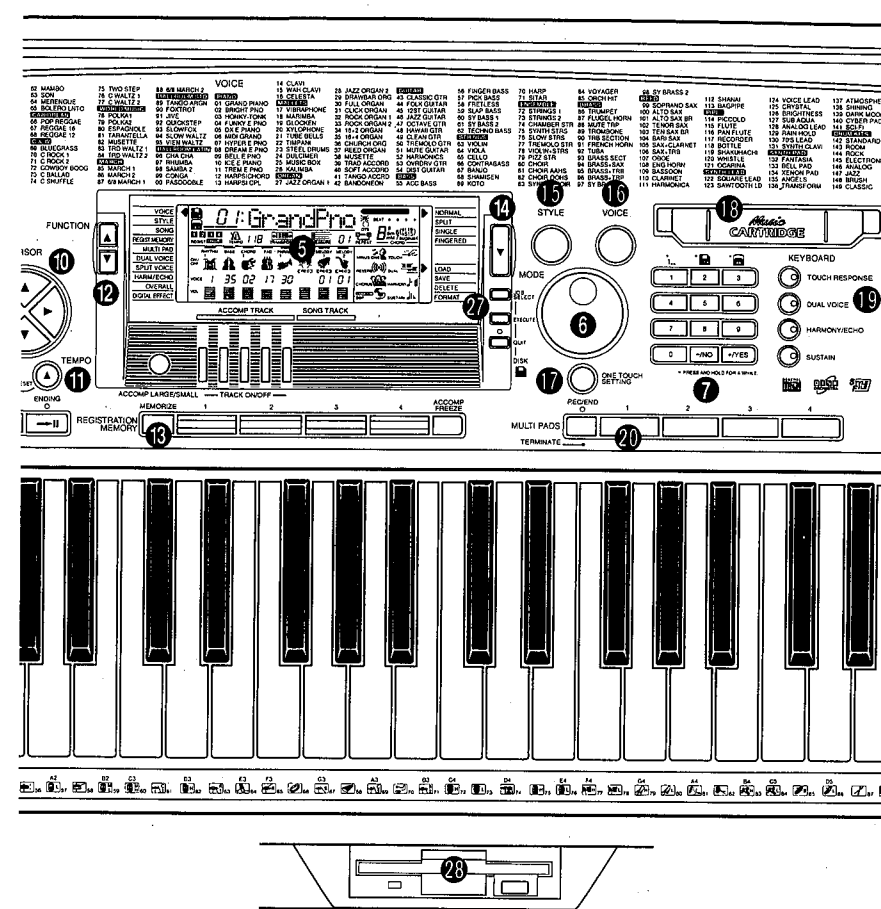
PSR-520



Top Panel Controls

- | | | | |
|---|---|--|--|
| <ol style="list-style-type: none"> 1. POWER Switch 2. MASTER VOLUME Control 3. DEMO Button 4. DIGITAL EFFECT Section <ul style="list-style-type: none"> • REVERB Button • CHORUS Button • DSP Button • DSP VARIATION Button 5. LCD Panel 6. Data Dial 7. Number [0]~[9] and [+ / YES], [- / NO] Buttons | <ol style="list-style-type: none"> 8. SONG Section <ul style="list-style-type: none"> • REC Button • PLAY/STOP Button • REPEAT PLAY Button • MINUS ONE Button 9. AUTO ACCOMPANIMENT Section <ul style="list-style-type: none"> • SYNC-START/STOP Button • START/STOP Button • INTRO Button • MAIN A/B Button • ENDING Button • ACCOMP LARGE/SMALL Button • TRACK ON/OFF Button | <ol style="list-style-type: none"> 10. CURSOR Δ, ∇, \triangleleft, \triangleright Buttons 11. TEMPO Δ, ∇ Buttons 12. FUNCTION Δ, ∇ Buttons 13. REGISTRATION MEMORY Section <ul style="list-style-type: none"> • MEMORIZE Button • 1~4 Buttons • ACCOMP FREEZE Button 14. MODE ∇ Button 15. STYLE Button 16. VOICE Button 17. ONETOUCH SETTING Button 18. Music CARTRIDGE Slot | <ol style="list-style-type: none"> 19. KEYBOARD Section <ul style="list-style-type: none"> • TOUCH RESPONSE Button • DUAL VOICE Button • HARMONY/ECHO Button • SUSTAIN Button 20. MULTI PADS Section <ul style="list-style-type: none"> • MULTI PADS 1~4 • REC/END, TERMINATE Button |
|---|---|--|--|

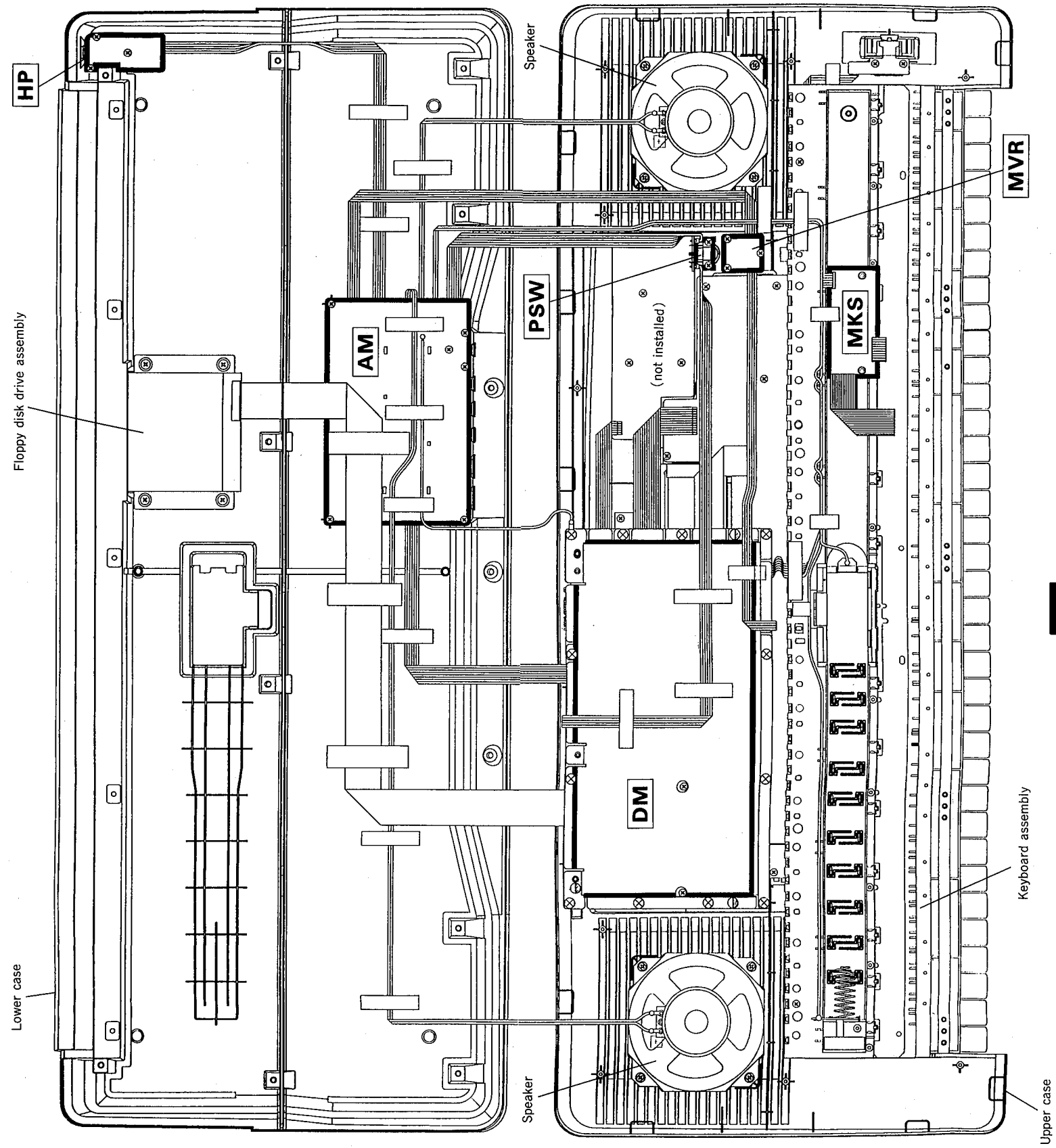
PSR-620



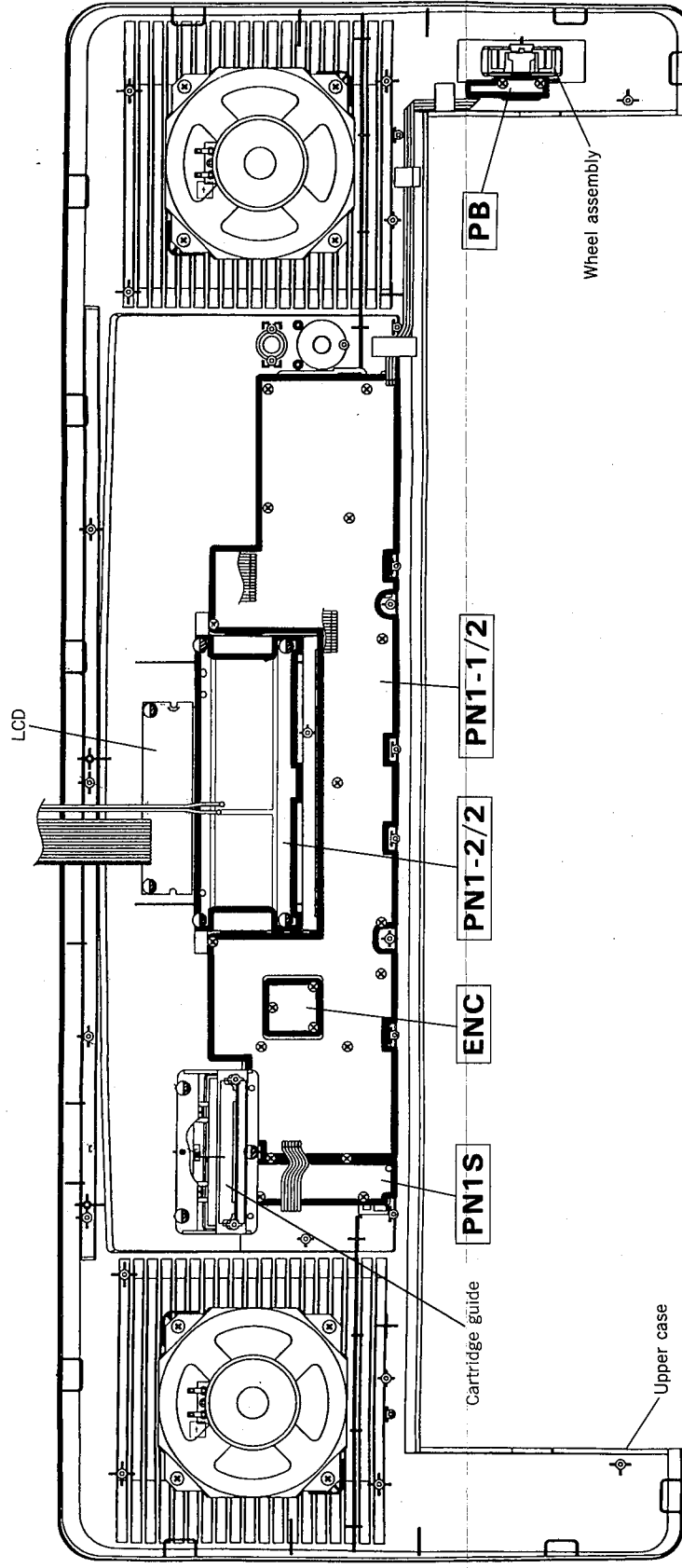
Rear Panel Controls

23. MIDI OUT and IN Connectors
24. SUSTAIN Jack
25. AUX OUT R, L+R/L Jacks
26. DC IN 10-12V Jack

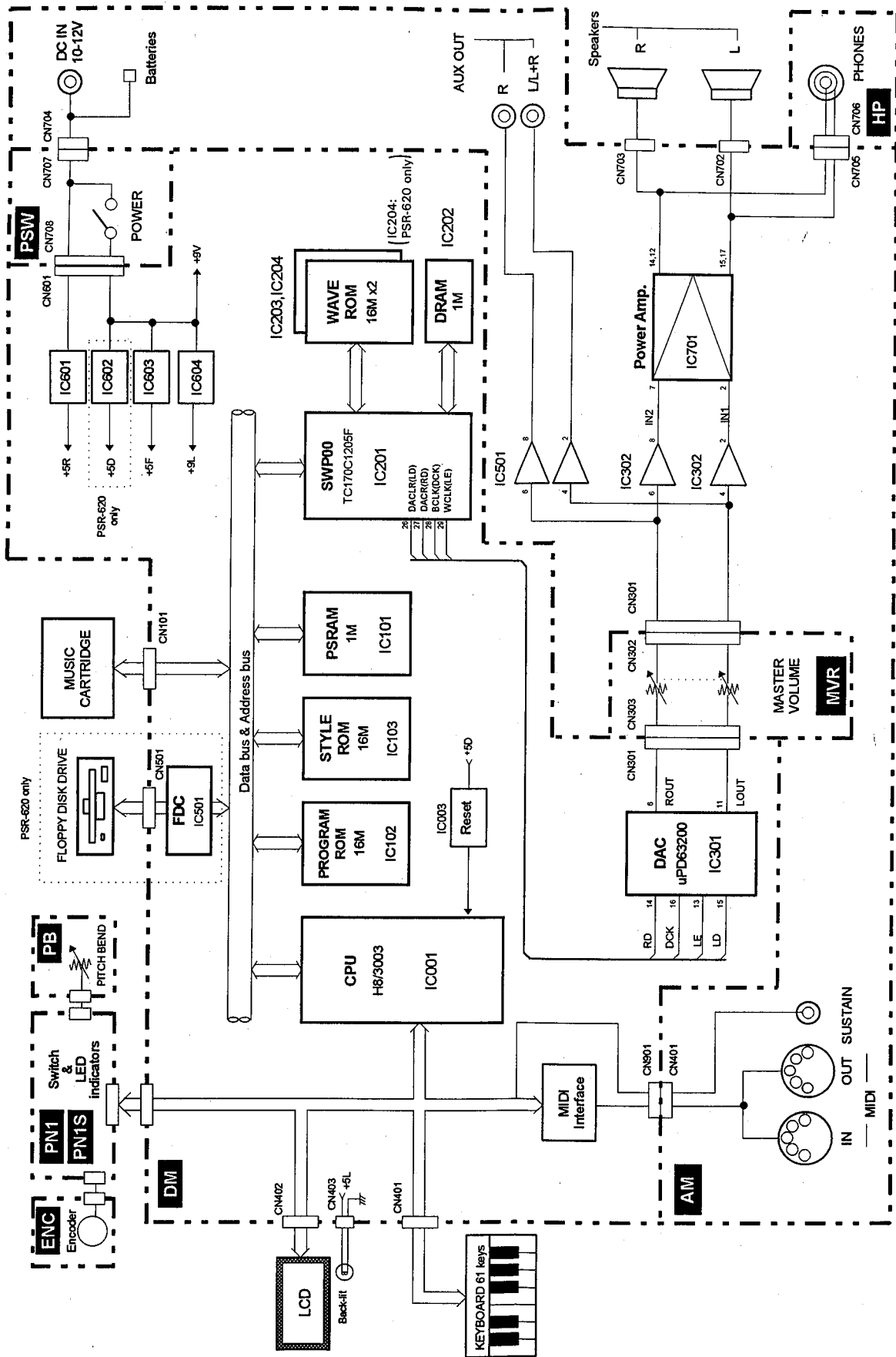
CIRCUIT BOARD LAYOUT



● DM circuit board and keyboard assembly have been removed.



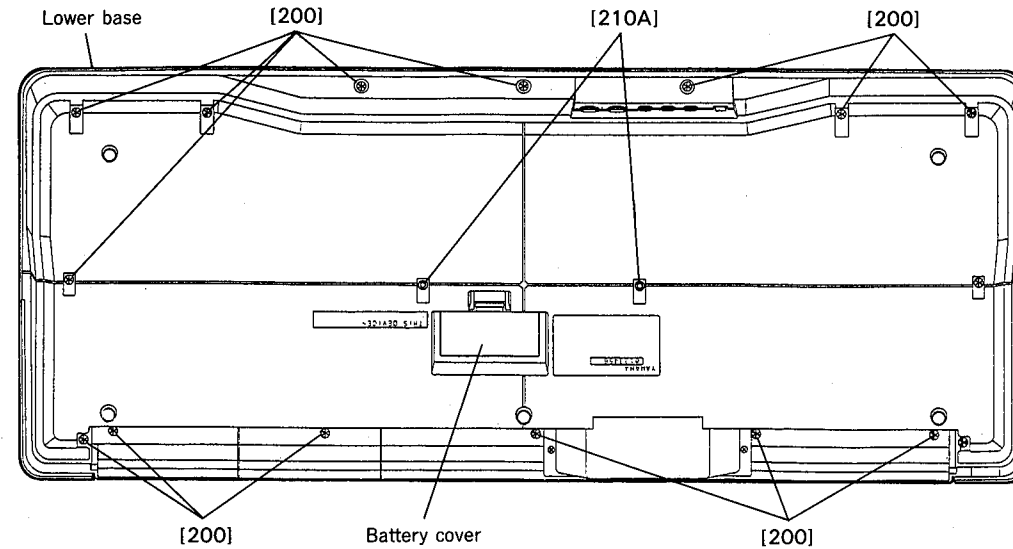
BLOCK DIAGRAM



DISASSEMBLY PROCEDURE

1 Lower Case Assembly

- 1-1 Remove the battery cover.
- 1-2 Remove the sixteen (16) screws marked as [200] and two (2) screws marked as [210A], then the lower case assembly can be removed. (Fig. 1)



[200]: Bind Head Tapping Screw-P 3.0X12 MFZN2Y (EP600300)
 [210A]: Bind Head Tapping Screw-P 3.0X25 MFZN2Y (VK228100)

(Fig. 1)

2 DM Circuit Board

- 2-1 Remove the lower case assembly. (See procedure 1)
- 2-2 Remove the three (3) screws marked as [180A] and twelve (12) screws marked as [19], then remove the shield box (L). (Fig. 2)
- 2-3 Remove the two (2) screws marked as [170], then the DM circuit board can be removed. (Fig. 2)

3 Keyboard Assembly

- 3-1 Remove the lower case assembly. (See procedure 1)
- 3-2 Remove the two (2) screws marked as [210B], then the keyboard assembly can be removed. (Fig. 2)

4 MKS Circuit Board

- 4-1 Remove the lower case assembly. (See procedure 1)
- 4-2 Remove the two (2) screws marked as [30], then the MK circuit board can be removed. (Fig. 2)
- ※ The MKS circuit board is a part of the keyboard assembly.

5 Speakers

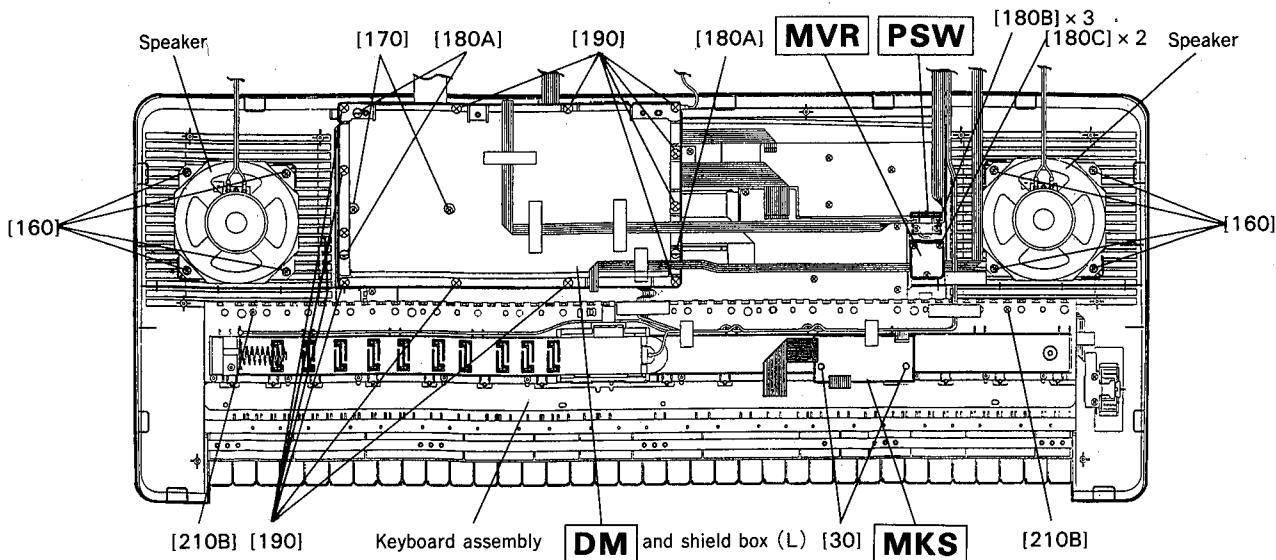
- 5-1 Remove the lower case assembly. (See procedure 1)
- 5-2 Remove the eight (8) screws marked as [160], then the right and left speakers can be removed. (Fig. 2)

6 MVR Circuit Board (MASTER VOLUME)

- 6-1 Remove the lower case assembly. (See procedure 1)
- 6-2 Pull off the MASTER VOLUME knob.
- 6-3 Remove the three (3) screws marked as [180B], then the MVR circuit board can be removed. (Fig. 2)

7 PSW Circuit Board (POWER Switch)

- 7-1 Remove the lower case assembly. (See procedure 1)
- 7-2 Remove the two (2) screws marked as [180C], then the PSW circuit board can be removed with the POWER switch knob. (Fig. 2)
- 7-3 Pull off the POWER switch knob from the PSW circuit board.



- [30]: Bind Head Tapping Screw-P 3.0X8 MFZN2BL (EP630220)
- [160]: Bind Head Tapping Screw-P 4.0X8 MFZN2BL (VB931600)
- [170]: Bind Head Tapping Screw-P 3.0X16 MFZN2Y (EP600310)
- [180A]: Bind Head Tapping Screw-P 3.0X8 MFZN2Y (EP600280)

- [180B]: Bind Head Tapping Screw-P 3.0X8 MFZN2Y (EP600280)
- [180C]: Bind Head Tapping Screw-P 3.0X8 MFZN2Y (EP600280)
- [190]: Bind Head Tapping Screw-B 3.0X6 MFZN2Y (EP600130)
- [210B]: Bind Head Tapping Screw-P 3.0X25 MFZN2Y (VK228100)

(Fig. 2)

8 AM Circuit Board

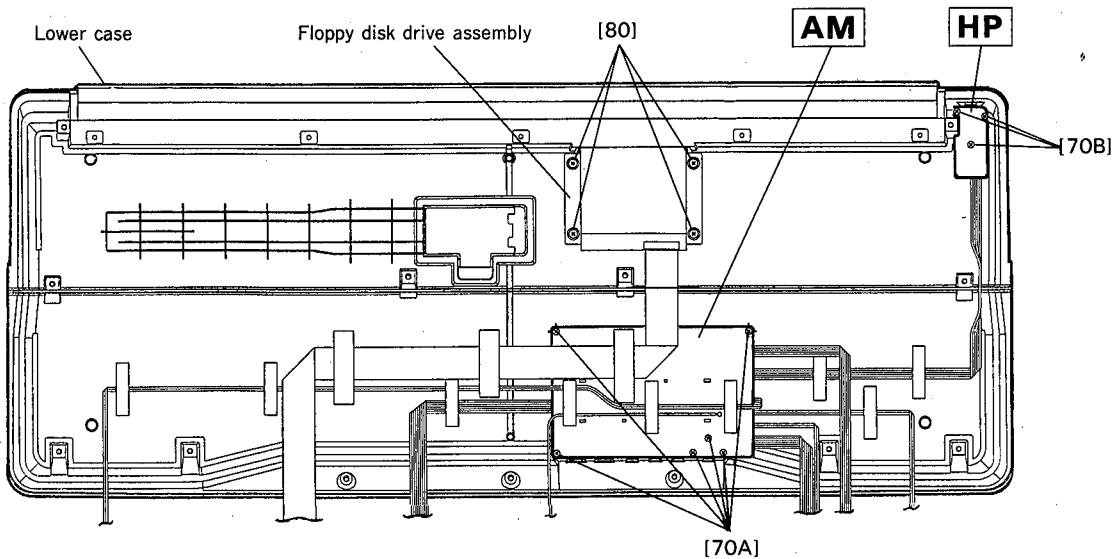
- 8-1 Remove the lower case assembly. (See procedure 1)
- 8-2 Remove the six (6) screws marked as [70A], then the AM circuit board can be removed. (Fig. 3)

9 HP Circuit Board

- 9-1 Remove the lower case assembly. (See procedure 1)
- 9-2 Remove the three (3) screws marked as [70B], then the HP circuit board can be removed. (Fig. 3)

10 Floppy Disk Drive Assembly (PSR-620 only)

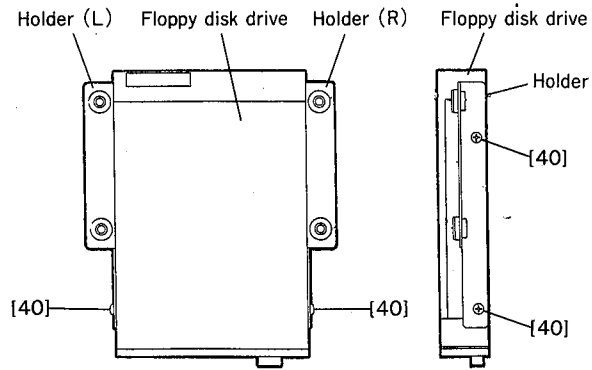
- 10-1 Remove the lower case assembly. (See procedure 1)
- 10-2 Remove the four (4) screws marked as [80], then the floppy disk drive assembly can be removed. (Fig. 3)



(Fig. 3)

- [70A]: Bind Head Tapping Screw-P 3.0X8 MFZN2Y (EP600280)
- [70B]: Bind Head Tapping Screw-P 3.0X8 MFZN2Y (EP600280)
- [80]: Bind Head Tapping Screw-P 4.0X16 MFZN2Y (VM839600)

10-3 Remove the four (4) screws marked as [40], then remove the right and left holders from the floppy disk drive. (Fig. 4)



(Fig. 4)

[40]: Pan Head Screw 3.0X5 ZMC2Y (EA030056)

11 PN1-2/2 Circuit Board & LCD

- 11-1 Remove the lower case assembly. (See procedure 1)
- 11-2 Remove the DM circuit board. (See procedure 2)
- 11-3 Remove the four (4) screws marked as [150A], then the PN1-2/2 circuit board can be removed. (Fig. 5)
- 11-4 Remove the reflection tape and back-lit board.
- 11-5 Remove the two (2) screws marked as [150B], then remove the LCD. (Fig. 5)

NOTE) You should care the direction of the back-lit board when replacing it on the LCD.

12 PN1-1/2 Circuit Board

- 12-1 Remove the lower case assembly. (See procedure 1)
- 12-2 Remove the DM circuit board. (See procedure 2)
- 12-3 Remove the keyboard assembly. (See procedure 3)
- 12-4 Remove the three (3) screws marked as [150C], then remove the cartridge guide. (Fig. 5)
- 12-5 Remove the eleven (11) screws marked as [150D] and two (2) screws marked as [150E], then the PN1-1/2 circuit board can be removed. (Fig. 5)

13 PN1S Circuit Board

- 13-1 Remove the lower case assembly. (See procedure 1)
- 13-2 Remove the DM circuit board. (See procedure 2)
- 13-3 Remove the keyboard assembly. (See procedure 3)
- 13-4 Remove the three (3) screws marked as [150C], then remove the cartridge guide. (Fig. 5)
- 13-5 Remove the two (2) screws marked as [150E] and two (2) screws marked as [150F], then the PN1S circuit board can be removed. (Fig. 5)

14 ENC Circuit Board

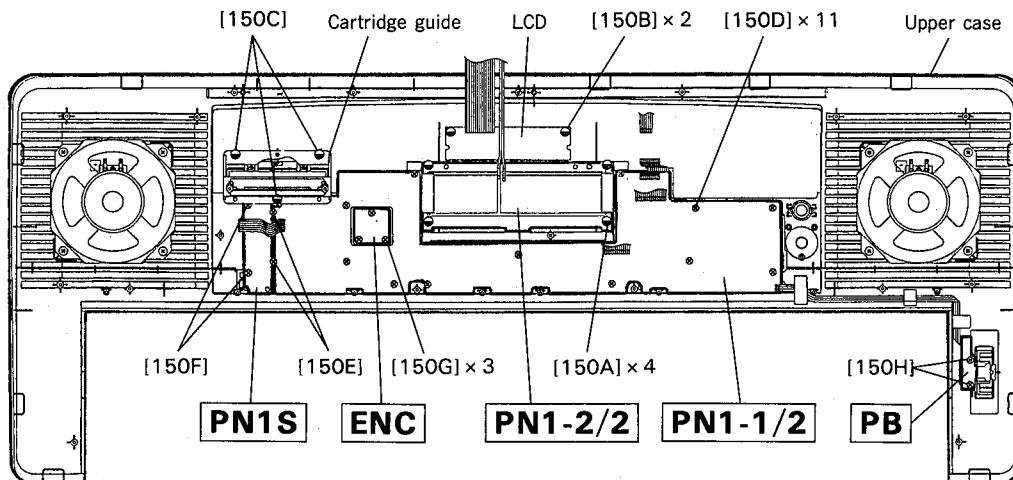
- 14-1 Remove the lower case assembly. (See procedure 1)
- 14-2 Remove the DM circuit board. (See procedure 2)
- 14-3 Pull off the encoder knob.
- 14-4 Remove the three (3) screws marked as [150G], then the ENC circuit board can be removed. (Fig. 5)

15 PB Circuit Board (PITCH BEND Wheel)

- 15-1 Remove the lower case assembly. (See procedure 1)
- 15-2 Remove the two (2) screws marked as [150H], then remove the PB circuit board with the wheel assembly. (Fig. 5)
- 15-3 Remove the wheel assembly from the PB circuit board.

16 PN2 Circuit Board (PSR-A3 only)

- 16-1 Remove the lower case assembly. (See procedure 1)
- 16-2 Remove the five (5) screws marked as [150I], then the PN2 circuit board can be removed. (Fig. 5)



[150A]-[150H]: Bind Head Tapping Screw-P 3.0X8 MFZN2Y (EP600280)

(Fig. 5)

LSI PIN DESCRIPTION

• HD6413003TF12 <H8/3003> (XP133A00) CPU

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION	
1	VCC			57	A11	I/O	Address bus	
2	PB0	I/O	Port B	58	A12	I/O		
3	PB1	I/O						
4	PB2	I/O						
5	PB3	I/O						
6	PB4	I/O						
7	PB5	I/O						
8	PB6//DERQ0	I/O						
9	PB7//DREQ1	I/O						
10	VSS				66	P60//WAIT	I	Wait (connected to GEW8 C/S)
11	PC0	I	not used	67	P61//BREQ		not used	
12	PC1	I						
13	PC2//TEND2							
14	PC3//DREQ2			68	P62//BACK			
15	PC4			69	φ			
16	PC5			70	/STBY	I	Stand-by mode signal	
17	PC6			71	/RES	I	Reset	
18	PC7			72	NMI	I	Non-maskable interrupt request	
19	/RES0			73	VSS		Ground	
20	P90/TXD0	O	not used	74	EXTAL		Clock (12 MHz)	
21	P91/TXD1		MIDI OUT	75	XTAL			
22	P92/RXD0	I	not used	76	VCC		Power supply (+5D)	
23	P93/RXD1		MIDI IN	77	/AS		not used	
24	P94//IRQ4		not used	78	/RD	O	Read strobe	
25	P95//IRQ5							
26	VSS			79	/HWR	O	Write strobe	
27	P40/D0	O	Ground	80	/LWR		not used	
28	P41/D1	O	Test pin 1	81	MD0	I	Mode select	
29	P42/D2		Test pin 2	82	MD1	I		
30	P43/D3			83	MD2	I		
31	P44/D4		not used	84	AVCC		Power supply (+5D)	
32	P45/D5							
33	P46/D6							
34	P47/D7							
35	VSS			Ground	85	VREF	I	Reference voltage (+5D)
36	D8	O			86	P70/AN0	I	(Piezo sensors)
37	D9	O		87	P71/AN0	I	(Lithium battery)	
38	D10	O	Data bus	88	P72/AN2	I	Port 7/Analog signal input	
39	D11	O						
40	D12	O						
41	D13	O						
42	D14	O						
43	D15	O						
44	VCC		Power supply (+5D)	89	P73/AN3	I		
45	A0	I/O	Address bus	90	P74/AN4	I		
46	A1	I/O						
47	A2	I/O						
48	A3	I/O						
49	A4	I/O						
50	A5	I/O						
51	A6	I/O						
52	A7	I/O						
53	VSS			Ground	91	P75/AN5	I	
54	A8	I/O	Address bus	92	P76/AN6	I	Power supply (+5D)	
55	A9	I/O						
56	A10	I/O						
			93	P77/AN7	I	Not used		
			94	AVSS		Power supply (+5D)		
			95	P54/A20		Not used		
			96	P55/A21		Ground		
			97	P56/A22		Not used		
			98	P57/A23		Ground		
			99	VSS		Not used		
			100	P80		GEW8 (IC 13) chip select		
			101	P81//CS3		SRAM (IC 8) chip select		
			102	P82//CS2	O	Main ROM (IC 9) chip select		
			103	P83//CS1	O	Port A		
			104	P84//CS0	O	Port A		
			105	PA0	I/O	Port A		
			106	PA1	I/O	Port A		
			107	PA2	I/O	Port A		
			108	PA3	I/O	Port A		
			109	PA4	I/O	Port A		
			110	PA5	I/O	Port A		
			111	PA6	I/O	Port A		
			112	PA7	I/O	Port A		

● HD63B05V0D73P (XJ450A00) 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					
6	A5	I/O					
7	A4	I/O					
8	A3	I/O					
9	A2	I/O					
10	A1	I/O		Port D	25	C3	I/O
11	A0	I/O	26		C2	I/O	
12	B0	I/O	27		C1	I/O	
13	B1	I/O	28		C0	I/O	
14	B2	I/O	Port B	29	D0	I/O	Port D
15	B3	I/O		30	D1	I/O	
16	B4	I/O		31	D2	I/O	
17	B5	I/O		32	D3/TX	O	
18	B6	I/O		33	D4/RX	I	(Serial data input)
19	B7	I/O		34	D5//CK	O	(Clock for serial operation)
20	VSS	I/O		35	D6//INT2	I	(Interrupt request 2)
			36	/STBY	I	(Standby mode signal)	
			37	TIMER	I	Timer	
			38	XTAL	O	Clock	
			39	EXTAL	I		
			40	VCC	I	Power supply	

● HD63266FP (XI939A00) FDC (Floppy Disk Controller)

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	8"/5"	I	Data transmission speed	33	/TRKO	I	Track 00 signal
2	XTALSET	I	Clock select	34	/INDEX	I	Index signal
3	/RESET	I	Rest	35	/RDATA	I	Read data input from FDD
4	E//RD	I	Enable/Read	36	XTAL2	I	Clock
5	RW//WR	I	Read/write/Write	37	EXTAL2	I	
6	/CS	I	Chip select	38	NC		Clock
7	/DACK	I	DMA acknowledge	39	XTAL1	I	
8	RS0	I	Register select	40	EXTAL1	I	Ground
9	RS1	I		41	VSS4	I	
10	VSS1	I	Ground	42	VSS5	I	
11	VSS2	I					
12	D0	I/O		Data bus	43	NC	
13	D1	I/O					
14	D2	I/O					
15	D3	I/O					
16	D4	I/O					
17	D5	I/O					
18	D6	I/O					
19	D7	I/O	Power supply	44	VCC2	I	
20	/DREQ	O			45	VCC3	I
21	/IRQ	O	DMA request	46	VCC4	I	
22	/DEND	I	Interrupt request	47	/WGATE	O	Write control
23	VSS3	I	Data end	48	/WDATA	O	Write data to FDD
24	1/2 EX1		Ground	49	VSS6	I	Ground
25	VCC1	I	Power supply	50	/STEP	O	Step signal to control head of FDD
26	NUM1	I			51	/HDIR	O
27	NUM3	I		52	/HLOAD	O	Head load
28	IFS	I	Host interface select	53	/HSEL	O	Head select
29	SFORM	I	Format data	54	VSS7	I	Ground
30	/INP	I	Index pulse	55	/DS0	O	
31	/READY	I	Ready from FDD	56	/DS1	O	Drive select
32	/WPRT	I	Write control signal	57	/DS2	O	
				58	/DS3	O	
				59	VSS8	I	Ground
				60	/MON0	O	Motor on
				61	/MON1	O	
				62	/MON2	O	
				63	/MON3	O	Ground
				64	VSS9	I	

• **TC170C120SF (XQ036A00) SWP00** (AWM Tone Generator) Standard Wave Processor

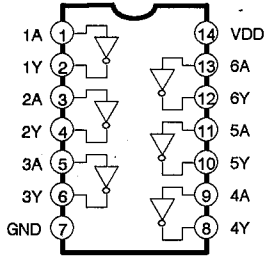
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION						
1	CA0	I	CPU address bus	51	MD1	I	Wave memory data bus						
2	CA1	I		52	MD2	I							
3	CA2	I		53	MD3	I							
4	CA3	I		54	MD4	I							
5	CA4	I		55	MD5	I							
6	CA5	I		56	MD6	I							
7	VDD	I		(Power supply)	57	MD7		I					
8	CA6	I	CPU data bus	58	VDD	I	Power supply						
9	CA7	I		59	MA0	O							
10	CA8	I		60	MA1	O							
11	CA9	I		61	MA2	O							
12	CA10	I		62	MA3	O							
13	CD0	I/O		63	MA4	O							
14	CD1	I/O		64	MA5	O							
15	VSS	I/O	(Ground)	65	MA6	O	(Ground)						
16	CD2	I/O	Power supply	66	VSS	I/O							
17	CD3	I/O		67	MA7	O							
18	CD4	I/O		68	MA8	O							
19	CD5	I/O		69	MA9	O							
20	CD6	I/O		70	MA10	O							
21	CD7	I/O		71	MA11	O							
22	VDD	I/O		Chip select	72	MA12	O	Wave memory address bus					
23	CSN	I	Data write strobe	73	VDD	I/O	(Power supply)						
24	WRN	I	Data read strobe	74	MA13	O							
25	RDN	I	DAC output (L or L/R)	75	MA14	O							
26	DACLR	O	DAC output (R)	76	MA15	O							
27	DACR	O	Bit clock	77	MA16	O							
28	BCLK	O	Word clock	78	MA17	O							
29	WCLK	O	Ground	79	MA18	O		(Ground)					
30	VSS	I/O	DRAM data bus	80	VSS	I/O							
31	RD0	I/O		81	MA19	O							
32	RD1	I/O		82	MA20	O							
33	RD2	I/O		83	MA21	O							
34	RD3	I/O		84	MA22	O							
35	RA0	O		85	MA23	O							
36	RA1	O		DRAM address bus	86	ICN	I	Initial clear					
37	RA2	O	87		VSS	I/O	Ground						
38	RA3	O	88		XIN	I			Crystal osc.				
39	RA4	O	89		XOUT	O				Crystal osc..			
40	VSS	I/O	(Ground)		90	VSS					I/O	Ground	
41	VDD	I/O	(Power supply)		91	VDD					I/O		Power supply
42	RA5	O	DRAM row address bus		92	MCLKO					O		
43	RA6	O		93	MCLKI	I		Master clock input					
44	RA7	O		94	SYI	I	Synch. signal						
45	RA8	O		95	SYCLK	O			1/2 master clock				
46	RASN	O		96	NSYSON	I				NSYS expansion enable			
47	CASN	O		97	TESTON	I					Test pin		
48	RWEN	O		98	ACIN	I						Test pin	
49	MD0	I	99	DCTEST	I	Test pin							
50	VSS	I/O	Wave memory data bus	100	VDD			I/O					Ground
			Power supply										

• **μPD63200GS (XM145A00) DAC** (Digital to Analog Converter)

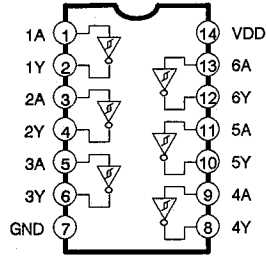
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	4/8F	I	4/8 Fs selection	9	R. REF	I	Channel R voltage reference
2	D. GND	I	Digital ground	10	L. REF	I	Channel L voltage reference
3	16 BIT	I	16 bit/18 bit selection	11	L. OUT	O	Channel L output
4	D. VDD	I	Digital power supply	12	A. GND	I	Analog ground
5	A. GND	I	Analog ground	13	WDCK	I	Word clock
6	R. OUT	O	Channel R output	14	RSI	I	Channel R series input
7	A. VDD	I	Analog power supply	15	SI/LSI	I	Series input/Channel L series input
8	A. VDD	I		16	CLK	I	Clock

IC BLOCK DIAGRAM

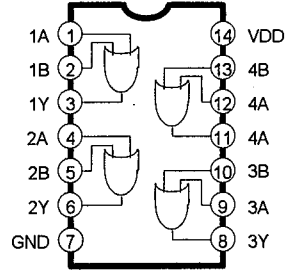
- **SN74HC04N** (IR000450)
Hex Inverter



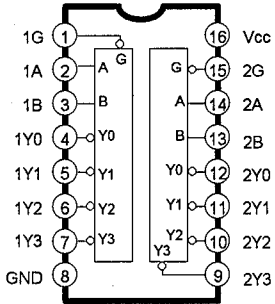
- **SN74HC14N** (IR001450)
Hex Inverter



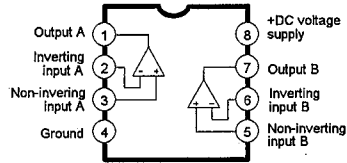
- **TC74AC32P** (XG658A00)
- **MC74AC32N** (XQ973A00)
Quad 2 Input OR



- **TC74AC139P** (XL123A00)
- **TC74HC139P** (IRO13900)
Dual 2 to 4 Demultiplexer



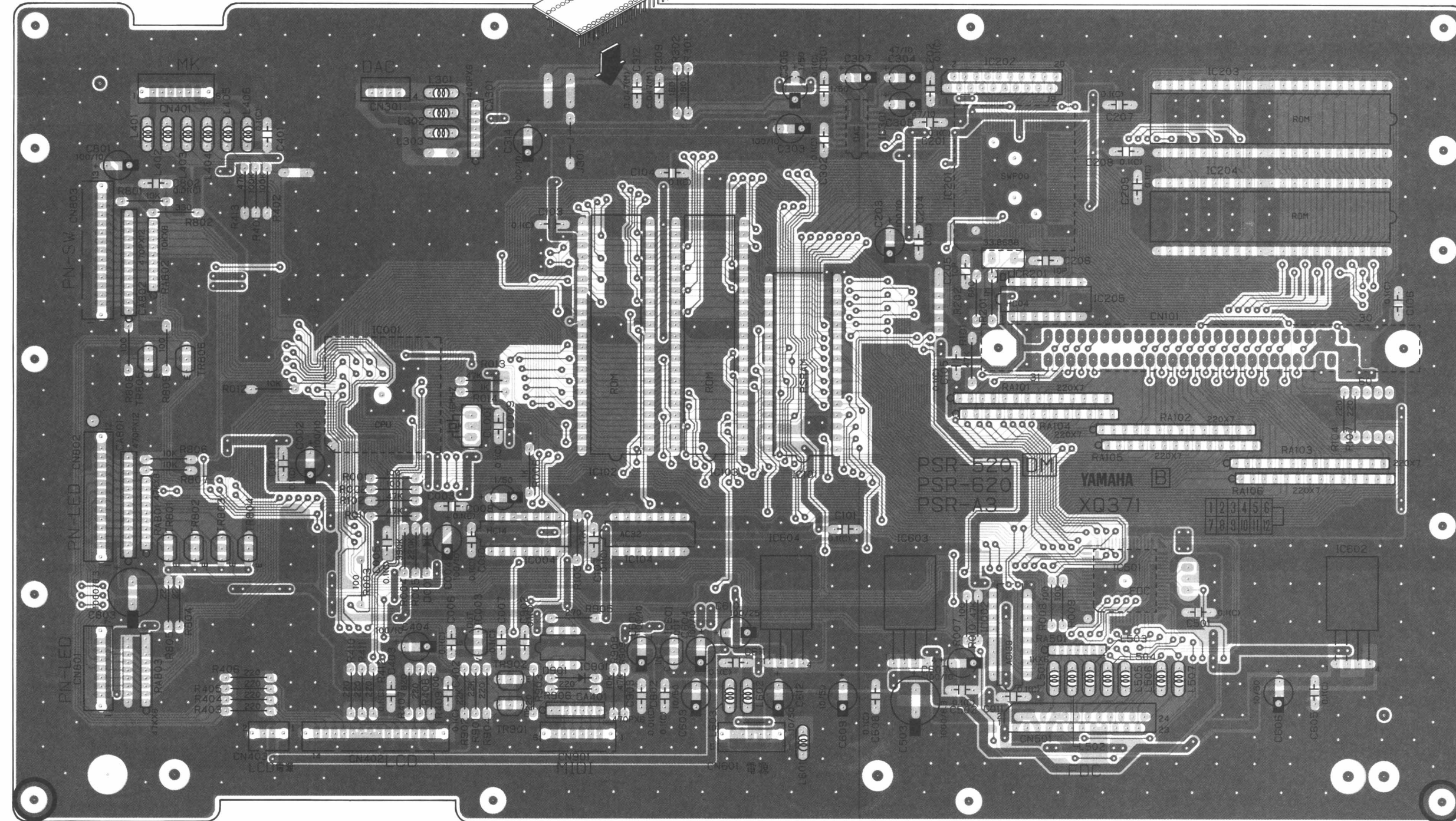
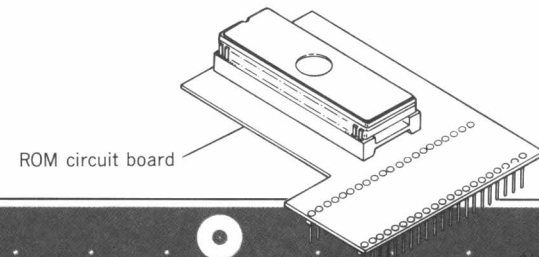
- **μ PC4570HA** (XB247A00)
Dual Operational Amplifier



CIRCUIT BOARDS

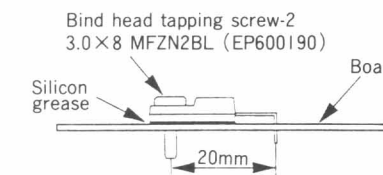
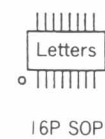
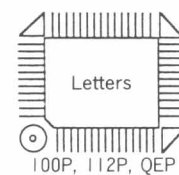
DM Circuit Board

There are some DM circuit boards on which the ROM circuit board have been installed as IC102. When you replace IC102, first, you must remove the ROM circuit board, and then install the PROGRAM ROM at the part printed as ROM, IC102.
 PSR-520: IC102 = XR312A00
 PSR-620: IC102 = XR313A00



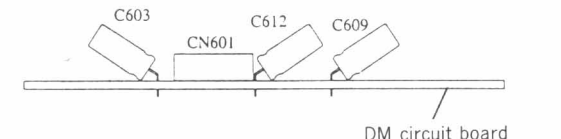
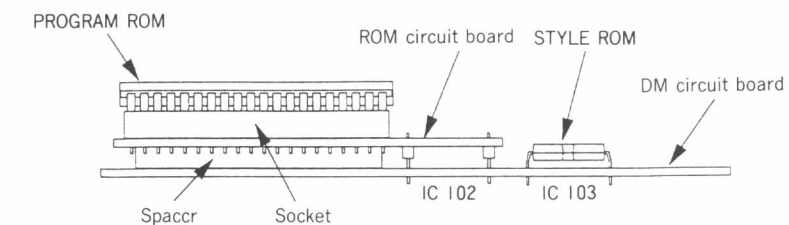
Components side

- IC101 or IC201 installation
- IC301 installation
- IC602, IC603 or IC604 installation



- Notes
- PSR-520**
 Circuit Board: DM (VT400600) XQ371B0 (U,C)
 DM (VT400700) XQ371B0 (J,X)
- PSR-620**
 Circuit Board: DM (VT400400) XQ371B0 (U,C)
 DM (VT400500) XQ371B0 (J,X)
- PSR-520 & PSR-620**
- IC
 - IC 001: HD6413003TF16 (XQ799A00) CPU
 - IC 002: TC74AC139P (XL123A00) DECODER or TC74HC139P (IR013900) DECODER
 - IC 003: IC-PS7993C-T (XQ693A00) RESET
 - IC 004: SN74HC14N (IR001450) INVERTER
 - IC 101: TC518129APL-80 (XL788A00) PSRAM 1M or KM658128ALP-8 (XQ974A00) PSRAM 1M
 - IC 102: (XR312A00) ROM 40M PROGRAM : PSR-520 (XR313A00) ROM 40M PROGRAM : PSR-620 (XR168A00) ROM STYLE
 - IC 103: TC74AC32P (XG658A00) OR or IC74AC32N (XQ973A00) OR
 - IC 104: TC170C120SF-003 (XQ036A00) SWP00
 - IC 201: MB81C4256A-70PS (XN978A00) DRAM 1M
 - IC 202: KM23C16000BKF63P (XQ706B00) WAVE ROM1 :PSR-520
 - IC 203: KM23C16000BKF63P (XQ707B00) WAVE ROM1 :PSR-620
 - IC 204: KM23C16000BKF63P (XQ708B00) WAVE ROM2 :PSR-620 only
 - IC 205: SN74HC04N (IR000450) INVERTER
 - IC 301: UPD63200GS (XM145A00) DAC
 - IC 501: HD63266F (X1939A00) FDC
 - IC 601: S-81250PG-T (XM993A00) REGULATOR +5V
 - IC 602: PQ05RA1 (XL450A00) REGULATOR +5V
 - IC 603: PQ05RA1 (XL450A00) REGULATOR +5V :PSR-620 only
 - IC 604: PQ09RA1 (XQ774A00) REGULATOR +9V
 - Transistor
 - TR 801-804: 2SA1524-AC (VT507900) or Digital transistor, DTB123YS TP (VT455400) 2SC2603 E,F (IC280320)
 - TR 902: DTB123YS TP (VT455400) or Transistor, 2SA1524-AC (VT507900)
 - TR 805,806: DTC123JS TP (VK165500)
 - TR 901: DTC114ES (VD678700)
 - Digital Transistor
 - TR 801-804: DTB123YS TP (VT455400) or Transistor, 2SA1524-AC (VT507900)
 - TR 805,806: DTC123JS TP (VK165500)
 - TR 901: DTC114ES (VD678700)
 - Diode
 - D 001,901: 1SS133,1SS176 (VB941200)
 - Photo Coupler
 - IC 901: PC-900V (VG181900)
 - Mylar Capacitor
 - C 309,312: 0.0470 50V J (UA654470)
 - Ceramic Capacitor
 - C 205,206: CH 10P 50V D (VA760600)
 - C 802,903: F 0.0100 50V Z (FG644100)
 - Ceramic Cap. Array
 - CA 301,401: 470Px6 50V M (VH285500)
 - CA 801,802: 470Px12 (VT487100)
 - Electrolytic Cap.
 - C 002,004,203, 303,314,404, 601,604,607: 100.00 10.0V (UJ828100)
 - C 008,306,307: 1.00 50.0V (UJ866100)
 - C 304,305: 47.00 10.0V (UJ827470)
 - C 503: 1000 6.3V (UJ819100) :PSR-620 only
 - C 603,606,609, 612: 10.00 16.0V (UJ867100)
 - C 610: 100.00 25.0V (UJ848100)
 - C 803: 1000 6.3V (UJ819100)
 - Semiconductive Cera. Cap.
 - C 001,003,005-007,009-011, 101-107,201, 202,204,207-209,301,302, 401-403,602, 605,608,611, 902: 0.1000 25V Z (VC694800)
 - C 501,502: 0.1000 25V Z (VC694800) :PSR-620 only
 - Carbon Resistor
 - R 001-003,007-009, 409,808,809: 100.0 1/4 J (HF755100)
 - R 104,107,403-406, 408,410-412,903, 904,906: 220.0 1/4 J (HF755220)
 - R 006,014: 1.0K 1/4 J (HF756100)
 - R 010,011,013,101-103,413,909: 47.0K 1/4 J (HF757470)
 - R 012,801,806,807, 908: 10.0K 1/4 J (HF757100)
 - R 201: 1.0M 1/4 J (HF759100)
 - R 202: 680.0 1/4 J (HF755680)
 - R 301,302: 180.0 1/4 J (HF755180)
 - R 401,402: 100.0K 1/4 J (HF758100)
 - R 407: 820.0 1/4 J (HF75820)
 - R 802: 0.55 (VA078900)
 - R 804,805: 22.0 1/4 J (HF754220)
 - R 901,902: 22.0K 1/4 J (HF757220)
 - R 905: 270.0 1/4 J (HF755270)
 - Metal Film Resistor
 - R 004: 390.0K 1/4 F (VH011000)
 - R 005: 220.0K 1/4 F (VH010400)
 - Resistor Array
 - RA 101-106: RGLD7Y221J (VT455500) 220x7
 - RA 501: RGLE6X102J (VN927500) 1Kx6
 - RA 801,803: RGLE8X473J (VF239600) 47Kx8
 - RA 802: RGLE8X103J (VF771900) 10Kx8
 - Coil
 - L 301-303,401-406,501-507, 601-603: FL5R200QNT (VB835000) or SBT-0260TF (VF968800)
 - Quartz Crystal Unit
 - CR 201: 33.8688M AT-49 (VT487600)
 - Ceramic Resonator
 - CL 001: 16M EFOEC1605T4 (VT487200) or 16.0M CST16.0 (VT630600)
 - Connector
 - CN 101: PSB4D30-2 (VT40210) to Music cartridge
 - Base Post Connector
 - CN 301: PH -4P TE (VB390000) to MVR-CN303
 - Wire Trap
 - CN 401: 52147-6P TE (VF728300) to Keyboard
 - CN 402: 52147-14P TE (VK025800) to LCD
 - CN 403: 52147-2P TE (VK024600) to back-lit of LCD
 - CN 601: 52147-5P TE (VK024900) to PSW-CN708
 - CN 802: 52147-12P TE (VK025600) to PN1(1/2)
 - CN 803: 52147-13P TE (VK025700) to PN1(1/2)
 - CN 901: 52147-6P TE (VF728300) to AM-CN401
 - FFC Connector
 - CN 501: 52045-24P TE (VP127700) to FDD : PSR-620 only
 - Jumper Wire
 - J 301: 0.55 (VA078900)
 - R 802: 0.55 (VA078900)

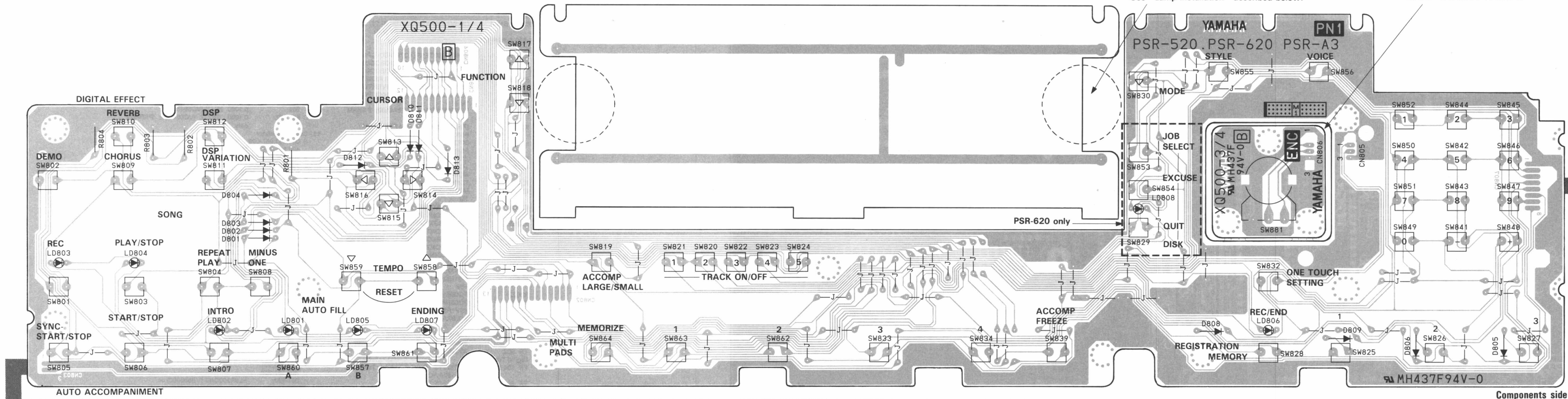
- ROM circuit board installation
- C603, C609 & C612 installing



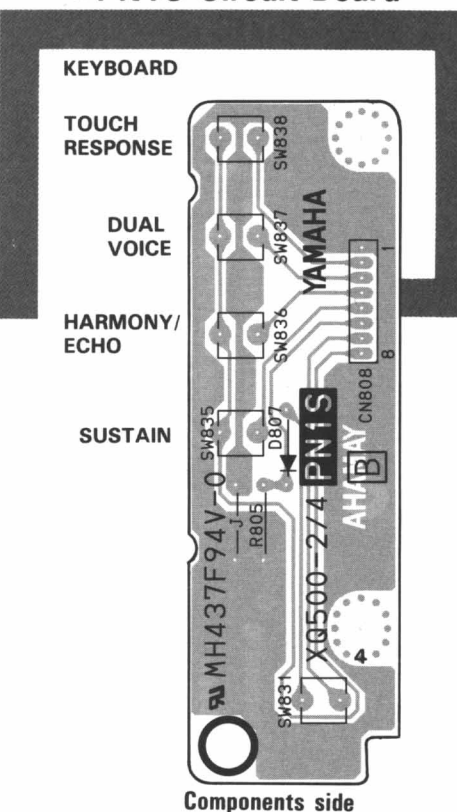
● PN1-1/2 Circuit Board

● PN1-2/2 Circuit Board

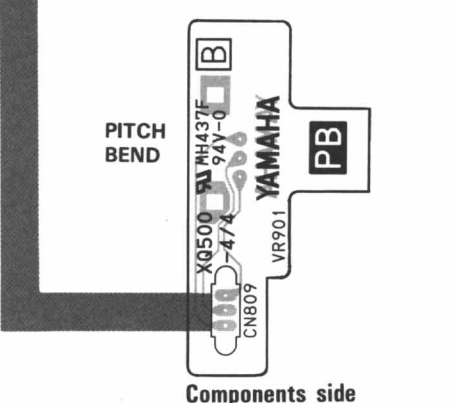
● ENC Circuit Board



● PN1S Circuit Board



● PB Circuit Board

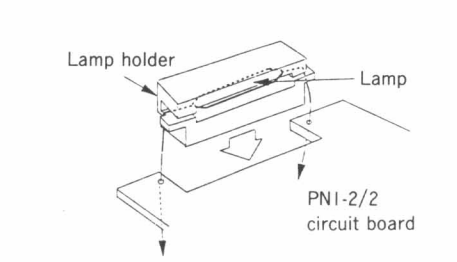


- Notes)
PSR-520
Circuit Board: PN1-1/2 (NX007400) XQ500B0
PN1-2/2 (NX007410) XQ500B0
PN1S (NX007420) XQ500B0
PB (NX007430) XQ500B0
ENC (NX007480) XQ500B0
- PSR-620
Circuit Board: PN1-1/2 (NX007440) XQ500B0
PN1-2/2 (NX007450) XQ500B0
PN1S (NX007460) XQ500B0
PB (NX007470) XQ500B0
ENC (NX007490) XQ500B0
- PSR-520 & PSR-620
- Diode
D 801-813: 1SS133, 1SS176 (VB941200)
 - LED
LED 801-807: SLZ-190B-10-T2 (VT387900)
LED 808: SLZ-190B-01 (VC341300) QUIT: PSR-620 only
 - Carbon Resistor
R 801-805: 10.0K 1/4 J (HF757100)
 - Rotary Variable Resistor
VR 901: B10K EVJ05DF25B14 (VT432100)
PITCH BEND
 - Light Touch Switch
SW 829, 853, 854: EVQ 22C 05B (VT513600) QUIT, JOB SELECT, EXCUSE : PSR-620 only
: EVQ 22C 05B (VT513600)
 - Others
Encoder
SW 881: EVQ WP5 F15 24B (VQ371800)
 - Lamp
0.1A HRT-6101A (VT488100) attached to PN1-2/2 (for LCD back-lit)
 - Lamp Holder
(VT370200) attached to PN1-2/2

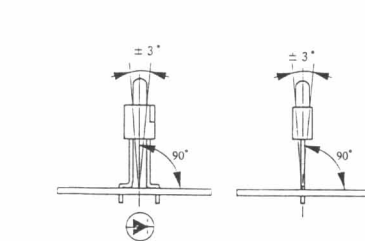
- Cable Holder
CN 809: 51048-3P TE (V1878100)
- Connector Assembly
W1: PN1-PB (VT43910) PN1(1/2) to PB-CN809
W2: PN1-ENC (VT43920) PN1(1/2)-CN805 to ENC-CN806
W3: PN1-PN1S (VT75500) PN1(1/2) to PN1S-CN808
W4: DM-PN1B 13P (VT44550) PN1(1/2) to DM-CN802
W5: DM-PN1A 12P (VT44540) PN1(1/2) to DM-CN803

See "Lamp installation" described below.

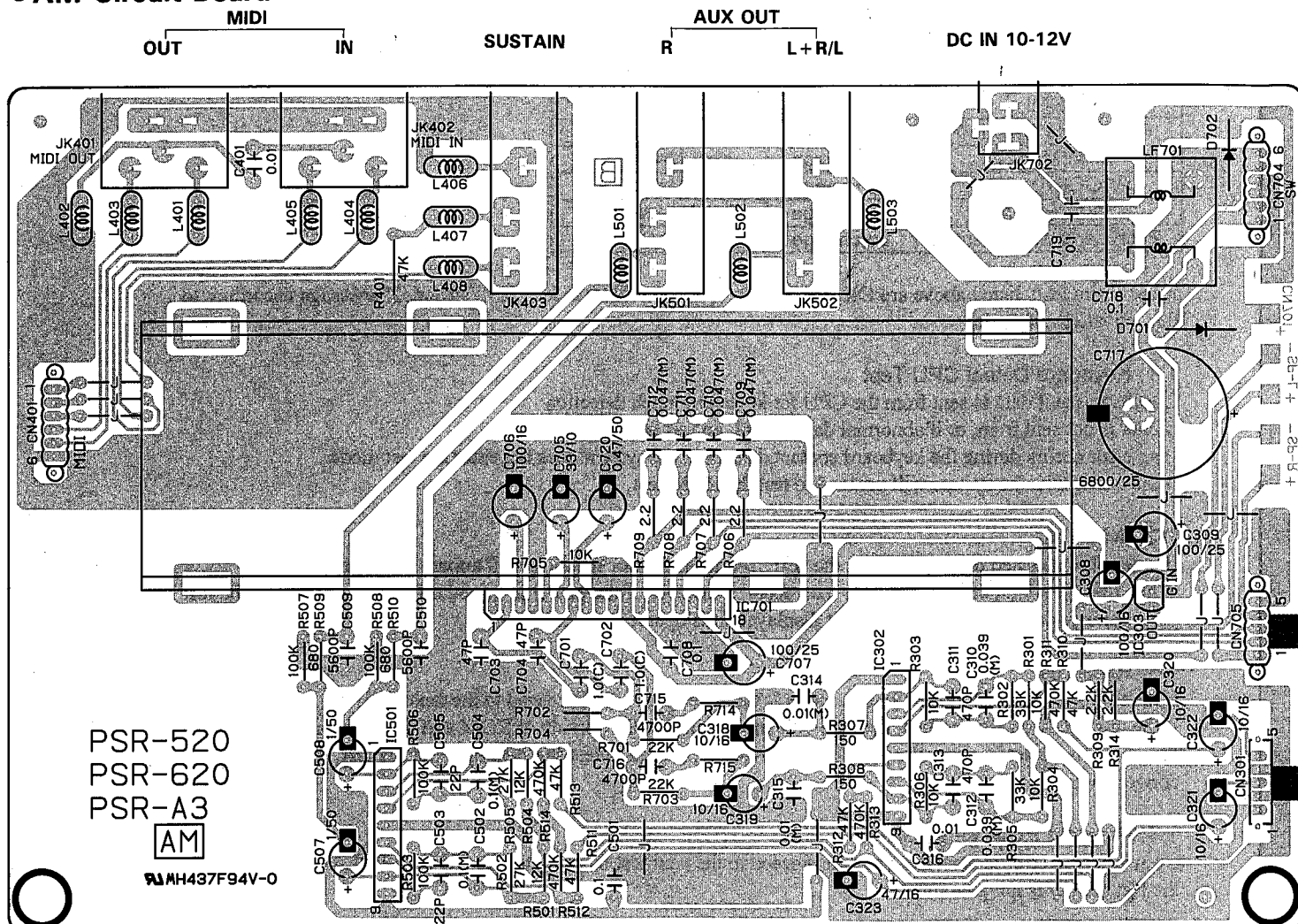
● Lamp installation (for LCD back-lit)



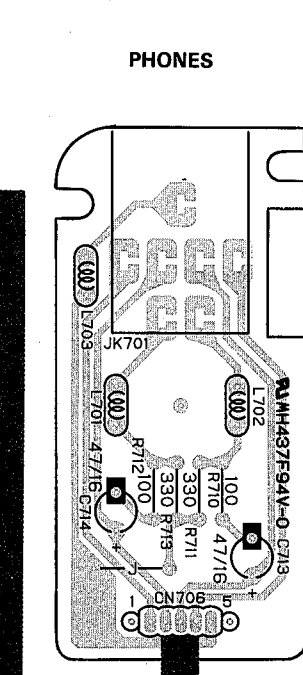
● LED installation



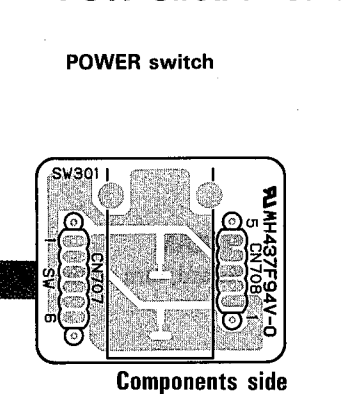
● AM Circuit Board



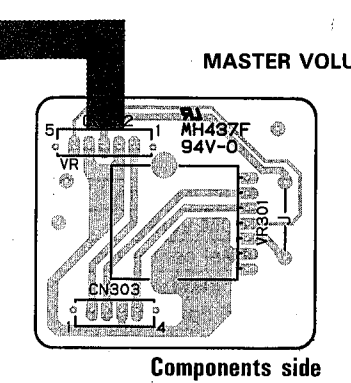
● HP Circuit Board



● PSW Circuit Board



● MVR Circuit Board



PSR-520
PSR-620
PSR-A3
AM
MH437F94V-0

Notes)
Circuit Board: AM (NX007360) (XQ372B0)
MVR (NX007370) (XQ372B0)
HP (NX007380) (XQ372B0)
PSW (NX007390) (XQ372B0)

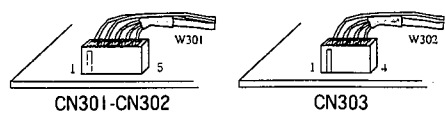
- IC
IC 302,501: UPC4570HA (XB247A00) OP AMP
IC 303: AN8009-(TA) (XR162A00) REGULATOR +9V
IC 701: LA4705NA 17W BTL (XQ619A00) POWER AMP
- Diode
D 701,702: 20E1-FC4 (VL723600)
- Mylar Capacitor
C 310,312: 0.0390 50V J (UA654390)
C 314,315: 0.0100 50V J (UA654100)
C 502,504: 0.10 50V J (VR168300)
C 709-712: 0.0470 50V J (UA654470)
- Ceramic Capacitor
C 311,313: B 470P 50V K (FG612470)
C 401: F 0.0100 50V Z (FG644100)
C 503,505: SL 22P 50V J (FG651220)
C 509,510: B 5600P 50V K (FG613560)
C 703,704: SL 47P 50V J (FG651470)
C 715,716: B 4700P 50V K (FG613470)
- Monolithic Ceramic Cap.
C 701,702: 1.000 25V Z (VT757800)
- Electrolytic Cap.
C 308,706: 100.00 16.0V (UJ838100)
C 309: 100.00 25.0V (UJ848100)
C 318-322: 10.00 16.0V (UJ837100)
C 323,713,714: 47.00 16.0V (UJ837470)
C 507,508: 1.00 50.0V (UJ866100)
C 705: 33.00 10.0V (UJ827330)
C 706: 100.00 16.0V (UJ838100)
C 707: 100.00 25.0V (UJ848100)
C 717: 6800 25.0V (VT848900)
C 720: 0.47 50.0V (UJ865470)

- Semiconductive Cera. Cap.
C 316,501,708, 718,719: 0.1000 25V Z (VC694800)
- Carbon Resistor
R 301,303,304, 306,705: 10.0K 1/4 J (HF757100)
R 302,305: 33.0K 1/4 J (HF757330)
R 307,308: 150.0 1/4 J (HF755150)
R 309,314: 2.2K 1/4 J (HF756220)
R 310,312,401, 511,513: 47.0K 1/4 J (HF757470)
R 311,313,512, 514: 470.0K 1/4 J (HF758470)
R 501,504: 12.0K 1/4 J (HF757120)
R 502,505,701, 703: 27.0K 1/4 J (HF757270)
R 503,506-508: 100.0K 1/4 J (HF758100)
R 509,510: 680.0 1/4 J (HF755680)
R 702,704: 4.7K 1/4 J (HF756470)
R 706-709: 2.2 1/4 J (HF753220)
R 710,712: 100.0 1/4 J (HF755100)
R 711,713: 330.0 1/4 J (HF755330)
R 714,705: 1.8K 1/4 J (HF756180)
- Rotary Variable Resistor
VR 301: A10Kx2 (VQ320200) MASTER VOLUME
- Line Filter
LF 701: SU10VD-10020 (VH227500)

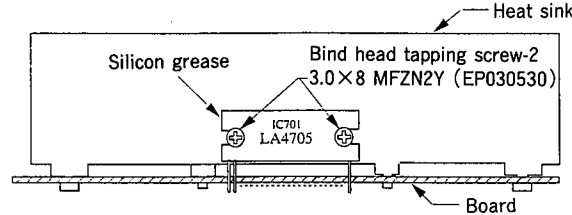
- Coil
L 401-408,501-503,701-703: FL5R200QNT 20u (VB835000)
- Push Switch
SW 301: SDDL1 (VQ670600) POWER switch
- Phone Jack
JK 403: YKB21-5012 BL (VB312600) SUSTAIN
JK 501: YKB21-5012 BL (VB312600) AUX OUT R
JK 502: YKB21-5014 BL (VC687500) AUX OUT L/L+R
JK 701: YKB21-5006 (LB101870) PHONES
- DIN Connector
JK 401: 5P YKF51-5050 (VJ107200) MIDI OUT
JK 402: 5P YKF51-5050 (VJ107200) MIDI IN
- DC IN Connector
JK 702: HEC2305 (VC664500) DC IN 10-12V
- Cable Holder
CN 401: 51048-6P TE (V1878400) AM-CN401 to DM-CN901
CN 704: 51048-6P TE (V1878400) AM-CN704 to PSW-CN707
CN 705: 51048-5P TE (V1878300) AM-CN705 to HP-CN706
CN 706: 51048-5P TE (V1878300) HP-CN706 to AM-CN705
CN 707: 51048-6P TE (V1878400) PSW-CN707 to AM-CN704
CN 708: 51048-5P TE (V1878300) PSW-CN708 to DM-CN601

- Connector Assembly
W 301: AM-VR 5P (VT91420) AM-CN301 to MVR-CN302
W 302: DM-VR 4P (VT91410) MVR-CN303 to DM-CN301
W 401: DM-AM 6P (VT44580) AM-CN401 to DM-CN901
W 701: AM-BAT 2P (VT65530) AM-CN701 to batteries
W 705: AM-HP 5P (VT96980) AM-CN705 to HP-CN706
W 706: DM-SW 5P (VT95690) PSW-CN708 to DM-CN601
- Jumper Wire
0.55 (VA078900)

● W301 & W302 installation



● IC701 installation



2NA-VI40280

TEST PROGRAM

A. TYPE OF TEST PROGRAM MODE

There are three test modes as follows:

- Mode 1: Hardware circuit test and each memory address line test
- Mode 2: Hardware circuit test and entire memory address test
- Mode 3: RAM backup function test

B. HOW TO ENTER THE TEST PROGRAM

While holding down white keys of the keyboard, turn on the POWER switch, then the test program is initiated. Pressing keys are as listed below.

Test mode	Pressing keys
Mode 1	C6 and B5
Mode 2	C6 and B5 and A5
Mode 3	C6 and B5 and C2

When the system enters the test on mode 2 or mode 3, then the data on RAM is overwritten.

C. TEST PROGRAM

Mode1/Mode2

Test order	Test Program
1	Keyboard detect CPU test
2	/NMI test
3	RAM test
4	PROGRAM ROM verify
5	WAVE ROM verify
6	Pitch bend wheel center test
7	Switch, LED/LCD, Version display, Music cartridge, Foot switch, Keyboard contact point, MIDI
	Pitch bend, DATA dial, DSP
	Floppy disk drive (PSR-620 only)

There are some differences in each test between the test mode 1 and test mode 2.

It takes a few minutes to complete the initial tests on the test mode 2. After the initial tests have been performed, "TstMode2" message will appear on the display so you could perform other tests.

Mode 3

Test order	Test Program
1	Keyboard detect CPU test
2	RAM test
3	Backup battery test ("***: Voltage" is displayed)

D. EXIT

Turn the POWER off to quit the test.

1. INITIAL TESTS

The following tests will be performed automatically when the test program is initiated.

- a Keyboard detect CPU test
- b /NMI test
- c RAM test
- d PROGRAM ROM verify
- e WAVE ROM verify
- f Pitch bend wheel center test

The test results of each test are indicated on the display.

Test	OK	NG
Keyboard detect CPU	no change	no change
/NMI	no change	"Err"/NmiHard"
RAM(Mode 1/Mode 2)	no change	"Err" M=1 RAM"
RAM(Mode 3)	no change	"Err" M=3 RAM"
PROGRAM ROM	no change	"Err" M=1 ROM"
WAVE ROM	no change	"Err" M=1 WROM"
Pitch bend wheel center	no change	"Err" PbCenter"

If the entire tests listed above are OK, the display will show "TstMode1" or "TstMode2" message according to the activated test mode.

1-1. Keyboard Detect CPU Test

Checks to see if data is sent from the CPU for keyboard touch detection

If data is not sent from, or if abnormal data is sent, an test is NG.

If an error occurs during the keyboard contact detection, the system does not enter the test mode.

If the test is OK, the system will proceed to test the RAM test.

1-2. /NMI Test

If an error is detected during this test, the "Err"/NmiHard" error message will appear on the display.

When the test is first started, the error may occur. However, if the power is turned off and on again, and the test program is restarted, but the error is not displayed, it is operating normally.

1-3. RAM Test

If the test is OK on test mode 1 or test mode 2, then the system will proceed to the next test.

If the test is OK on test mode 3, then the system will display the version of ROM and then exit the test.

If an error is detected, press the [REPEAT PLAY] to proceed to test the next one, but the test function may not correctly work.

1-4. Program ROM Verify Check

Even when an error is detected, you can proceed to the next test by pressing the [REPEAT PLAY] key, however the test quality is not guaranteed.

1-5. Wave ROM Verify Check

If an error is detected, pressing [REPEAT PLAY] will proceed to the next test.

1-6. Pitch Bend Wheel Center Test

If the pitch bend value at the beginning of the test is not center, then "Err" PbCenter" will appear on the display to indicate an error occurs.

2. ROM VERSION DISPLAY MODE

In order to verify the ROM versions, press the key shown in the table below.

Key	ROM	Display
MODE	Program ROM	Pro Vr**. ***
STYLE#	Style ROM	StL Vr**. ***
VOICE#	Wave ROM	Vro Vr**. ***
ONE TOUCH SETTING	Voice parameter ROM	PAR Vr**. ***

3. PANEL SWITCH AND LED TEST

Press the panel switches consecutively, if the switch is OK, a sine wave will sound. The level of the sine wave is 21 dB lower than the maximum level.

When a switch is pressed, the LED adjacent to the switch will light up.

If two or more switches are turned on simultaneously, the display will show "---Push Sw".

Pressing [YES] key will sound a sine wave assigned to the L channel, and if you press [NO], a sine wave assigned to the R will output.

If you press the [FREEZE] key of the [REGISTRATION] function, the A/D converted value of the power will appear on the display. (the range of the value is 0 - 152.)

4. PITCH BEND WHEEL TEST

Rotate the pitch wheel upwards and check that a sine wave of C4 will sound.

Rotate the pitch wheel downwards and check that a sine wave of C3 will sound.

When the wheel is operated, the indicated value on the display will change in the range of "000" - "040" - "07F".

5. FOOT SWITCH TEST

Connect a foot switch to the [SUSTAIN] jack on the rear panel and press it on and off. When the foot switch is connected, "Pedal In" message will appear on the display.

Check that a sine wave of D3 sounds when the foot switch is off, and a sine wave of D4 will sound when the foot switch is turned on.

When the foot switch is off, the indicated value on the display is in the range of "2FF" to "3FF".

When the foot switch is on, the indicated value is "000" to "0FF".

If you disconnect the foot switch, the sine wave will not be heard and the display will show the "PedalOut" message.

6. KEYBOARD CONTACT POINT TEST

Play a scale on the keyboard with a steady and even touch, the corresponding velocity value is indicated on the display and the sounded signal will change depending on the velocity.

If a sine wave or a click is generated, the test is OK.

Velocity value	Output signal
1 - 10	Click
11- 126	Sine wave
127	Click

7. DSP TEST

If the DSP-LSI is defective, the sound played from the keyboard may be distorted or muted.

8. MIDI TEST

Connect the MIDI IN to the MIDI OUT via a MIDI cable, sine waves of A3 and A4 will sound alternately with a cycle of 250 msec. for voicing and muting.

9. ROTARY ENCODER TEST

Rotate the rotary encoder to the right, the displayed value will increase, and turning it counter-clockwise will decrease the number.

10. LCD TEST

Check that all dots change to white (OFF) when the [TEMPO DOWN] key is pressed. When the [TEMPO UP] key is pressed, all dots will change to black (ON). If you press the [FUNCTION UP], then the LCD back-lit will light up, if the [FUNCTION DOWN] is pressed, the back-lit will turn off.

11. MUSIC CARTRIDGE TEST

Insert the supplied music cartridge to the slot, then the display will show the "Cart In" message and the test is initiated. If the test has been initiated on the test mode 2, when the test ends, the display will show a number regardless of the test results. If you remove the cartridge, the "Cart Out" message will appear on the display and the test will end, then you can activate the other test. If an error is detected during the test, press the [REPEAT PLAY] to perform to the other one.

12. FLOPPY DISK DRIVE TEST (PSR-620 only)

Insert a formatted floppy disk with the write protect on, then the display will show the "Disk In" message and the tests listed below will be performed. If an error is detected during each test, the corresponding error message will appear on the display and the test will stop.

Test	Error message
INDEX test	"Err""FddIndex"
UNFORMAT test	"Err""UnFormat"
WRITE PROTECT test	"Err""Protect"
WRITE test	"ErrFddWrite"
READ/VERIFY test	"Err"Fdd Read"

If an error is detected during the test, press the [REPEAT PLAY] to exit the floppy disk drive test and execute the other test. If these tests are OK, the display will show the "Tst Fdd" message. When you remove the disk, the display will show the "Disk Out" message, and you can perform the other test.

13. SOUND OUTPUT TEST

Insert an appropriate phone plug into the PHONES jack and check that the correct signal is output from each of the PHONES L and R. If necessary, verify the frequency, output waveform, output level using a frequency counter, oscilloscope and AC voltmeter (with a JIS-C type filter). Listed below are the specifications of the output during this test.(30 Ω load)

When MASTER VOLUME is set at maximum and the ACCOMP MAIN B switch is pressed:
 PHONES (R): -21.0 dBm ±2 dB PHONES (L): -21.0 dBm ±2 dB

When MASTER VOLUME is set at minimum and the ACCOMP MAIN B switch is pressed:
 PHONES (R): less than -86.0 dBm PHONES (L): less than -86.0 dBm

When MASTER VOLUME is set at maximum and the YES switch is pressed:
 PHONES (R): -18.0 dBm ±2 dB PHONES (L): less than -68.0 dBm

When MASTER VOLUME is set at maximum and the NO switch is pressed:
 PHONES (R): less than -68.0 dBm PHONES (L): -18.0 dBm ±2 dB

When MASTER VOLUME is set at minimum and no switch is pressed:
 PHONES (R): less than -78.0 dBm PHONES (L): less than -78.0 dBm

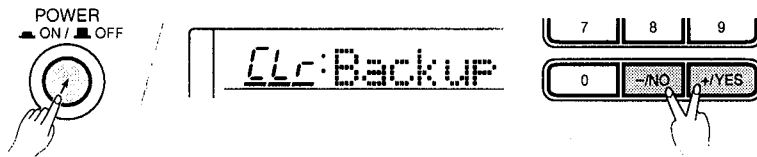
■ INITIALIZATION

Except for the data listed below, all PSR-520/PSR-620 panel settings are reset to their initial settings whenever the power is turned ON. The data listed below are backed up—i.e. retained in memory—as long as an AC adaptor is connected or a set of batteries is installed.

- Registration Memory data
- User Song data
- User Pad Kit data
- Remote Channel
- Keyboard Out
- Accomp Out
- External Clock

■ Data Initialization

All data can be initialized and restored to the factory preset condition by turning ON the power while holding the [-/NO] and [+ /YES] buttons. “CL: Backup” will appear briefly on the display.



★ CAUTION

- All registration, song and multi pad memory data, plus the other settings listed above, will be erased and/or changed when the data initialization procedure is carried out.
- If the PSR-520/PSR-620 has been “locked up” due to static electricity or other causes, turn the PSR-520/PSR-620 OFF and execute the initialize operation.

MIDI DATA FORMAT

<Table-1> Parameter Change

SYSTEM

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value(H)
00 00	00 4	0000 - 07FF	MASTER TUNE	-102.4 - +102.3[cent]	00 04 00 00
	01			1st bit3- -> @bit15-12	
	02			2nd bit3- -> @bit11-8	
	03			3rd bit3- -> @bit7-4	
	04	00 - 7F	MASTER VOLUME	0 - 127	7F
	06	28 - 58	TRANSPOSE	-24 - +24[semitone]	40
	7D	00 - 01	DRUM SETUP RESET	00: Drum setup 1 01: Drum setup 2	—
	7E	00	XG SYSTEM ON		—
	7F	00	ALL PARAMETER RESET		—

EFFECT

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value(H)
02 01	00 2	00-7F	REVERB TYPE MSB	Refer to Table-2	01(=HALL1)
		00-7F	REVERB TYPE LSB	Refer to Table-2	00
	02 1	00-7F	REVERB PARAMETER 1	Refer to Table-3	Depends on reverb type
	03 1	00-7F	REVERB PARAMETER 2	Refer to Table-3	Depends on reverb type
	04 1	00-7F	REVERB PARAMETER 3	Refer to Table-3	Depends on reverb type
	05 1	00-7F	REVERB PARAMETER 4	Refer to Table-3	Depends on reverb type
	06 1	00-7F	REVERB PARAMETER 5	Refer to Table-3	Depends on reverb type
	07 1	00-7F	REVERB PARAMETER 6	Refer to Table-3	Depends on reverb type
	08 1	00-7F	REVERB PARAMETER 7	Refer to Table-3	Depends on reverb type
	09 1	00-7F	REVERB PARAMETER 8	Refer to Table-3	Depends on reverb type
	0A 1	00-7F	REVERB PARAMETER 9	Refer to Table-3	Depends on reverb type
	0B 1	00-7F	REVERB PARAMETER 10	Refer to Table-3	Depends on reverb type
	0C 1	00-7F	REVERB RETURN	--dB...0dB...+6dB(0...64...127)	40
	0D 1	01-7F	REVERB PAN	L63...C...R63(1...64...127)	40
02 01	10 1	00-7F	REVERB PARAMETER 11	Refer to Table-3	Depends on reverb type
	11 1	00-7F	REVERB PARAMETER 12	Refer to Table-3	Depends on reverb type
	12 1	00-7F	REVERB PARAMETER 13	Refer to Table-3	Depends on reverb type
	13 1	00-7F	REVERB PARAMETER 14	Refer to Table-3	Depends on reverb type
	14 1	00-7F	REVERB PARAMETER 15	Refer to Table-3	Depends on reverb type
	15 1	00-7F	REVERB PARAMETER 16	Refer to Table-3	Depends on reverb type
02 01	20 2	00-7F	CHORUS TYPE MSB	Refer to Table-2	41(=CHORUS1)
		00-7F	CHORUS TYPE LSB	Refer to Table-2	00
	22 1	00-7F	CHORUS PARAMETER 1	Refer to Table-3	Depends on chorus type
	23 1	00-7F	CHORUS PARAMETER 2	Refer to Table-3	Depends on chorus type
	24 1	00-7F	CHORUS PARAMETER 3	Refer to Table-3	Depends on chorus type
	25 1	00-7F	CHORUS PARAMETER 4	Refer to Table-3	Depends on chorus type
	26 1	00-7F	CHORUS PARAMETER 5	Refer to Table-3	Depends on chorus type
	27 1	00-7F	CHORUS PARAMETER 6	Refer to Table-3	Depends on chorus type
	28 1	00-7F	CHORUS PARAMETER 7	Refer to Table-3	Depends on chorus type
	29 1	00-7F	CHORUS PARAMETER 8	Refer to Table-3	Depends on chorus type
	2A 1	00-7F	CHORUS PARAMETER 9	Refer to Table-3	Depends on chorus type
	2B 1	00-7F	CHORUS PARAMETER 10	Refer to Table-3	Depends on chorus type
	2C 1	00-7F	CHORUS RETURN	--dB...0dB...+6dB(0...64...127)	40
	2D 1	01-7F	CHORUS PAN	L63...C...R63(1...64...127)	40
	2E 1	00-7F	SEND CHORUS TO REVERB	--dB...0dB...+6dB(0...64...127)	00
02 01	30 1	00-7F	CHORUS PARAMETER 11	Refer to Table-3	Depends on chorus type
	31 1	00-7F	CHORUS PARAMETER 12	Refer to Table-3	Depends on chorus type
	32 1	00-7F	CHORUS PARAMETER 13	Refer to Table-3	Depends on chorus type
	33 1	00-7F	CHORUS PARAMETER 14	Refer to Table-3	Depends on chorus type
	34 1	00-7F	CHORUS PARAMETER 15	Refer to Table-3	Depends on chorus type
	35 1	00-7F	CHORUS PARAMETER 16	Refer to Table-3	Depends on chorus type
02 01	40 2	00-7F	VARIATION TYPE MSB	Refer to Table-2	05(=DELAY L,C,R)
		00-7F	VARIATION TYPE LSB	Refer to Table-2	00
	42 2	00-7F	VARIATION PARAMETER 1 MSB	Refer to Table-3	Depends on variation type
		00-7F	VARIATION PARAMETER 1 LSB	Refer to Table-3	Depends on variation type
	44 2	00-7F	VARIATION PARAMETER 2 MSB	Refer to Table-3	Depends on variation type
		00-7F	VARIATION PARAMETER 2 LSB	Refer to Table-3	Depends on variation type
	46 2	00-7F	VARIATION PARAMETER 3 MSB	Refer to Table-3	Depends on variation type
		00-7F	VARIATION PARAMETER 3 LSB	Refer to Table-3	Depends on variation type
	48 2	00-7F	VARIATION PARAMETER 4 MSB	Refer to Table-3	Depends on variation type
		00-7F	VARIATION PARAMETER 4 LSB	Refer to Table-3	Depends on variation type

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value(H)	
4A	2	00-7F	VARIATION PARAMETER 5 MSB	Refer to Table-3	Depends on variation type	
		00-7F	VARIATION PARAMETER 5 LSB	Refer to Table-3	Depends on variation type	
4C	2	00-7F	VARIATION PARAMETER 5 MSB	Refer to Table-3	Depends on variation type	
		00-7F	VARIATION PARAMETER 6 LSB	Refer to Table-3	Depends on variation type	
4E	2	00-7F	VARIATION PARAMETER 7 MSB	Refer to Table-3	Depends on variation type	
		00-7F	VARIATION PARAMETER 7 LSB	Refer to Table-3	Depends on variation type	
50	2	00-7F	VARIATION PARAMETER 8 MSB	Refer to Table-3	Depends on variation type	
		00-7F	VARIATION PARAMETER 8 LSB	Refer to Table-3	Depends on variation type	
52	2	00-7F	VARIATION PARAMETER 9 MSB	Refer to Table-3	Depends on variation type	
		00-7F	VARIATION PARAMETER 9 LSB	Refer to Table-3	Depends on variation type	
54	2	00-7F	VARIATION PARAMETER 10 MSB	Refer to Table-3	Depends on variation type	
		00-7F	VARIATION PARAMETER 10 LSB	Refer to Table-3	Depends on variation type	
56	1	00-7F	VARIATION RETURN	~>dB...0dB...+6dB(0...64...127)	40	
57	1	01-7F	VARIATION PAN	L63...C...R63(1...64...127)	40	
58	1	00-7F	SEND VARIATION TO REVERB	~>dB...0dB...+6dB(0...64...127)	00	
59	1	00-7F	SEND VARIATION TO CHORUS	~>dB...0dB...+6dB(0...64...127)	00	
5A	1	00-01	VARIATION CONNECTION	"0:INSERTION,1:SYSTEM"	00	
5B	1	00-01	VARIATION PART	00H~0FH: Ch1~16 7F: Off	7F	
02 01	70	1	00-7F	VARIATION PARAMETER 11	Refer to Table-3	Depends on variation type
	71	1	00-7F	VARIATION PARAMETER 12	Refer to Table-3	Depends on variation type
	72	1	00-7F	VARIATION PARAMETER 13	Refer to Table-3	Depends on variation type
	73	1	00-7F	VARIATION PARAMETER 14	Refer to Table-3	Depends on variation type
	74	1	00-7F	VARIATION PARAMETER 15	Refer to Table-3	Depends on variation type
	75	1	00-7F	VARIATION PARAMETER 16	Refer to Table-3	Depends on variation type

* VARIATION means PSR-520/PSR-620 Dsp effect.

MULTI PART

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value(H)
08 nn 07	1	00 - 05	PART MODE	00: NORMAL 01: Preset Drum Setup 02: Drum Setup 1 03: Drum Setup 2	00 (except 10Ch)/02 (10Ch)
nn 11	1	00 - 7F	DRY LEVEL	0 - 127	7F
nn 41	1	00 - 7F	SCALE TUNING C	-64 - +63[cent]	40
nn 42	1	00 - 7F	SCALE TUNING C#	-64 - +63[cent]	40
nn 43	1	00 - 7F	SCALE TUNING D	-64 - +63[cent]	40
nn 44	1	00 - 7F	SCALE TUNING D#	-64 - +63[cent]	40
nn 45	1	00 - 7F	SCALE TUNING E	-64 - +63[cent]	40
nn 46	1	00 - 7F	SCALE TUNING F	-64 - +63[cent]	40
nn 47	1	00 - 7F	SCALE TUNING F#	-64 - +63[cent]	40
nn 48	1	00 - 7F	SCALE TUNING G	-64 - +63[cent]	40
nn 49	1	00 - 7F	SCALE TUNING G#	-64 - +63[cent]	40
nn 4A	1	00 - 7F	SCALE TUNING A	-64 - +63[cent]	40
nn 4B	1	00 - 7F	SCALE TUNING A#	-64 - +63[cent]	40
nn 4C	1	00 - 7F	SCALE TUNING B	-64 - +63[cent]	40

* nn: MIDI Channel(00-0F)

DRUM SETUP

Address (H)	Size (H)	Data (H)	Parameter	Description	Default value(H)
3n rr 00	1	00 - 7F	PITCH COARSE	-64 - +63[semitone]	40
3n rr 01	1	00 - 7F	PITCH FINE	-64 - +63[cent]	40
3n rr 02	1	00 - 7F	LEVEL	0 - 127	Depends on note
3n rr 04	1	00 - 7F	PAN	1(Left)-64(Center)-127(Right)	Depends on note
3n rr 05	1	00 - 7F	REVERB SEND	0 - 127	Depends on note
3n rr 06	1	00 - 7F	CHORUS SEND	0 - 127	7F
3n rr 07	1	00 - 7F	VARIATION SEND	0 - 127	7F
3n rr 0B	1	00 - 7F	FILTER CUTOFF FREQUENCY	-64 - 63	40
3n rr 0C	1	00 - 7F	FILTER RESONANCE	-64 - 63	40
3n rr 0D	1	00 - 7F	EG ATTACK	-64 - 63	40
3n rr 0E	1	00 - 7F	EG DECAY1	-64 - 63	40

* n:Drum setup number (0H or 1H)
rr:note number(18H to 54H)

<Table-2> Effect map

The following types in the boxes can be controlled by the PSR-520/PSR-620 settings. The numbers in the brackets are PSR-520/PSR-620 panel effect numbers. The blank indicates the content is the same as that of 00H.

REVERB TYPE

MSB \ LSB	00H	01H	02H	08H	09H	0AH	0BH	0CH
00H	NO EFFECT							
01H	[1]HALL1	HALL5		[2]HALL2	[3]HALL3	[4]HALL4		
02H	ROOM5	ROOM6	ROOM7	[5]ROOM1	[6]ROOM2	[7]ROOM3	[8]ROOM4	
03H	STAGE3	STAGE4		[9]STAGE1	[10]STAGE2			
04H	PLATE3			[11]PLATE1	[12]PLATE2			
05H	NO EFFECT							
:	:							
7FH	NO EFFECT							

CHORUS TYPE

MSB \ LSB	00H	01H	02H	08H	09H	0AH	0BH	0CH
00H	NO EFFECT							
01H	NO EFFECT							
:	:							
40H	NO EFFECT							
41H	CHORUS6	CHORUS7	[5]CHORUS5					
42H	CELESTE1	[4]CHORUS4	CELESTE2	[2]CHORUS2	[3]CHORUS3	[1]CHORUS1		
43H	FLANGER 5	[9]FLANGER4		[6]FLANGER1	[7]FLANGER2	[8]FLANGER3		
44H	NO EFFECT							
:	:							
7FH	NO EFFECT							

VARIATION TYPE

MSB \ LSB	00H	01H	02H	08H	09H	0AH	0BH	0CH
00H	NO EFFECT							
01H	[1]HALL1	HALL2		[2]HALL2	[3]HALL3	[4]HALL4		
02H	ROOM5	ROOM6	ROOM7	[5]ROOM1	[6]ROOM2	[7]ROOM3	[8]ROOM4	
03H	STAGE3	STAGE4		[9]STAGE1	[10]STAGE2			
04H	PLATE3			[11]PLATE1	[12]PLATE2			
05H	DELAY L,C,R2			[38]DELAY LCR				
06H	[39]DELAY L,R							
07H	[40]ECHO							
08H	[41]CROSS DELAY							
09H	[13]EARLY REF1	[14]EARLY REF2						
0AH	[15]GATE REVERB							
0BH	[16]REVERSE GATE							
0CH	NO EFFECT or THRU*							
:	:							
3FH	NO EFFECT or THRU*							
40	THRU							
41	CHORUS6	CHORUS7	[21]CHORUS5					
42	CELESTE1	[20]CHORUS4	CELESTE2	[18]CHORUS2	[19]CHORUS3	[17]CHORUS1	[32]ROTARY SP5	
43	FLANGER 5	[25]FLANGER4		[22]FLANGER1	[23]FLANGER2	[24]FLANGER3		
44	SYMPHONIC2			[26]SYMPHONIC				
45	ROTARY SP6			[28]ROTARY SP1				
46	TREMOLO3			[33]TREMOLO1		[31]ROTARY SP4		
47	AUTO PAN2			[36]AUTO PAN	[29]ROTARY SP2	[30]ROTARY SP3	[34]TREMOLO2	[35]GTR TREMOLO
48	[27]PHASER							
49	DISTORTION							
4A	OVER DRIVE							
4B	AMP SIMULATOR			[42]DIST.HARD	[43]DIST.SOFT			
4C	3-BAND EQ			[44]EQ DISCO	[45]EQ TEL			
4D	2-BAND EQ							
4E	AUTO WAH2			[37]AUTO WAH				
4F	THRU							
:	:							
7F	THRU							

*No effect or Thru is determined by either Variation connection is system or insertion.

<Table-3> Effect Parameter List

Only the following parameter numbers are effective.

Parameter values consists of 2-bytes. Enter 00H for MSB and appropriate value for LSB.

* Parameter number 10 Dry/Wet is effective only when Variation connection is insertion.

TYPE MSB(H)	Type	Parameter Number	Parameter	Value	Description		
01 02 03 04	HALL ROOM STAGE PLATE	1	Reverb Time	0-69	0.3~30.0s		
		2	Diffusion	0-10			
		3	Initial Delay	0-63	0.0~99.3ms		
		4	HPF Cutoff	0-52	Thru~8.0kHz		
		5	LPF Cutoff	34-60	1.0k~Thru		
		10*	Dry/Wet	1-127	D63>W ~ D=W ~ D<W63		
		11	Rev Delay	0-63	0.0~100.0ms		
		12	Density	0-4			
		13	Rev/Er Balance	1-127	R<E63 ~ R=E ~ R63>E		
		15	Feedback Level	1-127	-63~+63		
		05	DELAY L,C,R	1	Lch Delay	1-7200	0.1~720.0ms
				2	Rch Delay	1-7200	0.1~720.0ms
				3	Cch Delay	1-7200	0.1~720.0ms
				4	Feedback Delay	1-7200	0.1~720.0ms
				5	Feedback Level	1-127	-63~+63
6	Cch Level			0-127			
7	High Damp			1-10	0.1~1.0		
10*	Dry/Wet			1-127	D63>W ~ D=W ~ D<W63		
13	EQ Low Frequency			8-40	50Hz~2.0kHz		
14	EQ Low Gain			52-76	-12~+12dB		
15	EQ High Frequency			28-58	500Hz~16.0kHz		
16	EQ High Gain	52-76	-12~+12dB				
06	DELAY L,R	1	Lch Delay	1-7200	0.1~720.0ms		
		2	Rch Delay	1-7200	0.1~720.0ms		
		3	Feedback Delay 1	1-7200	0.1~720.0ms		
		4	Feedback Delay 2	1-7200	0.1~720.0ms		
		5	Feedback Level	1-127	-63~+63		
		6	High Damp	1-10	0.1~1.0		
		10*	Dry/Wet	1-127	D63>W ~ D=W ~ D<W63		
		13	EQ Low Frequency	8-40	50Hz~2.0kHz		
		14	EQ Low Gain	52-76	-12~+12dB		
		15	EQ High Frequency	28-58	500Hz~16.0kHz		
		16	EQ High Gain	52-76	-12~+12dB		
07	ECHO	1	Lch Delay1	1-3600	0.1~360.0ms		
		2	Lch Feedback Level	1-127	-63~+63		
		3	Rch Delay1	1-3600	0.1~360.0ms		
		4	Rch Feedback Level	1-127	-63~+63		
		5	High Damp	1-10	0.1~1.0		
		6	Lch Delay2	1-3600	0.1~360.0ms		
		7	Rch Delay2	1-3600	0.1~360.0ms		
		8	Delay2 Level	0-127			
		10*	Dry/Wet	1-127	D63>W ~ D=W ~ D<W63		
		13	EQ Low Frequency	8-40	50Hz~2.0kHz		
		14	EQ Low Gain	52-76	-12~+12dB		
		15	EQ High Frequency	28-58	500Hz~16.0kHz		
		16	EQ High Gain	52-76	-12~+12dB		
		08	CROSS DELAY	1	L->R Delay	1-3600	0.1~360.0ms
				2	R->L Delay	1-3600	0.1~360.0ms
				3	Feedback Level	1-127	-63~+63
4	Input Select			0-2	L,R,L&R(L,R is mono mix)		
5	High Damp			1-10	0.1~1.0		
10*	Dry/Wet			1-127	D63>W ~ D=W ~ D<W63		
13	EQ Low Frequency			8-40	50Hz~2.0kHz		
14	EQ Low Gain			52-76	-12~+12dB		
15	EQ High Frequency			28-58	500Hz~16.0kHz		
16	EQ High Gain			52-76	-12~+12dB		

TYPE MSB(H)	Type	Parameter Number	Parameter	Value	Description		
09	EARLY REF	1	Type	0-5	S-H, L-H, Rdm, Rvs, Pit, Spr		
		2	Room Size	0-127			
		3	Diffusion	0-10	0~10		
		4	Initial Delay	0-127	0.0~200.0ms		
		5	Feedback Level	1-127	-63~+63		
		6	HPF Cutoff	0-52	Thru~8.0kHz		
		7	LPF Cutoff	34-60	1.0k~Thru		
		10*	Dry/Wet	1-127	D63>W ~ D=W ~ D<W63		
		11	Liveness	0-10			
		12	Density	0-3			
		13	High Damp	1-10	0.1~1.0		
		0A 0B	GATE REVERB REVERSE GATE	1	Type	0-1	TypeA, TypeB
				2	Room Size	0-127	
3	Diffusion			0-10			
4	Initial Delay			0-127	0.0~200.0ms		
5	Feedback Level			1-127	-63~+63		
6	HPF Cutoff			0-52	Thru~8.0kHz		
7	LPF Cutoff			34-60	1.0k~Thru		
10*	Dry/Wet			1-127	D63>W ~ D=W ~ D<W63		
11	Liveness			0-10			
12	Density			0-3			
13	High Damp			1-10	0.1~1.0		
41 42	CHORUS CELESTE			1	LFO Frequency	0-127	0.00~39.7Hz
				2	LFO PM Depth	0-127	
		3	Feedback Level	1-127	-63~+63		
		4	Delay Offset	0-127	0.0~50.0ms		
		6	EQ Low Frequency	8-40	50Hz~2.0kHz		
		7	EQ Low Gain	52-76	-12~+12dB		
		8	EQ High Frequency	28-58	500Hz~16.0kHz		
		9	EQ High Gain	52-76	-12~+12dB		
		10*	Dry/Wet	1-127	D63>W ~ D=W ~ D<W63		
		15	Input Mode	0-1	mono/stereo		
		43	FLANGER	1	LFO Frequency	0-127	0.00~39.7Hz
				2	LFO Depth	0-127	
				3	Feedback Level	1-127	-63~+63
				4	Delay Offset	0-127	0.0~50.0ms
				6	EQ Low Frequency	8-40	50Hz~2.0kHz
7	EQ Low Gain			52-76	-12~+12dB		
8	EQ High Frequency			28-58	500Hz~16.0kHz		
9	EQ High Gain			52-76	-12~+12dB		
10*	Dry/Wet			1-127	D63>W ~ D=W ~ D<W63		
14	LFO Phase Difference			4-124	-180~+180° (resolution 3°)		
15	Input Mode			0-1	mono/stereo		
44	SYMPHONIC			1	LFO Frequency	0-127	0.00~39.7Hz
				2	LFO Depth	0-127	
				3	Delay Offset	0-127	0.0~50.0ms
				6	EQ Low Frequency	8-40	50Hz~2.0kHz
		7	EQ Low Gain	52-76	-12~+12dB		
		8	EQ High Frequency	28-58	500Hz~16.0kHz		
		9	EQ High Gain	52-76	-12~+12dB		
		10*	Dry/Wet	1-127	D63>W ~ D=W ~ D<W63		
		45	ROTARY SPEAKER	1	LFO Frequency	0-127	0.00~39.7Hz
				2	LFO Depth	0-127	
6	EQ Low Frequency			8-40	50Hz~2.0kHz		
7	EQ Low Gain			52-76	-12~+12dB		
8	EQ High Frequency			28-58	500Hz~16.0kHz		
9	EQ High Gain			52-76	-12~+12dB		
10*	Dry/Wet			1-127	D63>W ~ D=W ~ D<W63		

TYPE MSB(H)	Type	Parameter Number	Parameter	Value	Description		
46	TREMLOLO	1	LFO Frequency	0-127	0.00~39.7Hz		
		2	AM Depth	0-127			
		3	PM Depth	0-127			
		6	EQ Low Frequency	8-40	50Hz~2.0kHz		
		7	EQ Low Gain	52-76	-12~+12dB		
		8	EQ High Frequency	28-58	500Hz~16.0kHz		
		9	EQ High Gain	52-76	-12~+12dB		
		14	LFO Phase Difference	4-124	-180~+180° (resolution 3°)		
		15	Input Mode	0-1	mono/stereo		
		47	AUTO PAN	1	LFO Frequency	0-127	0.00~39.7Hz
				2	L/R Depth	0-127	
				3	F/R Depth	0-127	
				4	PAN Direction	0-5	L<->R, L>R, L<-R, Lturn, Rturn, L/R
				6	EQ Low Frequency	8-40	50Hz~2.0kHz
				7	EQ Low Gain	52-76	-12~+12dB
8	EQ High Frequency			28-58	500Hz~16.0kHz		
9	EQ High Gain			52-76	-12~+12dB		
48	PHASER			1	LFO Frequency	0-127	0.00~39.7Hz
		2	LFO Depth	0-127			
		3	Phase Shift Offset	0-127			
		4	Feedback Level	1-127	-63~+63		
		6	EQ Low Frequency	8-40	50Hz~2.0kHz		
		7	EQ Low Gain	52-76	-12~+12dB		
		8	EQ High Frequency	28-58	500Hz~16.0kHz		
		9	EQ High Gain	52-76	-12~+12dB		
		10*	Dry/Wet	1-127	D63>W ~ D=W ~ D<W63		
		11	Stage	6-10			
		49 4A	DISTORTION OVERDRIVE	1	Drive	0-127	
2	EQ Low Frequency			8-40	50Hz~2.0kHz		
3	EQ Low Gain			52-76	-12~+12dB		
4	LPF Cutoff			34-60	1.0k~Thru		
5	Output Level			0-127			
7	EQ Mid Frequency			28-54	500Hz~10.0kHz		
8	EQ Mid Gain			52-76	-12~+12dB		
9	EQ Mid Width			10-120	1.0~12.0		
10*	Dry/Wet			1-127	D63>W ~ D=W ~ D<W63		
11	Edge(Clip Curve)			0-127	0:Mild ~ 127:Sharp		
4B	AMP SIMULATOR			1	Drive	0-127	
		2	AMP Type	0-3	Off,Stack,Combo,Tube		
		3	LPF Cutoff	34-60	1.0k~Thru		
		4	Output Level	0-127			
		10*	Dry/Wet	1-127	D63>W ~ D=W ~ D<W63		
		11	Edge(Clip Curve)	0-127	0:Mild ~ 127:Sharp		
4C	3-BAND EQ	1	EQ Low Gain	52-76	-12~+12dB		
		2	EQ Mid Frequency	28-54	500Hz~10.0kHz		
		3	EQ Mid Gain	52-76	-12~+12dB		
		4	EQ Mid Width	10-120	1.0~12.0		
		5	EQ High Gain	52-76	-12~+12dB		
		6	EQ Low Frequency	8-40	50Hz~2.0kHz		
		7	EQ High Frequency	28-58	500Hz~16.0kHz		
4D	2-BAND EQ	1	EQ Low Frequency	8-40	50Hz~2.0kHz		
		2	EQ Low Gain	52-76	-12~+12dB		
		3	EQ High Frequency	28-58	500Hz~16.0kHz		
		4	EQ High Gain	52-76	-12~+12dB		
4E	AUTO WAH	1	LFO Frequency	0-127	0.00~39.7Hz		
		2	LFO Depth	0-127			
		3	Cutoff Frequency Offset	0-127	50Hz~14.0kHz		
		4	Resonance	10-120	1.0~12.0		
		6	EQ Low Frequency	8-40	50Hz~2.0kHz		
		7	EQ Low Gain	52-76	-12~+12dB		
		8	EQ High Frequency	28-58	500Hz~16.0kHz		
		9	EQ High Gain	52-76	-12~+12dB		
		10*	Dry/Wet	1-127	D63>W ~ D=W ~ D<W63		

■ GM System Level 1

The existing MIDI protocol allows performance and other data to be transferred between different instruments, even if they are from different manufacturers. This means, for example, that sequence data that was originally created to control a tone generator from manufacturer A can also be used to control a different tone generator from manufacturer B. Since the voice allocation in different devices from different manufacturers is usually different, however, appropriate program change data must be transmitted to select the right voices.

The General MIDI protocol was developed to minimize confusion and the need for re-programming when playing software created by one MIDI device on another. This has been achieved by defining a standard voice allocation in which the same or similar voices are accessed by the same program change numbers or MIDI channels. The current standard recognized by the International MIDI Association is known as "GM System Level 1." The PSR-520/PSR-620 voice allocation complies with the GM System Level 1 standard.

*1 PSR-520/PSR-620 ordinarily functions as 16 MIDI channel multi-timbral tone generator controlled by MIDI reception data. Panel voices and the other panel settings are not affected by the MIDI message, excepting the followings:

- MIDI Master Tuning
- System Exclusive Message for controlling Reverb, Chorus and Dsp

The Remote Channel can be designated by the panel settings. The designated channel on the PSR-520 can be controlled by an external device and receive all the data excepting the following control change data:

- Data entry, MSB, LSB
- Portamento control
- Data increment
- Data decrement
- NRPN LSB, MSB
- RPN LSB, MSB

*2 Bank Select MSB

The bank select MSB is used for melody voice and rhythm voice switching.

- MSB 00H: Melody voice.
- MSB 7FH: Rhythm voice.

Transmission: Transmitted when changing the voice, style and song.

Reception: All channels except 10 channel receive this message. (10 channel is fixed at rhythm voice.) But when 10 channel is set for the remote channel or receives XG System On message, 10 channel receives this message and the rhythm voice can change to the melody voice.

Bank Select LSB

This message is used to correspond to the panel voice numbers higher than 128.

- Bank Select LSB=00H: program change numbers 0~127 correspond to the panel voice numbers 1~128.
- Bank Select LSB=01H: program change numbers 0~12 correspond to the panel voice numbers 129~141.

Transmission: Transmitted when changing the voice, style and song.

Reception: This message can be received only at the channel designated as the remote channel or the panel voice.

No voice change will occur when only a bank select is received. When a program change is received the latest bank select value is used.

*3 These Control Change messages are not transmitted by the PSR-520/PSR-620 panel operation, but may be transmitted by the accompaniment style playing.

*4 NRPN transmission/reception

The following parameters are supported.

NRPN	Data entry		Parameter Name/Range	Default	
MSB	LSB	MSB	LSB		
01H	08H	mmH	--	Vibrato Rate mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
01H	09H	mmH	--	Vibrato Depth mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
01H	0AH	mmH	--	Vibrato Delay mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
01H	20H	mmH	--	Filter Cutoff Freq. mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
01H	21H	mmH	--	Filter Resonance mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
01H	63H	mmH	--	EG Attack Time mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
01H	64H	mmH	--	EG Decay Time mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
01H	66H	mmH	--	EG Release Time mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
14H	rrH	mmH	--	Drum Filter Cutoff Freq. rr: drum instrument note number mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
15H	rrH	mmH	--	Drum Filter Resonance rr: drum instrument note number mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
16H	rrH	mmH	--	Drum EG Attack Rate rr: drum instrument note number mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
17H	rrH	mmH	--	Drum EG Decay Rate rr: drum instrument note number mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
18H	rrH	mmH	--	Drum Instrument Pitch Course rr: drum instrument note number mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
19H	rrH	mmH	--	Drum Instrument Pitch Fine rr: drum instrument note number mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
1AH	rrH	mmH	--	Drum Instrument Level rr: drum instrument note number mm: 00H - 7FH (0 - 127)	Depends on note
1CH	rrH	mmH	--	Drum Instrument Panpot rr: drum instrument note number mm: 00H - 40H - 7FH (L - Center - R)	Depends on note
1DH	rrH	mmH	--	Drum Instrument Reverb Send Level rr: drum instrument note number mm: 00H - 7FH (0 - 127)	Depends on note
1EH	rrH	mmH	--	Drum Instrument Chorus Send Level rr: drum instrument note number mm: 00H - 7FH (0 - 127)	Depends on note
1FH	rrH	mmH	--	Drum Instrument DSP Send Level rr: drum instrument note number mm: 00H - 7FH (0 - 127)	7FH

Data entry LSB is ignored.

*5 RPN transmission/reception

The following parameters are supported.

RPN	Data entry		Parameter Name/Range	Default	
MSB	LSB	MSB	LSB		
00H	00H	mmH	--	Pitch bend Sensitivity mm: 00H - 02H - 0CH (0 - 2 - 12)	02H
00H	01H	mmH	--	Fine Tuning mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
00H	02H	mmH	--	Course Tuning mm: 00H - 40H - 7FH (-64 - 0 - +63)	40H
7FH	7FH	--	--	RPN Null Clears current RPN and NRPN number settings.	--

Data entry LSB is ignored.

*6 Not transmitted when Song and Accompaniment is playing.

*7 Pitch Bend, modulation, expression, sustain, sostenuto and softpedal are returned to their default values. Clears current RPN and NRPN number settings. Resets portamento source note number.

*8 129~141 voice numbers are selectable through an appropriate Bank Select setting (Refer to *2).

*9 When the External Clock is turned ON by PSR-520/PSR-620 panel setting, Clock, Start/Stop message will be received. The start/stop of the song recording and playback will be controlled by the external device. The initial set up data is transmitted before the song playback, so that the start may be delayed.

*10 Exclusive

The following system exclusive parameters are supported.

<GM system ON> F0H, 7EH, 7FH, 09H, 01H, F7H

All parameters except MIDI master Tuning and Dsp setting are reset to their default values.

Remote Channel setting is canceled.

This message requires approximately 50ms to execute, so sufficient time should be allowed before the next message is sent.

<DISK ORCHESTRA ON> F0H, 43H, 73H, 01H, 14H, F7H

This message switches PSR-520 to Disk Orchestra default settings.

Remote Channel setting is canceled.

This message requires approximately 50ms to execute, so sufficient time should be allowed before the next message is sent.

<DISK ORCHESTRA OFF> F0H, 43H, 73H, 01H, 13H, F7H

This message switches Disk Orchestra ON to OFF.

All parameters except MIDI master Tuning are reset to their default values.

This message requires approximately 50ms to execute, so sufficient time should be allowed before the next message is sent.

<MIDI Master Volume> F0H, 7FH, 7FH, 04H, 01H, ll, mm, F7H

Allows the volume of all channels to be changed simultaneously.

"mm" is used as the MIDI Master Volume value ("ll" is ignored).

The default value for "mm" is 7FH.

<MIDI Master Tuning>

F0H, 43H, 1nH, 27H, 30H, 00H, 00H, mm, ll, cc, F7H

"mml" is used as the MIDI Master Tuning value.

The tuning value is represented as follows:

$T = M - 128$ ($28 \leq M \leq 228$), $T = -100$ ($M < 28$), $T = 100$ ($M > 228$)

Where T is the actual tuning value in cents.

M is decimal value represented by 1-byte using bits 0..3 of "mm" as the MSB and bits 0..3 of "ll" as the LSB.

The default values of "mm" and "ll" are 08H and 00H respectively.

n and cc are also recognized.

This value is not reset by a GM System ON or Reset All Controllers message.

This value affects not only MIDI reception part but the entire system of the PSR-520.

<Panel Voice> F0H, 43H, 76H, 1B, cc, vv, F7H

This message alternately selects Panel voice or GM voice.

cc: MIDI channel

vv: 00=GM voice mode/01=Panel voice mode

GM voice mode is default.

This message is ignored by the remote channel.

<Bulk Dump> (PSR-520 only)

Song Memory:

F0H, 43H, 76H, 1CH, bl, bh, <DATA>, cs, F7H

Multi Pad:

F0H, 43H, 76H, 1DH, bl, bh, <DATA>, cs, F7H

Registration Memory:

F0H, 43H, 76H, 1EH, bl, bh, <DATA>, cs, F7H

"bl" and "bh" represent the total byte count as "bl + bh*128".

cs=Checksum.

<XG System On> F0H, 43H, 1nH, 4CH, 00H, 7E, 00H, F7H

n: device number (transmission: n=0, reception: n is ignored.)

All parameters except MIDI master Tuning are reset to their default values.

Remote Channel setting is canceled.

This message requires approximately 50ms to execute, so sufficient time should be allowed before the next message is sent.

<XG Parameter Change>

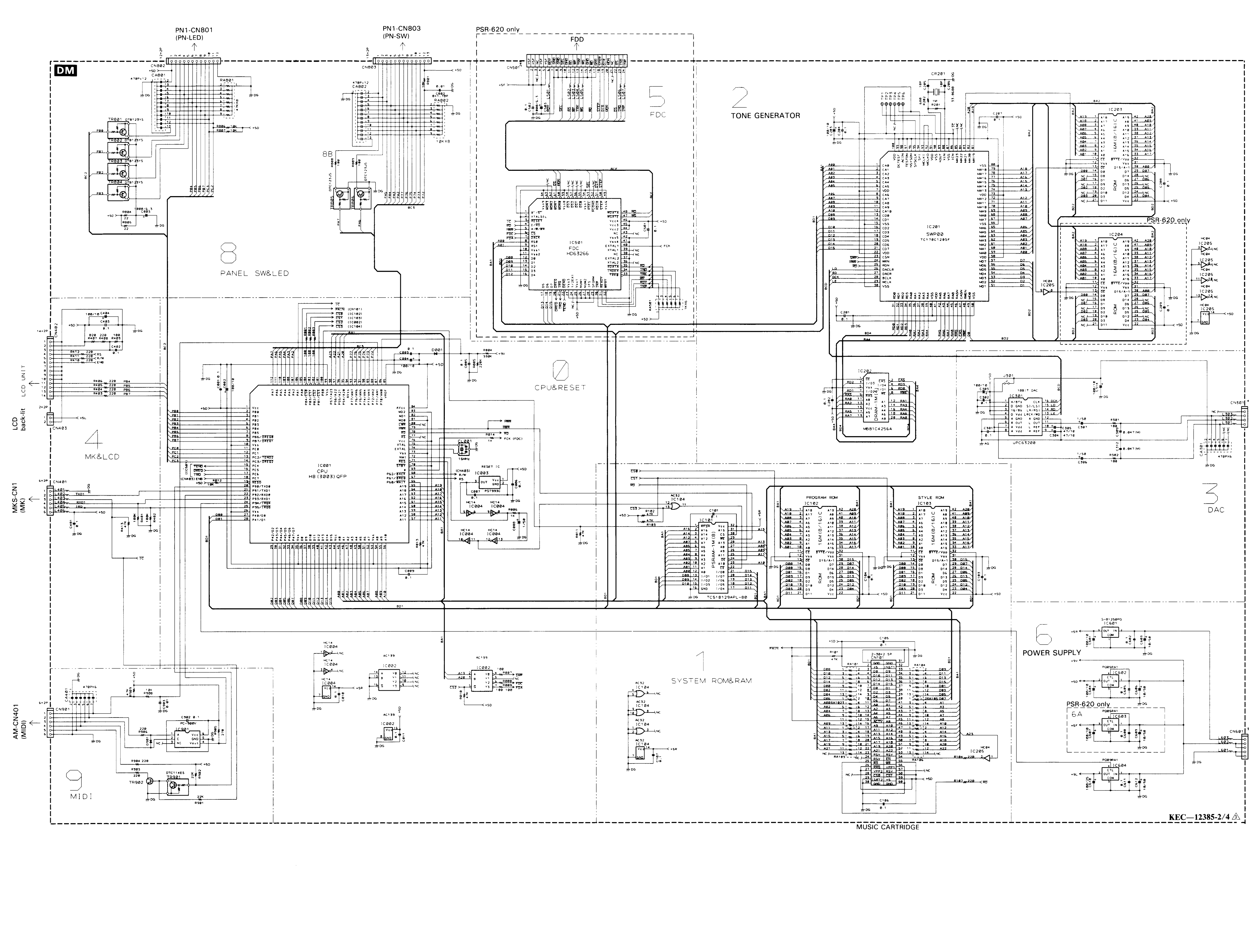
F0H, 43H, 1nH, 4CH, aaH, bbH, ccH, ddH.....F7H

n: device number (transmission: n=0, reception: n is ignored.)

aa,bb,cc: address High, Mid, Low (see below)

dd: data (successive transmission and reception are possible within the amount of data shown in the following Table-1)

Note: PSR-520/PSR-620 corresponds to XG parameters in the Table-1. But this is a part of XG parameters, PSR-520/PSR-620 does not perfectly correspond to XG format.



- Notes)
- PSR-520
Circuit Board: DM (VT400600) XQ371B0 (U,C)
DM (VT400700) XQ371B0 (J,X)
- PSR-620
Circuit Board: DM (VT400400) XQ371B0 (U,C)
DM (VT400500) XQ371B0 (J,X)
- PSR-520 & PSR-620
- IC
 - IC 001: HD6413003TF16 (XQ799A00) CPU
 - IC 002: TC74AC139P (XL123A00) DECODER or TC74HC139P (R013900) DECODER
 - IC 003: IC-PS1993C-T (XQ693A00) RESET
 - IC 004: SN74HC14N (R001450) INVERTER
 - IC 101: TC518129APL-80 (XL788A00) PSRAM 1M or KM58128ALP-8 (XQ974A00) PSRAM 1M (XR312A00) ROM 40M PROGRAM PSR-520 (XR313A00) ROM 40M PROGRAM PSR-620 (XR168A00) ROM STYLE (XR169A00) ROM STYLE
 - IC 102: TC74AC32P (XG658A00) OR or MC74AC32M (XQ273A00) OR TC170C1205F-003 (XQ036A00) SW/P00 MB81C4256A-70PS (XN978A00) DRAM 1M
 - IC 203: KM23C16000BKFE3P (XQ705B00) WAVE ROM1 PSR-520 (XQ707B00) KM23C16000BKFE3P (XQ707B00) WAVE ROM1 PSR-620
 - IC 204: KM23C16000BKFE3P (XQ708B00) WAVE ROM2 PSR-520 only
 - IC 205: SN74HC04N (R000450) INVERTER
 - IC 301: UPD63200GS (XM145A00) DAC
 - IC 501: HD63266F (XJ939A00) FDC
 - IC 601: S-81250PG-T (XM893A00) REGULATOR +5V
 - IC 602: PQ05RA1 (XL450A00) REGULATOR +5V
 - IC 603: PQ05RA1 (XL450A00) REGULATOR +5V PSR-620 only
 - IC 604: PQ05RA1 (XQ774A00) REGULATOR +9V
 - Transistor
 - TR 801-804: 2SA1524-AC (VT507900) or Digital transistor, DTB123VS TP (VT455400) 2SC2903 E,F (IC290320)
 - TR 902: DTB123VS TP (VT455400) or Transistor, 2SA1524-AC (VT507900)
 - TR 805,806: DTB123VS TP (VT455400)
 - TR 801: DTC114ES (VD678700)
 - Diode
 - D 001,901: 1S8133,1S8176 (VB941200)
 - Photo Coupler
 - IC 901: PC-900V (VG181900)
 - Mylar Capacitor
 - C 309,312: 0.0470 50V J (UA654470)
 - Ceramic Capacitor
 - C 205,206: CH 10P 50V D (VA760600)
 - C 802,903: F 0.0100 50V Z (FG644100)
 - Ceramic Cap. Array
 - CA 301,401: 470Px6 50V M (VH285500)
 - CA 801,802: 470Px12 (VT487100)
 - Electrolytic Cap.
 - C 002,004,203,303,314,404,601,804,607: 100.00 10.0V (UJ828100)
 - C 008,306,307: 1.00 50.0V (UJ866100)
 - C 304,305: 47.00 10.0V (UJ827470)
 - C 503: 1000 6.3V (UJ819100) PSR-620 only
 - C 603,606,609,612: 10.00 18.0V (UJ867100)
 - C 610: 100.00 25.0V (UJ848100)
 - C 803: 1000 6.3V (UJ819100)
 - Semiconductive Cera. Cap.
 - C 001,003,005,007,009,011,101,107,201,202,204,207,209,301,302,401,403,602,605,608,611,902: 0.1000 25V Z (VC694800)
 - C 501,502: 0.1000 25V Z (VC694800) PSR-620 only
 - Carbon Resistor
 - R 001-003,007-009,409,808,809: 100.0 1/4 J (HF755100)
 - R 104,107,403-405,408,410-412,903,904,906: 220.0 1/4 J (HF75220)
 - R 006,014: 1.0K 1/4 J (HF756100)
 - R 010,011,013,101,103,413,909: 47.0K 1/4 J (HF757470)
 - R 012,801,806,807,908: 10.0K 1/4 J (HF757100)
 - R 201: 1.0M 1/4 J (HF759100)
 - R 202: 680.0 1/4 J (HF756860)
 - R 301,302: 180.0 1/4 J (HF755180)
 - R 401,402: 100.0K 1/4 J (HF758100)
 - R 407: 820.0 1/4 J (HF75820)
 - R 802: 0.55 (VA078900)
 - R 804,805: 22.0 1/4 J (HF754220)
 - R 901,902: 22.0K 1/4 J (HF757220)
 - R 905: 270.0 1/4 J (HF755270)
 - Metal Film Resistor
 - R 004: 380.0K 1/4 F (VH011000)
 - R 005: 220.0K 1/4 F (VH010400)
 - Resistor Array
 - RA 101-106: RGLD7221J (VT455500) 220x7
 - RA 501: RGLDX102J (VN925000) 1Kx6
 - RA 801,803: RGLDX473J (VF238600) 47Kx8
 - RA 802: RGLDX103J (VF719000) 10Kx8
 - Coil
 - L 301-303,401-406,501-507,601-603: FL5R200QNT (VB835000) or SBT-0260TF (VF968800)
 - Quartz Crystal Unit
 - CR 201: 33.8668M AT-49 (VT487600)
 - Ceramic Resonator
 - CL 001: 16M EFOEC1605T4 (VT487200) or 18.0M CST16.0 (VT630600)
 - Connector
 - CN 101: PSB4D30-2 (VT40210) to Music cartridge
 - Base Post Connector
 - CN 301: PH-4P TE (VB390000) to MVR-CN303
 - Wire Trap
 - CN 401: 52147-6P TE (VF728300) to Keyboard
 - CN 402: 52147-14P TE (VK025800) to LCD
 - CN 403: 52147-2P TE (VK024600) to back-lit of LCD
 - CN 601: 52147-5P TE (VK024900) to PSW-CN708
 - CN 801: 52147-12P TE (VK025600) to PN111/2
 - CN 803: 52147-13P TE (VK025700) to PN111/2
 - CN 902: 52147-6P TE (VF728300) to AM-CN401
 - FFC Connector
 - CN 501: 52045-24P TE (VP127700) to FDD: PSR-620 only
 - Jumper Wire
 - J 301: 0.55 (VA078900)
 - R 802: 0.55 (VA078900)

PORTATONE

PSR-520

PARTS LIST

■CONTENTS

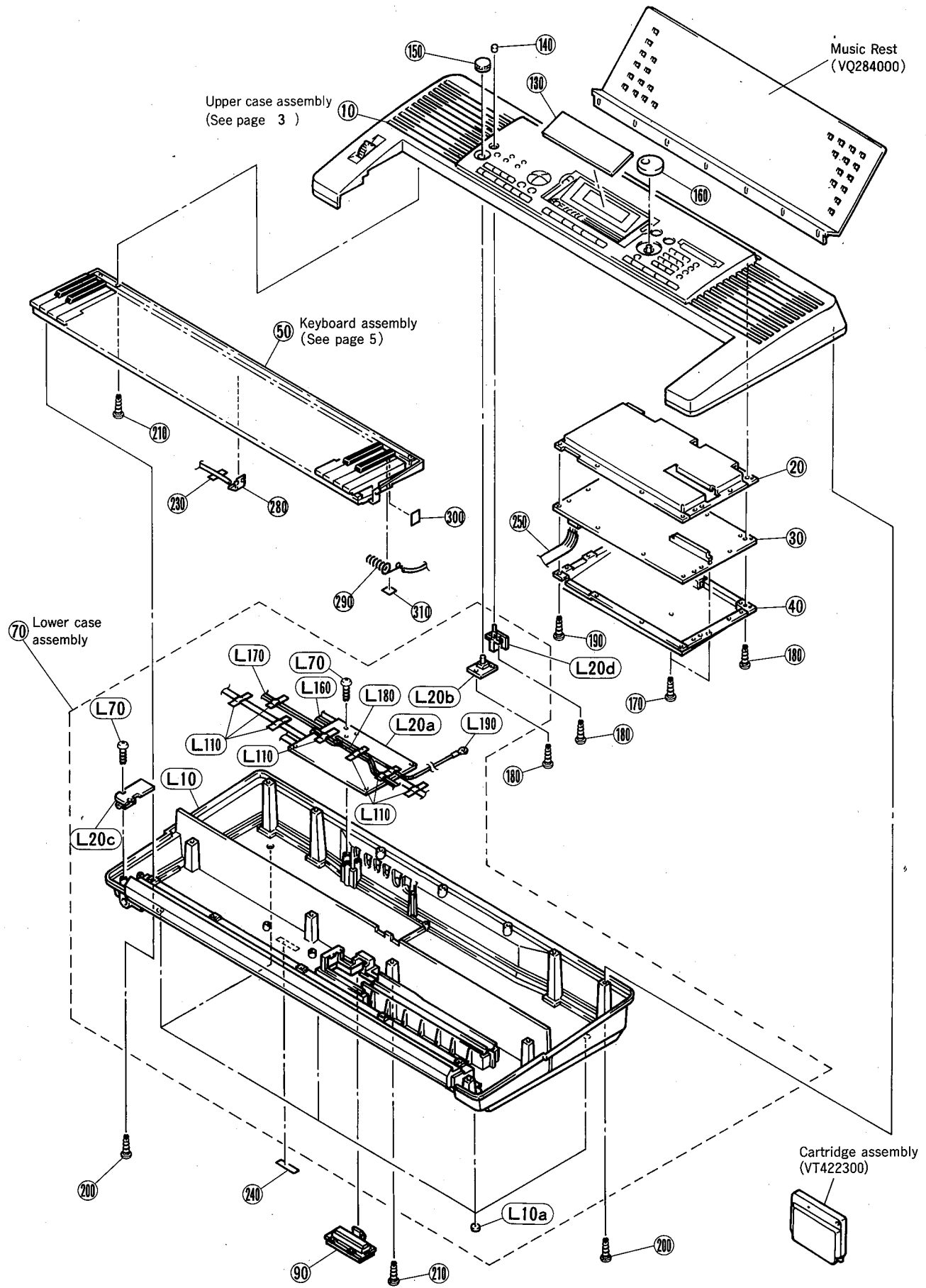
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Notes DESTINATION ABBREVIATIONS

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

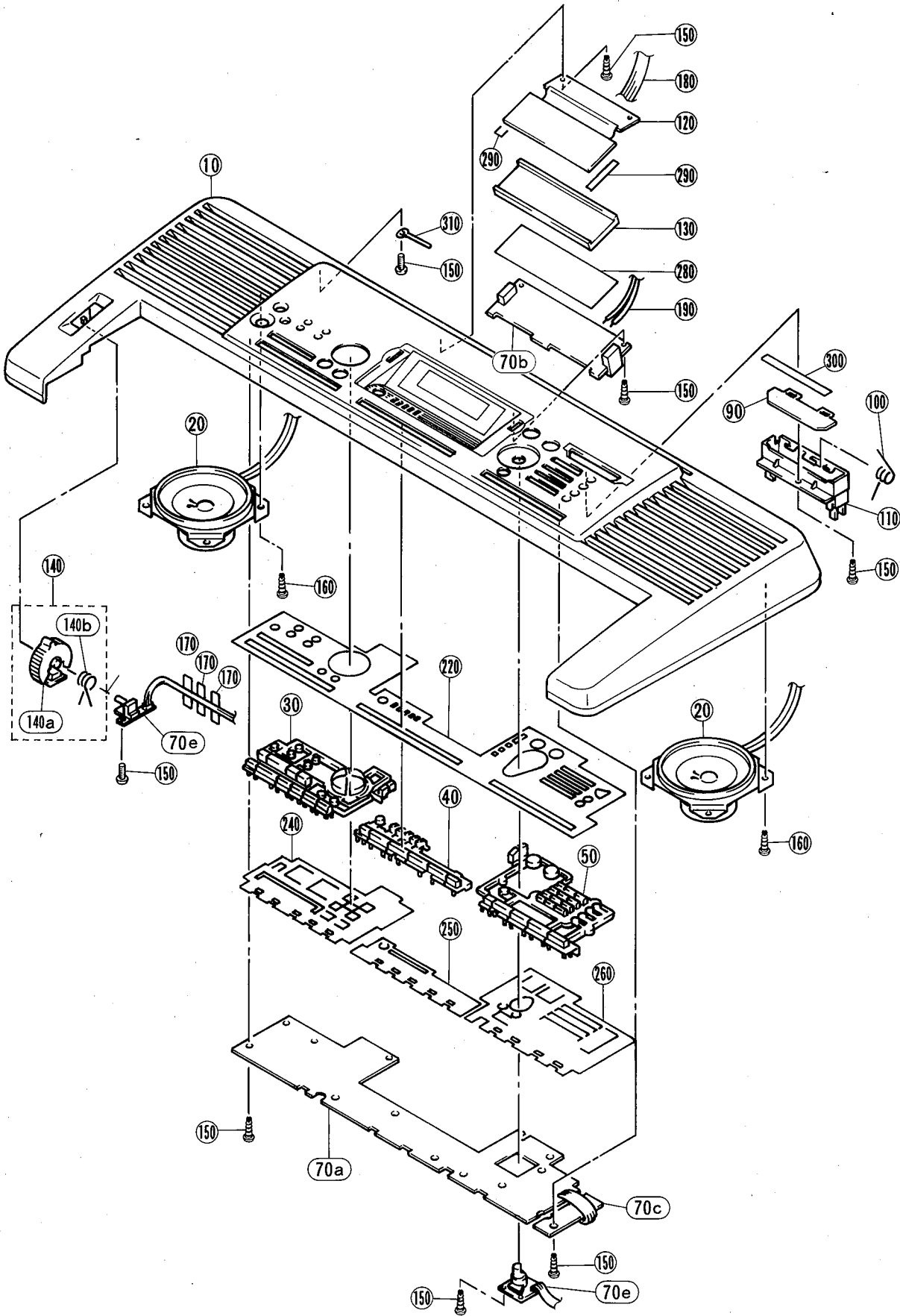


REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	ランク
	--	OVERALL ASSEMBLY	総 組 立	PSR520 (VT45290)	
* 10	VT441900	Upper Case Assembly	上 ケース A S S Y		
* 20	VT369700	Shield Box	シールドボックス		07
* 30	VT400700	Circuit Board	D M シート	J,X	
* 30	VT400600	Circuit Board	D M シート	U,C	
* 40	VT369800	Shield Box	シールドボックス		06
* 50	VQ383800	Keyboard Assembly	16L鍵盤ASSY	with sub-pcb	26
* 70	VT442200	Lower Case Assembly	下 ケース A S S Y		
* 90	VJ601000	Battery Cover Assembly	バッテリーカバー		06
* 130	VT370500	LCD Seal	L C D シール		05
140	VQ218800	Knob	プッシュボタン	POWER switch	03
150	VQ218900	Knob	V ツマミ	MASTER VOLUME	03
160	VL921100	Encoder Knob	エンコーダー		03
170	EP600310	Bind Head Tapping Screw-P	+ バインドPタイ	2pcs	01
180	EP600280	Bind Head Tapping Screw-P	+ バインドPタイ	8pcs	01
190	EP600130	Bind Head Tapping Screw-B	+ バインドBタイ	12pcs	01
200	EP600300	Bind Head Tapping Screw-P	+ バインドPタイ	16pcs	01
210	VK228100	Bind Head Tapping Screw-P	+ バインドPタイ	4pcs	01
230	VA126100	Filament Tape	粘着テープ	11pcs	03
240	--	Label	規格, 製番ラベル	(VT49740)	
250	--	Connector Assembly	D M - M K S 東線	(VT91370)	
280	BB005490	Battery Terminal	端子		01
290	VN218200	Spring Terminal	接点		03
300	--	Cushion	防振テープ	(VJ86150)	
310	--	Cushion	防振テープ	(VR12940)	
* L10	VT442200	LOWER CASE ASSEMBLY	下 ケース A S S Y	PSR520	
L10a	CB043750	Lower Case Sub-assembly	下 ケース 加工品	(VT44240)	
L20a	NX007360	Foot	ゴム足	5pcs	01
* L20b	NX007370	Circuit Board	A M シート	(VT40280)	
* L20c	NX007380	Circuit Board	M V R シート	(VT40280)	
* L20d	NX007390	Circuit Board	H P シート	(VT40280)	
L70	EP600280	Bind Head Tapping Screw-P	P S W シート	(VT40280)	
L110	VA126100	Filament Tape	+ バインドPタイ	5pcs	01
L160	--	Connector Assembly	粘着テープ	5pcs	03
L170	--	Connector Assembly	A M - B A T 東線	(VT65530)	
L180	--	Connector Assembly	A M - S P L 東線	(VT43880)	
L190	--	Connector Assembly	A M - S P R 東線	(VT91380)	
			D M - A M 東線	(VT91390)	
		ACCESSORIES	付属品		
* VQ284000		Music Rest	譜面立て		08
* VS276100		AC Adapter	A C アダプター	J	11
* VT872500		Japanese Guide Set	和文シート	J	09
* VT422300		Cartridge Assembly	C A R T A s s y		

* New Parts (新規部品)

ランク: Japan only

UPPER CASE ASSEMBLY

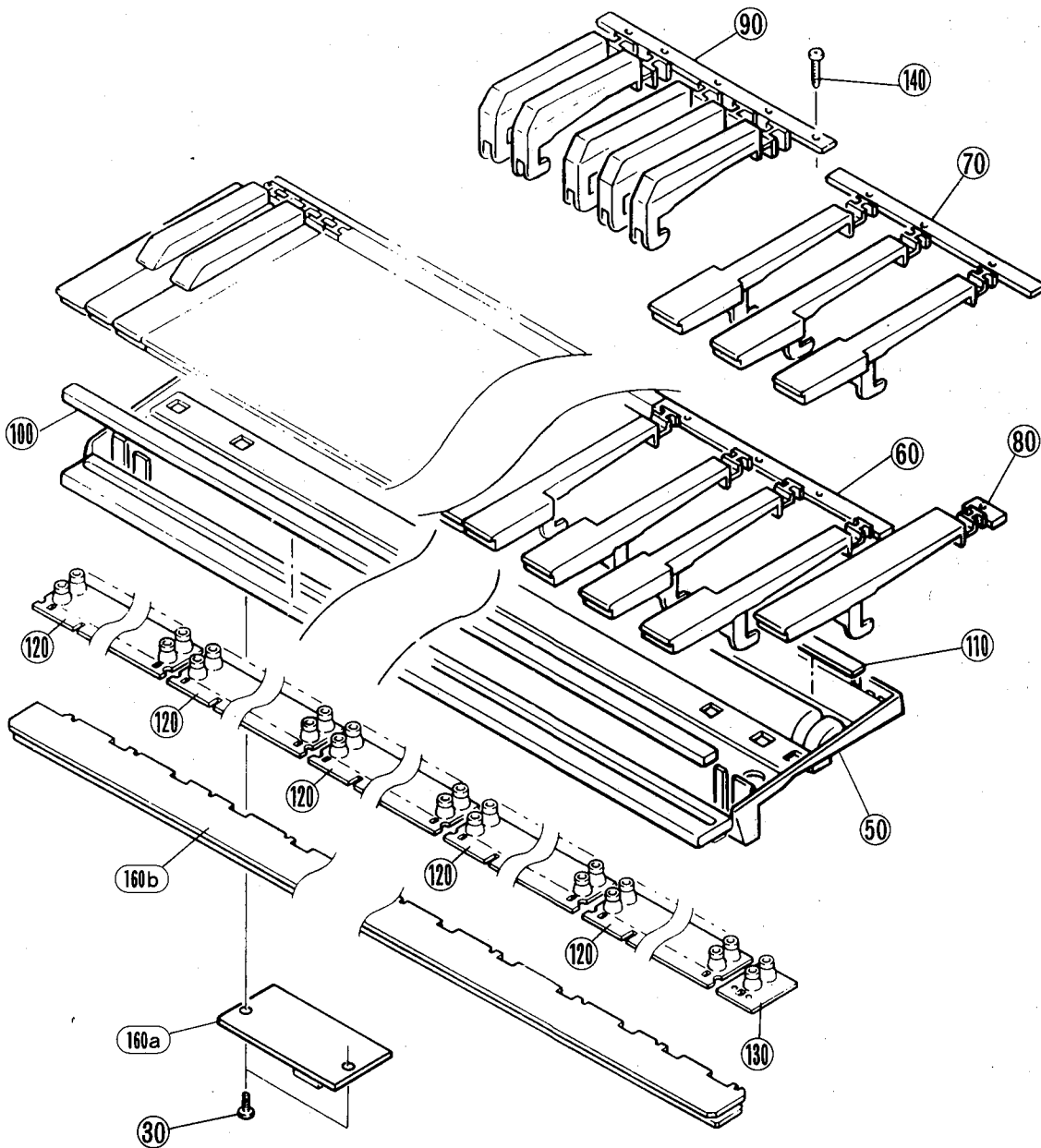


REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	ランク
*	VT441900	UPPER CASE ASSEMBLY	上 ケ ー ス A S S Y	PSR520	
10	--	Upper Case	上 ケ ー ス 加 工 品	(VT44160)	
*	XQ764A00	Speaker	ス ピ ー カ ー	2pcs	05
*	VT365700	Panel Switch	パ ネ ル ス イ ッ チ L	DEMO-ENDING	05
*	VT365800	Panel Switch	パ ネ ル ス イ ッ チ C	LARGE-FREEZE	04
*	VT366100	Panel Switch	パ ネ ル ス イ ッ チ R	MODE-4	05
*	NX007400	Circuit Board	PN1-1/2	(VT43780)	
*	NX007410	Circuit Board	PN1-2/2	(VT43780)	
*	NX007420	Circuit Board	PN1S	(VT43780)	
*	NX007430	Circuit Board	PB	(VT43780)	
*	NX007480	Circuit Board	ENC	(VT43780)	
*	VT368500	Cartridge Cover	E N C シ ー ト		
*	VT422400	Spring	C A R T 蓋 成 形 品		03
*	VT367600	Cartridge Guide	回 転 パ ネ		01
*	VT488200	LCD	C A R T ガ イ ド 成 形 品		04
*	VT912200	Back-lit board Assembly	液 晶 デ ィ ス プ レ イ		14
130	VT912200	Back-lit board Assembly	導 光 板 A s s y		06
140	--	Wheel Assembly	ホ イ ー ル A S S Y	(VT48770)	
140a	VT366400	Wheel	ホ イ ー ル	PITCH BEND	03
140b	VT440100	Spring	ホ イ ー ル パ ネ		03
150	EP600280	Bind Head Tapping Screw-P	+ バ イ ン ド P タ イ ト	31pcs	01
160	VB931600	Bind Head Tapping Screw-P	+ バ イ ン ド P タ イ ト	8pcs	01
170	VA119300	Filament Tape	粘 着 テ ー プ	3pcs	01
180	--	Connector Assembly	D M - L C D 束 線	(VT44520)	
190	--	Connector Assembly	D M - L C D 2 束 線	(VT43950)	
220	--	Cishion	-U	(VT74690)	
240	--	Cishion	防 振 シ ー ト L - L	(VT74710)	
250	--	Cishion	防 振 シ ー ト C - L	(VT74720)	
260	--	Cishion	防 振 シ ー ト R - L	(VT74730)	
280	--	Reflecion Sheet	反 射 シ ー ト	(VT54610)	
290	VA126100	Filament Tape	粘 着 テ ー プ	2pcs	03
300	--	Tape	防 振 テ ー プ	(VT85810)	
310	CB502030	Cord Binder	束 線 止 め		01

* New Parts (新規部品)

ランク : Japan only

KEYBOARD ASSEMBLY



REF NO.	PART NO.	DESCRIPTION		部 品 名	REMARKS	ランク
	VQ383800	KEYBOARD ASSEMBLY	C61 K6	16L 鍵盤ASSYサブ基	PSR520	26
30	EP630220	Bind Head Tapping Screw-P	3.0X8 MFZN2BL	+ バインドPタイト	2pcs	01
40	--	Filament Tape	12X60	粘 着 テ ー プ	2pcs	(VM72270) (VG49510)
50	--	Frame	C61	フ レ ー ム		
60	VH180900	White Keys	CEGB	白 鍵 C E G B	5pcs	03
70	VH181000	White Keys	DFA	白 鍵 D F A	5pcs	03
80	VH181100	White Key	C'	白 鍵 C'		01
90	VH181200	Black Keys		黒 鍵	5pcs	03
100	VH181300	Felt		フ ェ ル ト		03
110	VH181400	Rubber Sheet		ゴ ム シ ー ト		01
120	VY694800	Rubber Contact	2X12keys	接 点 ゴ ム	5pcs	05
130	VT695000	Rubber Contact	2X1key	接 点 ゴ ム		03
140	VB205200	Bind Head Tapping Screw-P	3.0X16 MFZN2BL	+ バインドPタイト	21pcs	01
140	VS756700	Bind Head Tapping Screw-P	3.0X16 MFZN2B	+ バインドPタイト	21pcs	01
160	--	Circuit Board	MK	M K シ ー ト サブ基板付	(VQ38960)	
160a	VQ305200	Circuit Board	MKS	M K S シ ー ト		10
160b	VL319900	Circuit Board	MK	M K シ ー ト サブ束線付		13

* New Parts (新規部品)

ランク : Japan only

ELECTRICAL PARTS

REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	ランク
		ELECTRICAL PARTS	電 気 部 品	PSR520	
*	NX007360	Circuit Board	A M シ ー ト		
*	NX007370	Circuit Board	M V R シ ー ト		
*	NX007380	Circuit Board	H P シ ー ト		
*	NX007390	Circuit Board	P S W シ ー ト		
*	VT400700	Circuit Board	D M シ ー ト	J,X	
*	VT400600	Circuit Board	D M シ ー ト	U,C	
	VL319900	Circuit Board	MKシート サブ束線付		13
	VQ305200	Circuit Board	M K S シ ー ト		10
	NX007400	Circuit Board	PN1-1/2		
*	NX007410	Circuit Board	PN1-2/2		
*	NX007420	Circuit Board	PN1S		
*	NX007430	Circuit Board	P B シ ー ト		
*	NX007480	Circuit Board	E N C シ ー ト		
*	NX007360	Circuit Board	A M シ ー ト	(XQ372B0)	
*	NX007370	Circuit Board	M V R シ ー ト	(XQ372B0)	
*	NX007380	Circuit Board	H P シ ー ト	(XQ372B0)	
*	NX007390	Circuit Board	P S W シ ー ト	(XQ372B0)	
	EP030530	Bind Head Tapping Screw-2	3.0X8 MFZN2Y	+バインドTP2種溝	01
	UA654100	Mylar Capacitor	0.0100 50V J	マイラーコン	01
	UA654390	Mylar Capacitor	0.0390 50V J	マイラーコン	01
	UA654470	Mylar Capacitor	0.0470 50V J	マイラーコン	01
	VR168300	Mylar Capacitor	0.10 50V J	マイラーコン	01
	FG612470	Ceramic Capacitor-B	470P 50V K	セラコン B	01
	FG613470	Ceramic Capacitor-B	4700P 50V K	セラコン (B)	01
	FG613560	Ceramic Capacitor-B	5600P 50V K	セラコン (B)	01
	FG651220	Ceramic Capacitor-SL	22P 50V J	セラコン (SL)	01
	FG644100	Ceramic Capacitor-F	0.0100 50V Z	セラコン F	01
	VT757800	Monolithic Ceramic Cap.	1.000 25V Z	積層セラコン	01
	UJ827330	Electrolytic Cap.	33.00 10.0V	ケミコン	01
	UJ837100	Electrolytic Cap.	10.00 16.0V	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
	UJ848100	Electrolytic Cap.	100.00 25.0V	ケミコン	01
*	UI848100	Electrolytic Cap.	100.00 25.0V	ケミコン	
	UJ865470	Electrolytic Cap.	0.47 50.0V	ケミコン	01
	UJ866100	Electrolytic Cap.	1.00 50.0V	ケミコン	01
*	VT848900	Electrolytic Cap.	6800 25.0V	ケミコン	
	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z	半導体セラコン	01
	VB835000	Coil	FL5R200QNT 20u	コイル 20u	01
	HF753220	Carbon Resistor	2.2 1/4 J	カーボン抵抗	01
	HF755100	Carbon Resistor	100.0 1/4 J	カーボン抵抗	01
	HF755150	Carbon Resistor	150.0 1/4 J	カーボン抵抗	01
	HF755330	Carbon Resistor	330.0 1/4 J	カーボン抵抗	01
	HF755680	Carbon Resistor	680.0 1/4 J	カーボン抵抗	01
	HF756180	Carbon Resistor	1.8K 1/4 J	カーボン抵抗	01
	HF756220	Carbon Resistor	2.2K 1/4 J	カーボン抵抗	01
	HF756470	Carbon Resistor	4.7K 1/4 J	カーボン抵抗	01
	HF757100	Carbon Resistor	10.0K 1/4 J	カーボン抵抗	01
	HF757120	Carbon Resistor	12.0K 1/4 J	カーボン抵抗	01
	HF757270	Carbon Resistor	27.0K 1/4 J	カーボン抵抗	01
	HF757330	Carbon Resistor	33.0K 1/4 J	カーボン抵抗	01
	HF757470	Carbon Resistor	47.0K 1/4 J	カーボン抵抗	01
	HF758100	Carbon Resistor	100.0K 1/4 J	カーボン抵抗	01
	HF758470	Carbon Resistor	470.0K 1/4 J	カーボン抵抗	01
	V1878200	Cable Holder	51048-4P TE	ケーブルホルダー	01
	V1878300	Cable Holder	51048-5P TE	ケーブルホルダー	01
	V1878400	Cable Holder	51048-6P TE	ケーブルホルダー	01
	--	Heat Sink		放熱板	(VT40290)
	VA078900	Jumper Wire	0.55	ジャンパー線	
	--	Connector Assembly	DM-SW	D M - S W 東線	(VT44560)
	--	Connector Assembly	DM-AM	D M - A M 東線	(VT44580)
	--	Connector Assembly	AM-SW	A M - S W 東線	(VT95690)
	--	Connector Assembly	AM-HP	A M - H P 東線	(VT96980)
	--	Connector Assembly	DM-VR	D M - V R 東線	(VT91410)
	--	Connector Assembly	AM-VR	A M - V R 東線	(VT91420)
D701	VL723600	Diode	20E1-FC4	ダイオード	01
D702	VL723600	Diode	20E1-FC4	ダイオード	01
IC302	XB247A00	IC	UPC4570HA	IC	01

* New Parts (新規部品)

ランク: Japan only

REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	ランク
* IC303	XR162A00	IC	AN8009-(TA)	REGULATOR +9V	
IC501	XB247A00	IC	UPC4570HA	OP AMP	01
* IC701	XQ619A00	IC	LA4705NA 17W BTL	POWER AMP	05
JK401	VJ107200	DIN Connector	5P YKF51-5050	MIDI OUT	01
JK402	VJ107200	DIN Connector	5P YKF51-5050	MIDI IN	01
JK403	VB312600	Phone Jack	YKB21-5012 BL	SUSTAIN	02
JK501	VB312600	Phone Jack	YKB21-5012 BL	AUX OUT R	02
JK502	VC687500	Phone Jack	YKB21-5014 BL	AUX OUT L/L+R	01
JK701	LB101870	Phone Jack	YKB21-5006	PHONES	03
JK702	VC664500	DC IN Connector	HEC2305	DC IN 10-12V	01
LF701	VH227500	Line Filter	SU10VD-10020	ラインフィルタ	03
SW301	VQ670600	Push Switch	SDDLB1	POWER switch	03
VR301	VQ320200	Rotary Variable Resistor	A10Kx2	ニ連ロータリーVR	03
* VT400700		Circuit Board	DM	J,X (XQ371B0)	
* VT400600		Circuit Board	DM	U,C (XQ371B0)	
EP600190		Bind Head Tapping Screw-2	3.0X8 MFZN2BL	＋バインドTP2種溝	01
UA654470		Mylar Capacitor	0.0470 50V J	マイラーコン	01
VA760600		Ceramic Capacitor-CH	10P 50V D	セラコン (CH)	01
FG644100		Ceramic Capacitor-F	0.0100 50V Z	セラコン F	01
UJ827470		Electrolytic Cap.	47.00 10.0V	ケミコン	01
UJ828100		Electrolytic Cap.	100.00 10.0V	ケミコン	01
UJ848100		Electrolytic Cap.	100.00 25.0V	ケミコン	01
UJ866100		Electrolytic Cap.	1.00 50.0V	ケミコン	01
UJ867100		Electrolytic Cap.	10.00 16.0V	ケミコン	01
UJ819100		Electrolytic Cap.	1000 6.3V	ケミコン	01
VC694800		Semiconductive Cera. Cap.	0.1000 25V Z	半導体セラコン	01
HF754220		Carbon Resistor	22.0 1/4 J	カーボン抵抗	01
HF755100		Carbon Resistor	100.0 1/4 J	カーボン抵抗	01
HF755180		Carbon Resistor	180.0 1/4 J	カーボン抵抗	01
HF755220		Carbon Resistor	220.0 1/4 J	カーボン抵抗	01
HF755270		Carbon Resistor	270.0 1/4 J	カーボン抵抗	01
HF755680		Carbon Resistor	680.0 1/4 J	カーボン抵抗	01
HF755820		Carbon Resistor	820.0 1/4 J	カーボン抵抗	01
HF756100		Carbon Resistor	1.0K 1/4 J	カーボン抵抗	01
HF757100		Carbon Resistor	10.0K 1/4 J	カーボン抵抗	01
HF757220		Carbon Resistor	22.0K 1/4 J	カーボン抵抗	01
HF757470		Carbon Resistor	47.0K 1/4 J	カーボン抵抗	01
HF758100		Carbon Resistor	100.0K 1/4 J	カーボン抵抗	01
HF759100		Carbon Resistor	1.0M 1/4 J	カーボン抵抗	01
VH010400		Metal Film Resistor	220.0K 1/4 F	金属皮膜抵抗	01
VH011000		Metal Film Resistor	390.0K 1/4 F	金属皮膜抵抗	01
VB390000		Base Post Connecor	PH -4P TE	コネクタベースポスト	01
VA078900		Jumper Wire	0.55	ジャンパー線	
D001	VB941200	Diode	1SS133,1SS176	ダイオード	01
L301	VB835000	Coil	FL5R200QNT 20u	コイル 20u	01
L301	VF968800	Coil	SBT-0260TF 60u	コイル SB 60uH	01
CA301	VH285500	Ceramic Cap. Array	470Px6 50V M	セラコンアレイ	02
CA801	VT487100	Ceramic Cap. Array	470Px12	セラコンアレイ	02
CN101	--	Connector	PSB4D30-2	P基板用コネクタ	(VT40210)
CN401	VF728300	Connector	52147-6P TE	コネクタ	01
CN402	VK025800	Wire Trap	52147-14P TE	ワイヤートラップ	01
CN403	VK024600	Wire Trap	52147-2P TE	ワイヤートラップ	01
CN601	VK024900	Wire Trap	52147-5P TE	ワイヤートラップ	01
CN802	VK025600	Wire Trap	52147-12P TE	ワイヤートラップ	01
CN803	VK025700	Wire Trap	52147-13P TE	ワイヤートラップ	01
* CL001	VT487200	Ceramic Resonator	16M EFOEC1605T4	セラミック振動子	02
* CL001	VT630600	Ceramic Resonator	16.0M CST16.00M	セラミック振動子	
* CR201	VT487600	Quartz Crystal Unit	33.8688M AT-49	水晶振動子	04
* IC001	XQ799A00	IC	HD6413003TF16	IC	09
IC002	XL123A00	IC	TC74AC139P	DECODER	03
IC002	IR013900	IC	TC74HC139P	DECODER	05
* IC003	XQ693A00	IC	IC-PST993C-T	RESET	01
IC004	IR001450	IC	SN74HC14N	INVERTER	05
IC101	XL788A00	IC	TC518129APL-80	PSRAM 1M	12
* IC101	XQ974A00	IC	KM658128ALP-8	PSRAM 1M	09
* IC102	XR312A00	IC		ROM 4M(PROGRAM)	
* IC103	XR167A00	IC		ROM STYLE	
* IC104	XG658A00	IC	TC74AC32P	OR	02
* IC104	XQ973A00	IC	MC74AC32N	OR	02

* New Parts (新規部品)

ランク: Japan only

REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	ランク
IC201	XQ036A00	IC	TC170C120SF-003	SWP00	10
IC202	XN978A00	IC	MB81C4256A-70PS	DRAM 1M	08
IC203	XQ706B00	IC		WAVE ROM	12
IC205	IR000450	IC	SN74HC04N	INVERTER	03
IC301	XM145A00	IC	UPD63200GS	DAC	07
IC601	XM993A00	IC	S-81250PG-T	REGULATOR +5V	02
IC602	XL450A00	IC	PQ05RA1	REGULATOR +5V	03
IC604	XQ774A00	IC	PQ09RA1	REGULATOR +9V	03
IC901	VG181900	Photo Coupler	PC-900V		03
RA101	VT455500	Resistor Array	RGLD7Y221J 220x7		01
RA801	VF238600	Resistor Array	RGLE8X473J 47Kx8		01
RA802	VF771900	Resistor Array	RGLE8X103J 10Kx8		01
TR801	VT507900	Transistor	2SA1524-AC		01
TR801	VT455400	Digital Transistor	DTB123YS TP		01
TR805	VK165500	Digital Transistor	DTC123JS TP		01
TR901	VD678700	Digital Transistor	DTC114ES		03
TR902	IC260320	Transistor	2SC2603 E,F		01
	VL319900	Circuit Board	MK	(XF656F0)	13
	VB941200	Diode	1SS133,1SS176		01
	VH586000	Cushion			05
	--	Cable	11P	(VL31910)	
	--	Cable	12P	(VL31920)	
	--	Cable	1P L=210mm	(VL74540)	
	VA078900	Jumper Wire	0.55		
	--	Earth Wire	AWG22 34mm BL	(V112660)	
	VQ305200	Circuit Board	MKS	(XM324A0)	10
	VD840500	Ceramic Capacitor-SL	22P 50V J		01
	VK392400	Ceramic Capacitor-F	47000P 16V Z		01
	VL409500	Coil	BL03RN2-R62T4 0.45		01
	VL674500	Resistor Array	RGLE12X223J		01
	XJ450A00	IC	HD63B05V0D73P	CPU	07
	VF728300	Connector	52147-6P TE		01
	VK025500	Wire Trap	52147-11P TE		01
	VK025600	Wire Trap	52147-12P TE		01
	--	Vibration-proof Tape	10X64X0.5	(VK34680)	
10	UJ828100	Electrolytic Cap.	100.00 10.0V		01
10	UJ828100	Electrolytic Cap.	100.00 10.0V		01
20	HF756470	Carbon Resistor	4.7K 1/4 J	(V113840)	01
30	HF757470	Carbon Resistor	47.0K 1/4 J		01
40	VA078900	Jumper Wire	0.55		
CR1	VN002100	Ceramic Resonator	CST8.00MTW140		02
CR1	VQ305500	Ceramic Resonator	8.00M EFOEC8004T3		02
	NX007400	Circuit Board	PN1-1/2	(XQ500A0)	
	NX007410	Circuit Board	PN1-2/2	(XQ500A0)	
	NX007420	Circuit Board	PN1S	(XQ500A0)	
	NX007430	Circuit Board	PB	(XQ500A0)	
	NX007480	Circuit Board	ENC	(XQ500A0)	
	HF757100	Carbon Resistor	10.0K 1/4 J	(VL60610)	01
	VT488100	Lamp	0.1A HRT-6101A	for LCD back-lit	02
	VT513600	Light Touch Switch	EVQ 22C 05B		01
	VQ371800	Encoder	EVQ WP5 F15 24B		04
	V1878100	Cable Holder	51048-3P TE		01
	VB941200	Diode	1SS133,1SS176		01
	VT387900	LED	SLZ-190B-10-T2		01
	VT370200	Holder			03
	VA078900	Jumper Wire	0.55		
	--	Connector Assembly	PN1-PB	(VT43910)	
	--	Connector Assembly	PN1-ENC	(VT43920)	
	--	Connector Assembly	DM-PN1A	(VT44540)	
	--	Connector Assembly	DM-PN1B	(VT44550)	
	--	Connector Assembly	PN1-PN1S	(VT75500)	
VR901	VT432100	Rotary Variable Resistor	B10K EVJ05DF25B14	PITCH BEND	03
	XQ764A00	Speaker	12.0cm 4ohm 8W		05
	VT488200	LCD	EDMCR11A00		14
	VT370000	Back-lit board			

* New Parts (新規部品)

ランク: Japan only

PORTATONE

PSR-620

PARTS LIST

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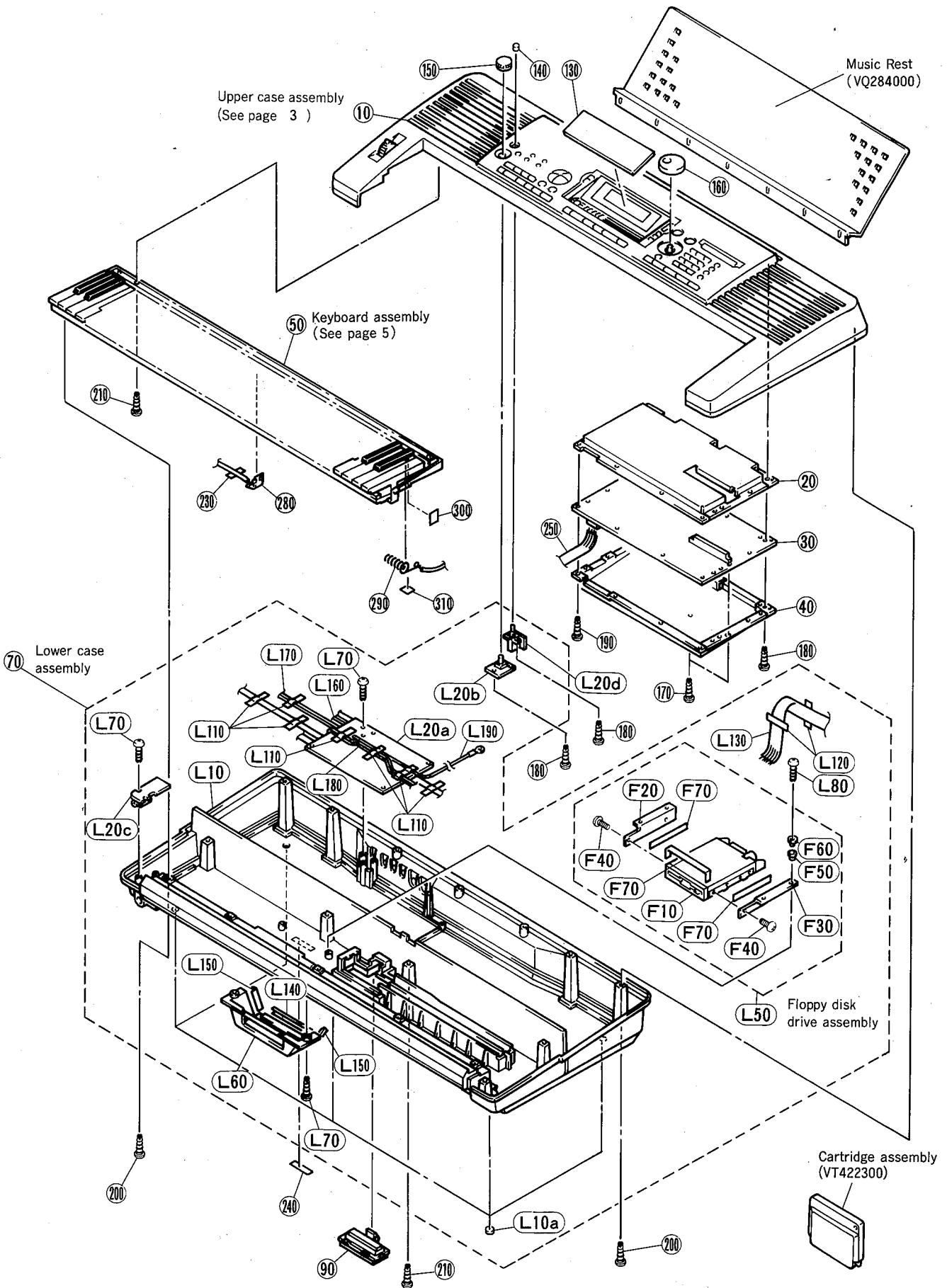
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Notes DESTINATION ABBREVIATIONS

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

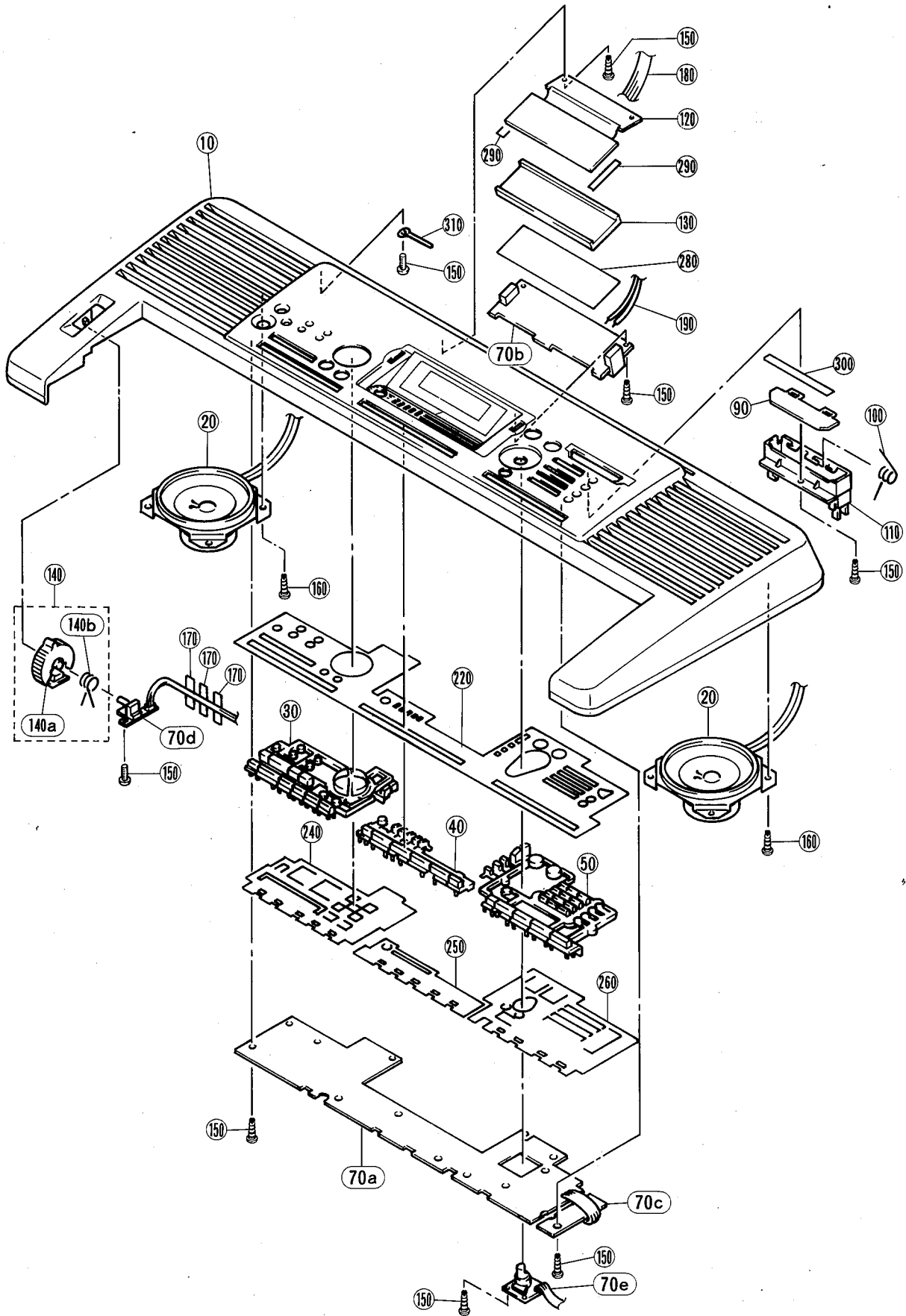


REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	ランク
10	--	OVERALL ASSEMBLY	総 組 立	PSR620 (VT45270)	
20	VT369700	Upper Case Assembly	上 ケース A S S Y	(VT44180)	07
30	VT400500	Shield Box	シールドボックス		
30	VT400400	Circuit Board	D M シ ー ト	J,X U,C	
40	VT369800	Shield Box	シールドボックス		06
50	VQ383800	Keyboard Assembly	16L 鍵盤 A S S Y	with sub-pcb	26
70	VT442100	Lower Case Assembly	下 ケース A S S Y		
90	VJ601000	Battery Cover Assembly	バ ッ テ リ ー カ バ ー		06
130	VT370400	LCD Seal	L C D シ ー ル		05
140	VQ218800	Push Knob	プ ッ シ ュ ツ マ ミ	POWER switch	03
150	VQ218900	Knob	V ー ツ マ ミ	MASTER VOLUME	03
160	VL921100	Encoder Knob	エン コ ー ダ ー ツ マ ミ		03
170	EP600310	Bind Head Tapping Screw-P	+ バ イ ン ド P タ イ ト	2pcs	01
180	EP600280	Bind Head Tapping Screw-P	+ バ イ ン ド P タ イ ト	8pcs	01
190	EP600130	Bind Head Tapping Screw-B	+ バ イ ン ド B タ イ ト	12pcs	01
200	EP600300	Bind Head Tapping Screw-P	+ バ イ ン ド P タ イ ト	16pcs	01
210	VK228100	Bind Head Tapping Screw-P	+ バ イ ン ド P タ イ ト	4pcs	01
230	VA126100	Filament Tape	粘 着 テ ー プ	11pcs	03
240	--	Label	規 格 , 製 番 ラ ベ ル	(VT49720)	
250	--	Connector Assembly	D M - M K S 束 線	(VT91370)	
280	BB005490	Battery Terminal	端 子		01
290	VN218200	Spring Terminal	端 接 点		03
300	--	Cushion	防 振 テ ー プ	(VJ86150)	
310	--	Cushion	防 振 テ ー プ	(VR12940)	
330	--	Cushion	防 振 テ ー プ	2pcs (VT97500)	
* LOWER CASE ASSEMBLY					
L10	VT442100	Lower Case	下 ケース A S S Y	PSR620	
L10a	CB043750	Foot	下 ケース 加 工 品	(VT44230)	01
L20a	NX007360	Circuit Board	A M シ ー ト	(VT40280)	
L20b	NX007370	Circuit Board	M V R シ ー ト	(VT40280)	
L20c	NX007380	Circuit Board	H P シ ー ト	(VT40280)	
L20d	NX007390	Circuit Board	P S W シ ー ト	(VT40280)	
L50	--	Floppy Disk Drive Assembly	F D D A S S Y	(VT45200)	
L60	VT366600	Cover, FDD	F D D カ バ ー		05
L70	EP600280	Bind Head Tapping Screw-P	+ バ イ ン ド P タ イ ト	11pcs	01
L80	VM839600	Bind Head Tapping Screw-P	+ バ イ ン ド P タ イ ト	4pcs	01
L110	VA126100	Filament Tape	粘 着 テ ー プ	5pcs	03
L120	--	Filament Tape	粘 着 テ ー プ	4pcs (VF29880)	
L130	VT403000	FDD Cable	ケ ー ブ ル F D D		
L140	--	Tape	防 振 テ ー プ	(VT85820)	
L150	--	Tape	防 振 テ ー プ	(VT85830)	
L160	--	Connector Assembly	A M - B A T 束 線	(VT65530)	
L170	--	Connector Assembly	A M - S P L 束 線	(VT43880)	
L180	--	Connector Assembly	A M - S P R 束 線	(VT91380)	
L190	--	Connector Assembly	D M - A M 束 線	(VT91390)	
* FLOPPY DISK DRIVE ASSEMBLY					
F10	VT455300	Floppy Disk Drive	F D D A S S Y	PSR620 (VT45200)	21
F20	VT431000	Holder, FDD	3 . 5 " F D D		03
F30	VT431100	Holder, FDD	F D D 金 具		03
F40	EA030056	Pan Head Screw	F D D 金 具 R		01
F50	VA121600	Rubber Bushing	+ ナ ベ 小 ネ ジ	4pcs (0375111)	01
F60	VK431100	Spacer, FDD	ゴ ム ブ ッ シ ュ	4pcs	01
F70	--	Adhesive Tape	F D D ス ペ ー サ	4pcs (ZL35000)	01
* ACCESSORIES					
	VQ284000	Music Rest	付 属 品		08
	VS276100	AC Adapter	諧 面 立 品	J	11
	VT872400	Japanese Guide Set	A C ア ダ プ タ ー	J	09
	VT422300	Cartridge Assembly	和 文 シ ー ト		
			C A R T A s s y		

* New Parts (新規部品)

ランク: Japan only

UPPER CASE ASSEMBLY (PSR-620)

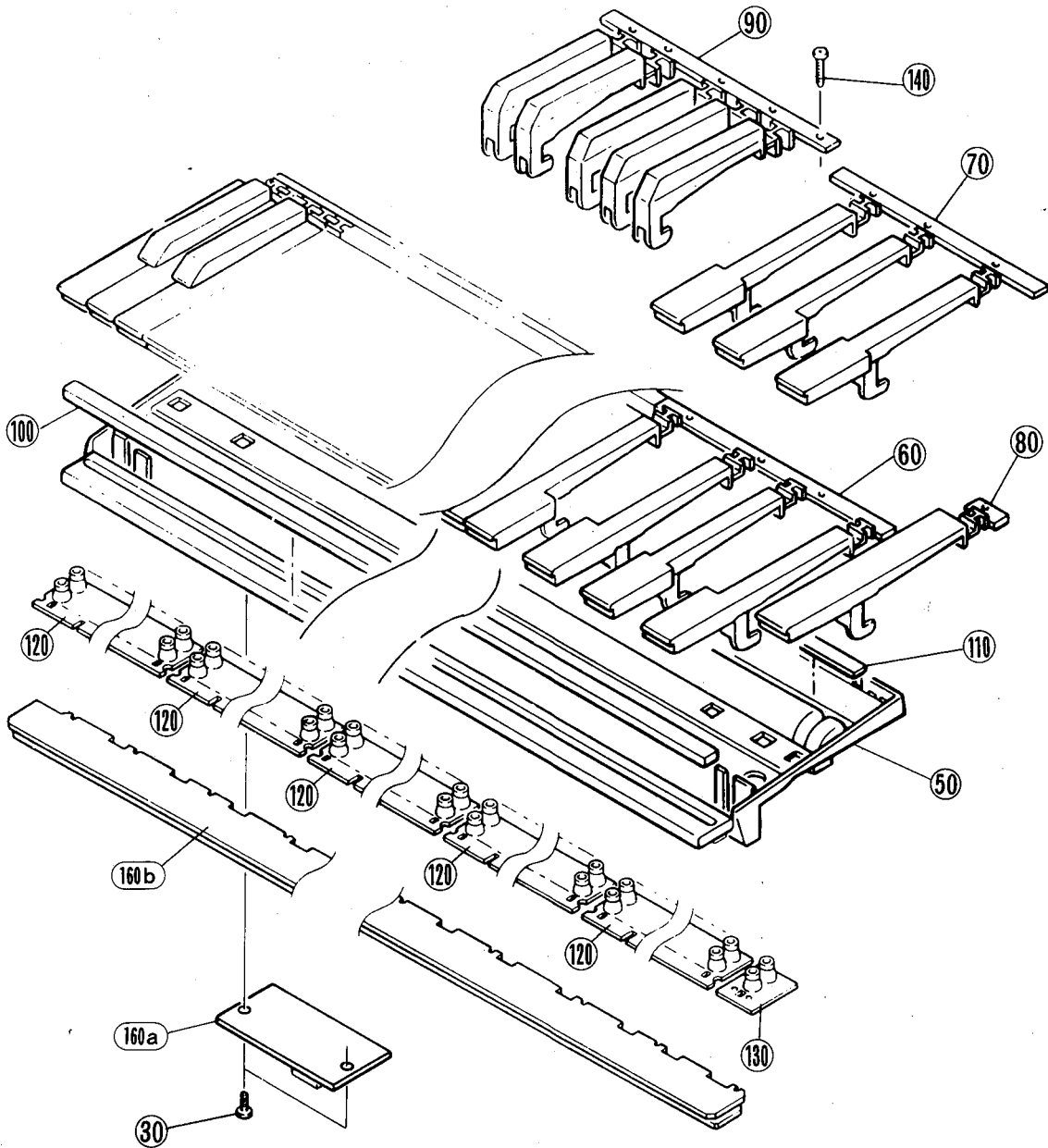


REF NO.	PART NO.	DESCRIPTION		部 品 名	REMARKS	ランク
	--	UPPER CASE ASSEMBLY		上 ケ ー ス A S S Y	PSR620 (VT44180)	
* 10	VT441500	Upper Case		上 ケ ー ス 加 工 品		
* 20	XQ764A00	Speaker	12.0cm 4ohm 8W	ス ピ ー カ ー	2pcs	05
* 30	VT365700	Panel Switch	L	パ ネ ル ス イ ッ チ L	DEMO-ENDING	05
* 40	VT365800	Panel Switch	C	パ ネ ル ス イ ッ チ C	LARGE-FREEZE	04
* 50	VT366000	Panel Switch	R	パ ネ ル ス イ ッ チ R	MODE-4	05
* 70a	NX007440	Circuit Board	PN1-1/2	PN1-1/2シ ー ト	(VT40030)	
* 70b	NX007450	Circuit Board	PN1-2/2	PN1-2/2シ ー ト	(VT40030)	
* 70c	NX007460	Circuit Board	PN1S	P N 1 S シ ー ト	(VT40030)	
* 70d	NX007470	Circuit Board	PB	P B シ ー ト	(VT40030)	
* 70e	NX007490	Circuit Board	ENC	E N C シ ー ト	(VT40030)	
* 90	VT368500	Cartridge Cover		C A R T 蓋 成 形 品		03
* 100	VT422400	Spring		回 転 バ ネ		01
* 110	VT367600	Cartridge Guide		C A R T ガ イ ド 成 形 品		04
* 120	VT488200	LCD	EDMCR11A00	液 晶 デ ィ ス プ レ イ		14
* 130	VT912200	Back-lit board Assembly		導 光 板 A s s y		06
* 140	--	Wheel Assembly		ホ イ ー ル A S S Y	(VT48770)	
* 140a	VT366400	Wheel		ホ イ ー ル	PITCH BEND	03
* 140b	VT440100	Spring		ホ イ ー ル バ ネ		03
* 150	EP600280	Bind Head Tapping Screw-P	3.0X8 MFZN2Y	+ バ イ ン ド P タ イ ト	31pcs	01
* 160	V8931600	Bind Head Tapping Screw-P	4.0X8 MFZN2BL	+ バ イ ン ド P タ イ ト	8pcs	01
* 170	VA119300	Filament Tape	12X25	粘 着 テ ー プ	3pcs	01
* 180	--	Connector Assembly	DM-LCD	D M - L C D 束 線	(VT44520)	
* 190	--	Connector Assembly	DM-LCD2	D M - L C D 2 束 線	(VT43950)	
* 220	--	Cishion	-U	防 振 シ ー ト - U	(VT74690)	
* 240	--	Cishion	L-L	防 振 シ ー ト L - L	(VT74710)	
* 250	--	Cishion	C-L	防 振 シ ー ト C - L	(VT74720)	
* 260	--	Cishion	R-L	防 振 シ ー ト R - L	(VT74730)	
* 280	--	Reflecion Sheet		反 射 シ ー ト	(VT54610)	
* 290	VA126100	Filament Tape	12X50	粘 着 テ ー プ	2pcs	03
* 300	--	Tape	7X80X0.5	防 振 テ ー プ	(VT85810)	
* 310	CB502030	Cord Binder	S-75B	束 線 止 め		01

* New Parts (新規部品)

ランク: Japan only

KEYBOARD ASSEMBLY



REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	ランク
	VQ383800	KEYBOARD ASSEMBLY	1 6 L 鍵盤 A S S Y	PSR620	26
30	EP630220	Bind Head Tapping Screw-P	+ バインド P タイト	2pcs	01
40	--	Filament Tape	粘 着 テー プ	2pcs (VM72270) (VG49510)	
50	--	Frame	フ レー ム		
60	VH180900	White Keys	白 鍵 C E G B	5pcs	03
70	VH181000	White Keys	白 鍵 D F A	5pcs	03
80	VH181100	White Key	白 鍵 C	1pc.	01
90	VH181200	Black Keys	黒 鍵	5pcs	03
100	VH181300	Felt	フ ェ ル		03
110	VH181400	Rubber Sheet	ゴ ム シー ト		01
120	VT694800	Rubber Contact	接 点 ゴ ム	5pcs	05
130	VT695000	Rubber Contact	接 点 ゴ ム	1pc.	03
140	VB205200	Bind Head Tapping Screw-P	+ バインド P タイト	21pcs	01
* 140	VS756700	Bind Head Tapping Screw-P	+ バインド P タイト	21pcs	01
160	--	Circuit Board	M K シー ト サブ基板付	(VQ38960)	
160a	VQ305200	Circuit Board	M K S シー ト		10
160b	VL319900	Circuit Board	M K シー ト サブ束線付		13

* New Parts (新規部品)

ランク : Japan only

ELECTRICAL PARTS

REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	ランク
		ELECTRICAL PARTS	電 気 部 品	PSR620	
*	NX007360	Circuit Board	A M シ ー ト		
*	NX007370	Circuit Board	M V R シ ー ト		
*	NX007380	Circuit Board	H P シ ー ト		
*	NX007390	Circuit Board	P S W シ ー ト		
*	VT400500	Circuit Board	D M シ ー ト	JX	
*	VT400400	Circuit Board	D M シ ー ト	U,C	
	VQ305200	Circuit Board	M K S シ ー ト		10
	VL319900	Circuit Board	M K シ ー ト サブ東線付		13
	NX007440	Circuit Board	PN1-1/2		
	NX007450	Circuit Board	PN1-2/2		
	NX007460	Circuit Board	PN1S		
	NX007470	Circuit Board	P B シ ー ト		
	NX007490	Circuit Board	E N C シ ー ト		
	NX007360	Circuit Board	A M シ ー ト	(XQ372B0)	
	NX007370	Circuit Board	M V R シ ー ト	(XQ372B0)	
	NX007380	Circuit Board	H P シ ー ト	(XQ372B0)	
	NX007390	Circuit Board	P S W シ ー ト	(XQ372B0)	
	EP030530	Bind Head Tapping Screw-2	3.0X8 MFZN2Y	+	01
	UA654100	Mylar Capacitor	0.0100 50V J	マ イ ラ ー コ ン	01
	UA654390	Mylar Capacitor	0.0390 50V J	マ イ ラ ー コ ン	01
	UA654470	Mylar Capacitor	0.0470 50V J	マ イ ラ ー コ ン	01
	VR168300	Mylar Capacitor	0.10 50V J	マ イ ラ ー コ ン	01
	FG612470	Ceramic Capacitor-B	470P 50V K	セ ラ コ ン B	01
	FG613470	Ceramic Capacitor-B	4700P 50V K	セ ラ コ ン B	01
	FG613560	Ceramic Capacitor-B	5600P 50V K	セ ラ コ ン (B)	01
	FG651220	Ceramic Capacitor-SL	22P 50V J	セ ラ コ ン (S L)	01
	FG644100	Ceramic Capacitor-F	0.0100 50V Z	セ ラ コ ン F	01
	VT757800	Monolithic Ceramic Cap.	1.000 25V Z	積 層 セ ラ コ ン	01
	UJ827330	Electrolytic Cap.	33.00 10.0V	ケ ム イ コ ン	01
	UJ837100	Electrolytic Cap.	10.00 16.0V	ケ ム イ コ ン	01
	UJ837470	Electrolytic Cap.	47.00 16.0V	ケ ム イ コ ン	01
	UJ838100	Electrolytic Cap.	100.00 16.0V	ケ ム イ コ ン	01
	UJ848100	Electrolytic Cap.	100.00 25.0V	ケ ム イ コ ン	01
	UI848100	Electrolytic Cap.	100.00 25.0V	ケ ム イ コ ン	01
	UJ865470	Electrolytic Cap.	0.47 50.0V	ケ ム イ コ ン	01
	UJ866100	Electrolytic Cap.	1.00 50.0V	ケ ム イ コ ン	01
	VT848900	Electrolytic Cap.	6800 25.0V	ケ ム イ コ ン	01
	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z	半 導 体 セ ラ コ ン	01
	V8835000	Coil	FL5R200QNT 20u	コ イ ル 2 0 U	01
	HF753220	Carbon Resistor	2.2 1/4 J	カ ー ボ ン 抵 抗	01
	HF755100	Carbon Resistor	100.0 1/4 J	カ ー ボ ン 抵 抗	01
	HF755150	Carbon Resistor	150.0 1/4 J	カ ー ボ ン 抵 抗	01
	HF755330	Carbon Resistor	330.0 1/4 J	カ ー ボ ン 抵 抗	01
	HF755680	Carbon Resistor	680.0 1/4 J	カ ー ボ ン 抵 抗	01
	HF756180	Carbon Resistor	1.8K 1/4 J	カ ー ボ ン 抵 抗	01
	HF756220	Carbon Resistor	2.2K 1/4 J	カ ー ボ ン 抵 抗	01
	HF756470	Carbon Resistor	4.7K 1/4 J	カ ー ボ ン 抵 抗	01
	HF757100	Carbon Resistor	10.0K 1/4 J	カ ー ボ ン 抵 抗	01
	HF757120	Carbon Resistor	12.0K 1/4 J	カ ー ボ ン 抵 抗	01
	HF757270	Carbon Resistor	27.0K 1/4 J	カ ー ボ ン 抵 抗	01
	HF757330	Carbon Resistor	33.0K 1/4 J	カ ー ボ ン 抵 抗	01
	HF757470	Carbon Resistor	47.0K 1/4 J	カ ー ボ ン 抵 抗	01
	HF758100	Carbon Resistor	100.0K 1/4 J	カ ー ボ ン 抵 抗	01
	HF758470	Carbon Resistor	470.0K 1/4 J	カ ー ボ ン 抵 抗	01
	V1878300	Cable Holder	51048-5P TE	ケ ー ブ ル ホ ル ダ ー	01
	V1878400	Cable Holder	51048-6P TE	ケ ー ブ ル ホ ル ダ ー	01
	VA078900	Heat Sink		放 熱 板	(VT40290)
	VA078900	Jumper Wire	0.55	ジャンパー線	
	---	Connector Assembly	DM-SW	D M - S W 東 線	(VT95690)
	---	Connector Assembly	DM-AM	D M - A M 東 線	(VT44580)
	---	Connector Assembly	AM-SW	A M - S W 東 線	(VT44600)
	---	Connector Assembly	AM-HP	A M - H P 東 線	(VT96980)
	---	Connector Assembly	DM-VR	D M - V R 東 線	(VT91410)
	---	Connector Assembly	AM-VR	A M - V R 東 線	(VT91420)
D701	VL723600	Diode	20E1-FC4	ダ イ オ ード	01
D702	VL723600	Diode	20E1-FC4	ダ イ オ ード	01
IC302	XB247A00	IC	UPC4570HA	イ ン テ ー ジ ン グ	01
IC303	XR162A00	IC	AN8009-(TA)	イ ン テ ー ジ ン グ	01

* New Parts (新規部品)

ランク: Japan only

REF NO.	PART NO.	DESCRIPTION		部 品 名	REMARKS	ランク
* IC501	XB247A00	IC	UPC4570HA	I C	OP AMP	01
* IC701	XQ619A00	IC	LA4705NA 17W BTL	I C	POWER AMP	05
JK401	VJ107200	DIN Connector	5P YKF51-5050	D I N コ ネ ク タ	MIDI OUT	01
JK402	VJ107200	DIN Connector	5P YKF51-5050	D I N コ ネ ク タ	MIDI IN	01
JK403	VB312600	Phone Jack	YKB21-5012 BL	ホ ー ン ジ ャ ッ ク (黒)	SUSTAIN	02
JK501	VB312600	Phone Jack	YKB21-5012 BL	ホ ー ン ジ ャ ッ ク (黒)	AUX OUT R	02
JK502	VC687500	Phone Jack	YKB21-5014 BL	ホ ー ン コ ネ ク タ (黒)	AUX OUT L/L+R	01
JK701	LB101870	Phone Jack	YKB21-5006	ホ ー ン ジ ャ ッ ク	PHONES	03
JK702	VC664500	DC IN Connector	HEC2305	電 源 コ ネ ク タ	DC IN 10-12V	01
LF701	VH227500	Line Filter	SU10VD-10020	ラ イ ン フ ィ ル タ ー		03
SW301	VQ670600	Push Switch	SDDL1	プ ッ シ ュ S W	POWER switch	03
VR301	VQ320200	Rotary Variable Resistor	A10K2	二 連 ロ ー タ リ ー V R	MASTER VOLUME	03
* VT400500		Circuit Board	DM	D M シ ー ト	J,X (XQ371B0)	
* VT400400		Circuit Board	DM	D M シ ー ト	U,C (XQ371B0)	
	EP600190	Bind Head Tapping Screw-2	3.0X8 MFZN2BL	マ イ ン ド T P 2 種 溝		01
	UA654470	Mylar Capacitor	0.0470 50V J	マ イ ラ ー コ ン		01
	VA760600	Ceramic Capacitor-CH	10P 50V D	セ ラ コ ン (C H)		01
	FG644100	Ceramic Capacitor-F	0.0100 50V Z	セ ラ コ ン F		01
	UJ827470	Electrolytic Cap.	47.00 10.0V	ケ ケ ミ コ ン		01
	UJ828100	Electrolytic Cap.	100.00 10.0V	ケ ケ ミ コ ン		01
	UJ848100	Electrolytic Cap.	100.00 25.0V	ケ ケ ミ コ ン		01
	UJ866100	Electrolytic Cap.	1.00 50.0V	ケ ケ ミ コ ン		01
	UJ867100	Electrolytic Cap.	10.00 16.0V	ケ ケ ミ コ ン		01
	UJ819100	Electrolytic Cap.	1000 6.3V	ケ ケ ミ コ ン		01
	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z	半 導 体 セ ラ コ ン		01
	HF754220	Carbon Resistor	22.0 1/4 J	カ カ ー ボ ン 抵 抗		01
	HF755100	Carbon Resistor	100.0 1/4 J	カ カ ー ボ ン 抵 抗		01
	HF755180	Carbon Resistor	180.0 1/4 J	カ カ ー ボ ン 抵 抗		01
	HF755220	Carbon Resistor	220.0 1/4 J	カ カ ー ボ ン 抵 抗		01
	HF755270	Carbon Resistor	270.0 1/4 J	カ カ ー ボ ン 抵 抗		01
	HF755680	Carbon Resistor	680.0 1/4 J	カ カ ー ボ ン 抵 抗		01
	HF755820	Carbon Resistor	820.0 1/4 J	カ カ ー ボ ン 抵 抗		01
	HF756100	Carbon Resistor	1.0K 1/4 J	カ カ ー ボ ン 抵 抗		01
	HF757100	Carbon Resistor	10.0K 1/4 J	カ カ ー ボ ン 抵 抗		01
	HF757220	Carbon Resistor	22.0K 1/4 J	カ カ ー ボ ン 抵 抗		01
	HF757470	Carbon Resistor	47.0K 1/4 J	カ カ ー ボ ン 抵 抗		01
	HF758100	Carbon Resistor	100.0K 1/4 J	カ カ ー ボ ン 抵 抗		01
	HF759100	Carbon Resistor	1.0M 1/4 J	カ カ ー ボ ン 抵 抗		01
	VH010400	Metal Film Resistor	220.0K 1/4 F	金 属 皮 膜 抵 抗		01
	VH011000	Metal Film Resistor	390.0K 1/4 F	金 属 皮 膜 抵 抗		01
	VB390000	Base Post Connecor	PH -4P TE	コ ネ ク タ ベ ー ス ポ ス		01
	VA078900	Jumper Wire	0.55	コ ジ ャ ン パ ー		01
D001	VB941200	Diode	1SS133,1SS176	ダ イ オ ー		01
L301	VB835000	Coil	FL5R200QNT 20u	コ イ ル 2 0 U		01
L301	VF968800	Coil	SBT-0260TF 60u	コ イ ル S B 6 0 u H		01
CA301	VH285500	Ceramic Cap. Array	470Px6 50V M	セ ラ コ ン ア レ イ		02
CA801	VT487100	Ceramic Cap. Array	470Px12	セ ラ コ ン ア レ イ		02
CN101	--	Connector	PSB4D30-2	P 基 板 用 コ ネ ク タ	(VT40210)	
CN401	VF728300	Wire Trap	52147-6P TE	コ ネ ク タ		01
CN402	VK025800	Wire Trap	52147-14P TE	ワ イ ヤ ー ト ラ ッ プ		01
CN403	VK024600	Wire Trap	52147-2P TE	ワ イ ヤ ー ト ラ ッ プ		01
CN501	VP127700	FFC Connector	52045-24P TE	F F C コ ネ ク タ		01
CN601	VK024900	Wire Trap	52147-5P TE	ワ イ ヤ ー ト ラ ッ プ		01
CN802	VK025600	Wire Trap	52147-12P TE	ワ イ ヤ ー ト ラ ッ プ		01
CN803	VK025700	Wire Trap	52147-13P TE	ワ イ ヤ ー ト ラ ッ プ		01
* CR001	VT487200	Ceramic Resonator	16M EFOEC1605T4	セ ラ ミ ッ ク 振 動 子		02
* CR001	VT630600	Ceramic Resonator	16.0M CST16.00M	セ ラ ミ ッ ク 振 動 子		02
* CR201	VT487600	Quartz Crystal Unit	33.8688M AT-49	水 晶 振 動 子		04
* IC001	XQ799A00	IC	HD6413003TF16	I C	CPU	09
IC002	XL123A00	IC	TC74AC139P	I C	DECODER	03
IC002	IR013900	IC	TC74HC139P	I C	DECODER	05
IC003	XQ693A00	IC	IC-PST993C-T	I C	RESET	01
IC004	IR001450	IC	SN74HC14N	I C	INVERTER	05
IC101	XL788A00	IC	TC518129APL-80	I C	PSRAM 1M	12
* IC101	XQ974A00	IC	KM658128ALP-8	I C	PSRAM 1M	09
* IC102	XR313A00	IC		I C	ROM 4M(PROGRAM)	
* IC103	XR168A00	IC		I C	ROM STYLE	
IC104	XG658A00	IC	TC74AC32P	I C	OR	02
* IC104	XQ973A00	IC	MC74AC32N	I C	OR	02

* New Parts (新規部品)

ランク: Japan only

REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	ランク
IC201	XQ036A00	IC	TC170C120SF-003	C SWP00	10
IC202	XN978A00	IC	MB81C4256A-70PS	C DRAM 1M	08
IC203	XQ707B00	IC	KM23C16000B	C WAVE ROM1	12
IC204	XQ708B00	IC	KM23C16000B	C WAVE ROM2	12
IC205	1R000450	IC	SN74HC04N	C INVERTER	03
IC301	XM145A00	IC	UPD63200GS	C DAC	07
IC501	X1939A00	IC	HD63266F	C FDC	09
IC601	XM993A00	IC	S-81250PG-T	C REGULATOR +5V	02
IC602	XL450A00	IC	PQ05RA1	C REGULATOR +5V	03
IC604	XQ774A00	IC	PQ09RA1	C REGULATOR +9V	03
IC901	VG181900	Photo Coupler	PC-900V	フ ォ ト カ プ ラ	03
RA101	VT455500	Resistor Array	RGLD7Y221J 220x7	抵 抗 ア レ イ	01
RA501	VN927500	Resistor Array	RGLE6X102J 1Kx6	抵 抗 ア レ イ	01
RA801	VF238600	Resistor Array	RGLE8X473J 47Kx8	抵 抗 ア レ イ	01
RA802	VF771900	Resistor Array	RGLE8X103J 10Kx8	抵 抗 ア レ イ	01
TR801	YT507900	Transistor	2SA1524-AC	ト ラ ン ジ ス タ	01
TR801	VT455400	Digital Transistor	DTB123YS TP	デ ジ タ ル ト ラ ン ジ ス タ	01
TR805	VK165500	Digital Transistor	DTC123JS TP	デ ジ タ ル ト ラ ン ジ ス タ	01
TR901	VD678700	Digital Transistor	DTC114ES	デ ジ タ ル ト ラ ン ジ ス タ	03
TR902	IC260320	Transistor	2SC2603 E,F	ト ラ ン ジ ス タ	01
	VQ305200	Circuit Board	MKS	M K S シ ー ト	(XM324A0)
	VD840500	Ceramic Capacitor-SL	22P 50V J	円 筒 セ ラ (S L)	01
	VK392400	Ceramic Capacitor-F	47000P 16V Z	円 筒 セ ラ (F)	01
	VL409500	Coil	BL03RN2-R62T4 0.45	コ イ ル 0. 4 5 U	01
	VL674500	Resistor Array	RGLE12X223J	抵 抗 ア レ イ	01
	XJ450A00	IC	HD63B05V0D73P	コ ン ネ ク タ	CPU 07
	VF728300	Connector	52147-6P TE	コ ネ ク タ	01
	VK025500	Wire Trap	52147-11P TE	ワ イ ヤ ー ト ラ ッ プ	01
	VK025600	Wire Trap	52147-12P TE	ワ イ ヤ ー ト ラ ッ プ	01
	---	Vibration-proof Tape	10X64X0.5	防 振 テ ー プ	(VK34680)
10	UJ828100	Electrolytic Cap.	100.00 10.0V	ケ ー プ	01
20	HF756470	Carbon Resistor	4.7K 1/4 J	カ ー ボ ン 抵 抗	01
30	HF757470	Carbon Resistor	47.0K 1/4 J	カ ー ボ ン 抵 抗	01
40	VA078900	Jumper Wire	0.55	ジャンパー線	01
CR1	VN002100	Ceramic Resonator	CST8.00MTW140	セラミック振動子	02
CR1	VQ305500	Ceramic Resonator	8.00M EFOEC8004T3	セラミック振動子	02
	VL319900	Circuit Board	MK	M K シ ー ト サ ブ 束 線 付	(XF656F0)
	VB941200	Diode	1SS133,1SS176	ダイオード	01
	VA078900	Jumper Wire	0.55	ジャンパー線	
	---	Earth Wire	AWG22 34mm BL	ア ー ス 線	(V112660)
	---	Cable	11P	ケ ー ブ ル	(VL31910)
	---	Cable	12P	ケ ー ブ ル	(VL31920)
	---	Cable	1P L=210mm	ケ ー ブ ル	(VL74540)
	NX007440	Circuit Board	PN1-1/2	P N 1 - 1 / 2 シ ー ト	(XQ500A0)
	NX007450	Circuit Board	PN1-2/2	P N 1 - 2 / 2 シ ー ト	(XQ500A0)
	NX007460	Circuit Board	PN1S	P N 1 S シ ー ト	(XQ500A0)
	NX007470	Circuit Board	PB	P B シ ー ト	(XQ500A0)
	NX007490	Circuit Board	ENC	E N C シ ー ト	(XQ500A0)
	HF757100	Carbon Resistor	10.0K 1/4 J	カ ー ボ ン 抵 抗	01
	VT488100	Lamp	0.1A HRT-6101A	ラ ンプ 1 2 V	for LCD back-lit 02
	VT513600	Light Touch Switch	EVQ 22C 05B	ラ イ ト タ ッ チ S W 2 端 子	01
	VQ371800	Encoder	EVQ WP5 F15 24B	1 6 形 エ ン コ ー ダ	04
	V1878100	Cable Holder	51048-3P TE	ケ ー ブ ル ホ ル ダ ー	01
	VB941200	Diode	1SS133,1SS176	ダイオード	01
	VT387900	LED	SLZ-190B-10-T2	LED	01
	VT370200	Holder	PSR620	ラ ンプ ホ ル ダ	03
	VA078900	Jumper Wire	0.55	ジャンパー線	
	---	Connector Assembly	PN1-PB	P N 1 - P B 束 線	(VT43910)
	---	Connector Assembly	PN1-ENC	P N 1 - E N C 束 線	(VT43920)
	---	Connector Assembly	DM-PN1A	D M - P N 1 A 束 線	(VT44540)
	---	Connector Assembly	DM-PN1B	D M - P N 1 B 束 線	(VT44550)
	---	Connector Assembly	PN1-PN1S	P N 1 - P N 1 S 束 線	(VT75500)
LD808	VC341300	LED	SLZ-190B-01	L E D	01
VR901	VT432100	Rotary Variable Resistor	B10K EVJ05DF25B14	ロ ー タ リ ー V R	03
	XQ764A00	Speaker	12.0cm 4ohm 8W	ス ピ ー カ ー	05
	VT488200	LCD	EDMCR11A00	液 晶 デ ィ ス プ レ イ	14
	VT370000	Back-lit board		バ ッ ク ラ イ ト 導 光 板	
	VT455300	Floppy Disk Drive	EME-213YN	3 . 5 " F D D	21

* New Parts (新規部品)

ランク : Japan only