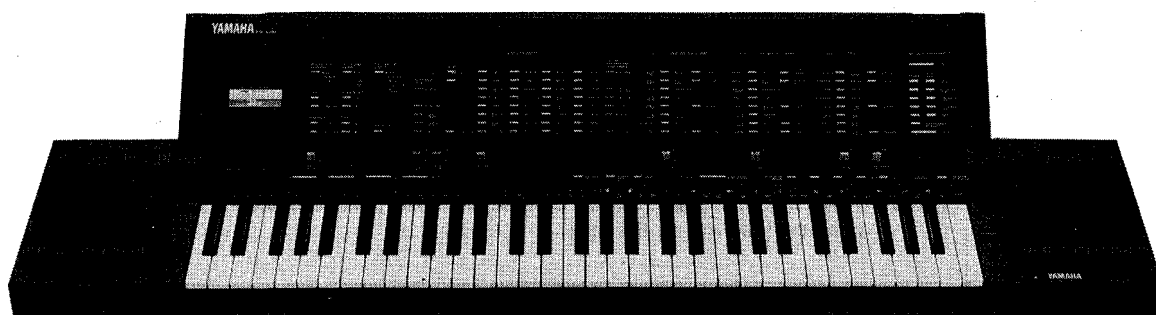


PORTATONE

PSR-6300

SERVICE MANUAL



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SPECIFICATIONS

Keyboard

61 keys (C₁—C₆)

Solo Voices

Trumpet, Trombone, Horn, Saxophone, Violin, Jazz Flute, Piccolo, Oboe, Elec Guitar, Percus 1, Percus 2, Popsynth, Bluesynth, Funksynth, Slapsynth 1, Slapsynth 2, On/Off, Volume

Upper Orchestra Voices

Brass 1, Brass 2, Brass & Chimes, Clarinet, Strings, Jazz Organ, Pipe Organ, Cosmic, Piano, Elec Piano, Harpsichord, Vibes, Jazz Guitar, Hawaiian Guitar, Koto, Music Box, On/Off, Volume

Lower Orchestra Voices

Brass Ens. 1, Brass Ens. 2, Horn, Hard Brass, String Ens., Elec Organ, Harmonica, Wave, Piano, Elec Piano, Harpsichord, Clavi, Lute, Toy Piano, Bells, Fantasy, On/Off, Volume

Effects

Solo: Sustain 1, Sustain 2, Chorus, Portamento, Portamento Time

Upper: Sustain 1, Sustain 2, Chorus, Duet, Trio

Lower: Sustain 1, Sustain 2, Chorus, To Upper

Rhythm Section

Disco, Pops, Rock'n'Roll, 8 Beat, 16 Beat, Electric Pop, Heavy Metal, Country, Big Band, Swing, Bounce, Slow Rock, Shuffle, Reggae, Hard Rock, Boogie, Salsa, Rhumba, Samba, Bossanova, March/Polka, 6/8 March, Waltz, Jazz Waltz, Volume, Tempo, Variation, Fill-In 1, 2, 3, 4, Start, Synchro Start, Stop, Intro/Ending, Custom 1, 2, 3, 4, 5, 6, 7, 8

Keyboard Percussion: 12 Latin Percussions, 15

Drum Percussions, Accent, On/Off

Auto Bass Chord System

Memory, Fingered, Single Finger, Manual Bass, Off, Bass Volume, Chord Volume

Custom Accompaniment

Program, Rhythm Step Write, Rhythm, Bass, Chord, Clear

Registration Memory

Program, 1, 2, 3, 4, 5

Music Programmer

Record & Playback: Solo, Upper Orchestra, Lower Orchestra, Accompaniment, Bass, Accompaniment Step Write, Pause, Off

RAM Pack

To Pack, From Pack

Tape Interface

To Tape, From Tape

Transposer

1/2 octave up and down

Pitch Control

± 50 cents

Pitch Bend

Pitch Bend Wheel, Pitch Bend Range

Key Velocity Sensitivity

High, Normal, Low

Foot Switch Functions

Glide, Portamento, Fill-In, Start/Stop, Intro/Ending

Other Controls

Power Switch, Pilot Lamp, Master Volume, LED Display, Tempo Light, Modulation Wheel, Key Split, Key Split lamps, MIDI mode

Auxiliary Jacks

Headphones, Foot switch, Sustain, Tape (In/Out), MIDI (In/Out/Thru), Exp Pedal, Aux Out(L/R), AC In

Amplifiers

5.0 W × 2

Speakers

12.0cm (4 ohms) × 2

Dimensions (W × D × H)

1,181mm × 273mm × 96mm

(46-1/2" × 10-3/4" × 3-3/8")

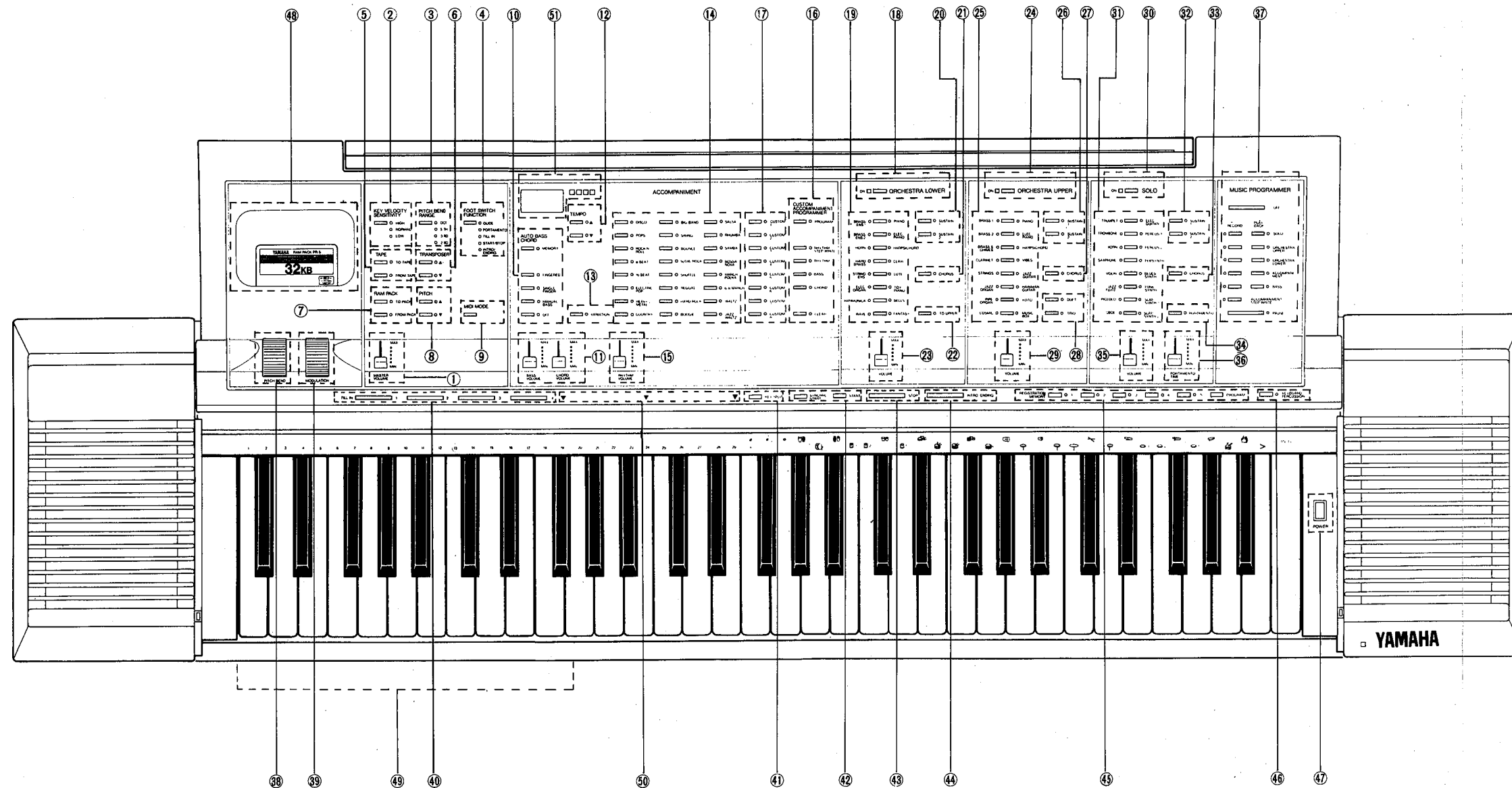
(Panel open: 1,181mm × 310mm × 434mm)

Weight

12.0kg (26.4 lbs.)

Specifications are subject to change without notice.

PANEL LAYOUT (パネルレイアウト)



- ① Master Volume
- ② Key Velocity Sensitivity selector
- ③ Pitch Bend Range selector
- ④ Foot Switch Function selector
- ⑤ Tape Interface
- ⑥ Transposer
- ⑦ RAM Pack function selectors
- ⑧ Pitch controls
- ⑨ MIDI Mode selector

Accompaniment section

- ⑩ Auto Bass Chord selectors
- ⑪ Bass & Chord Volume
- ⑫ Tempo controls
- ⑬ Variation
- ⑭ Rhythm selectors
- ⑮ Rhythm Volume
- ⑯ Custom Accompaniment Programmer selectors
- ⑰ Custom Accompaniment Memory selectors

Lower Orchestra section

- ⑱ On/Off switch
- ⑲ Voice selectors
- ⑳ Sustain selectors
- ㉑ Chorus
- ㉒ To Upper
- ㉓ Volume

Upper Orchestra Section

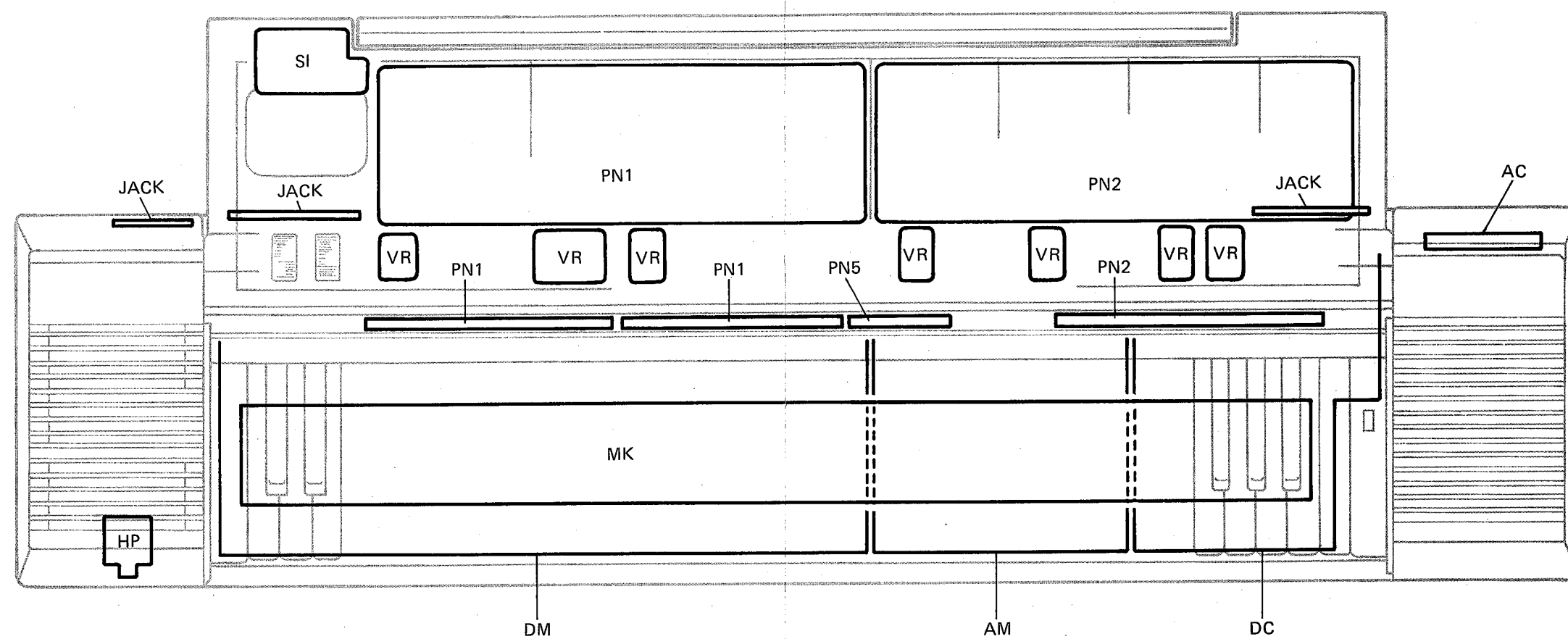
- ㉔ On/Off switch
- ㉕ Voice selectors
- ㉖ Sustain selectors
- ㉗ Chorus
- ㉘ Duet & Trio
- ㉙ Volume

Solo section

- ㉚ On/Off switch
- ㉛ Voice selectors
- ㉜ Sustain selectors
- ㉝ Chorus
- ㉞ Portamento
- ㉟ Volume
- ㊱ Portamento Time control
- ㊲ Music Programmer selectors
- ㊳ Pitch Bend wheel
- ㊴ Modulation wheel
- ㊵ Fill-in selectors
- ㊶ Key Split selector
- ㊷ Synchro Start & Start
- ㊸ Stop
- ㊹ Intro/Ending
- ㊺ Registration Memory selectors

- ㊻ Keyboard Percussion
- ㊼ Power switch
- ㊽ RAM Pack compartment
- ㊾ Lower Keyboard Split section
- ㊿ Keyboard Split lamps
- 1 LED Display

■CIRCUIT BOARD LAYOUT(ユニットレイアウト)



■ DISASSEMBLY PROCEDURE (分解手順)

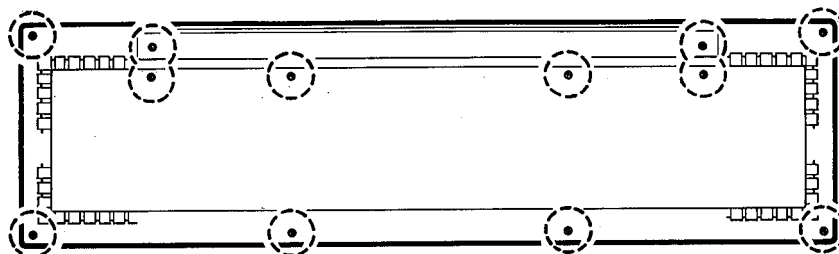
● Lower Case Removal

Take off the Lower case by removing the twelve retaining screws marked with circle. (Fig. 1).

● 下ケースの取り外し

丸印の止めネジ12本を外して、下ケースを取り外します (図1)。

(Fig. 1)
(図1)



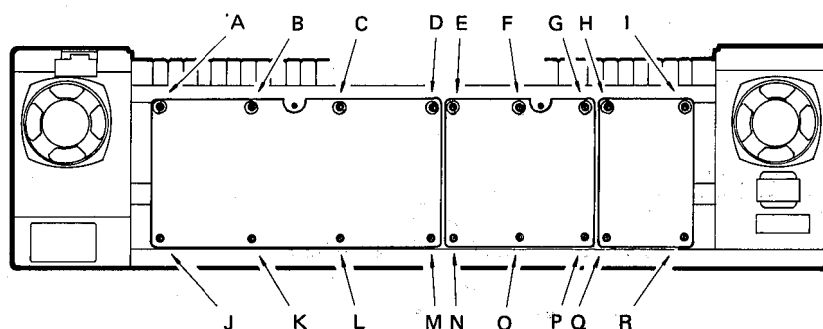
● DM, AM and DC Circuit Boards Removal

As shown in Fig 2, loosen the nine retaining screws (A-I) securing DM, AM and DC circuit boards, remove the nine retaining screws (J-R), and remove each circuit board. (Fig. 2).

● DM、AM、DCシートの取り外し

図2のように、DM、AM、DCシートをとめているA～Iのネジをゆるめ、J～Rネジを外して、各シートを取り外します。

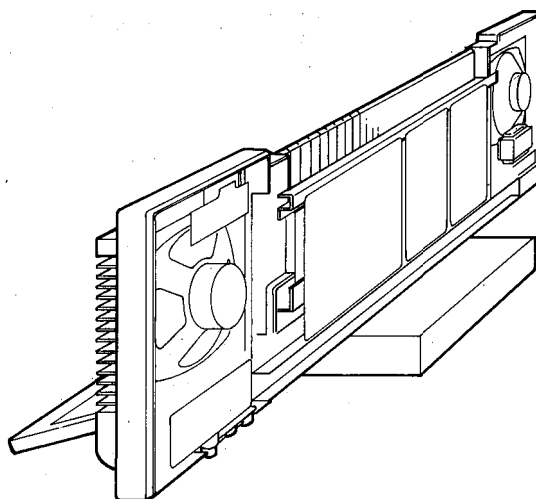
(Fig. 2)
(図2)



CAUTION: When setting PSR-6300 in the upright position, put the stags under PSR-6300 to prevent the pin jack (EXP-pedal) from contacting with worktable. (Fig. 3).

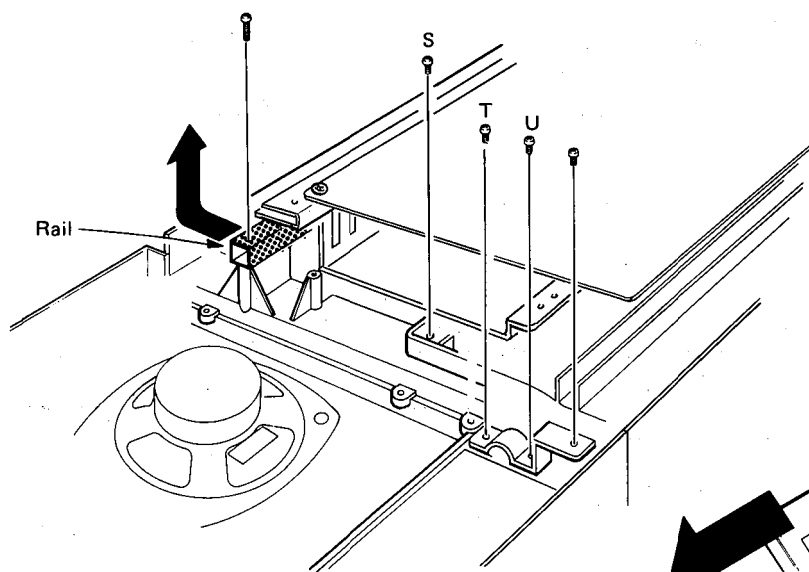
注意: 本体を立てるときには、ピンジャック (EXPペダル) が机にあたらないように、下にかいものをして下さい (図3)。

(Fig. 3)
(図3)



● Control Panel Removal

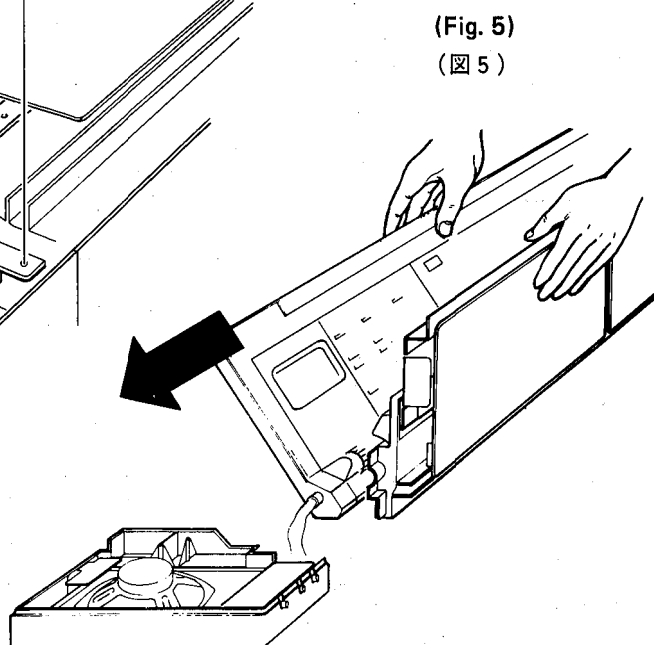
- (1) Take off the key stopper rail by removing the two retaining screws (left and right) (Fig. 4).
- (2) Take off the baffle board by removing the four retaining screws (S - V) (Fig. 4).
- (3) Remove the control panel by pulling it to the left (Fig. 5).



(Fig. 4)
(図 4)

●コントロールパネルの取り外し

- 1) 口金を止めている左右のネジ2本を外して口金を取り外します (図 4)。
- 2) ネジ4本 (S ~ V) を外して、バッフルボードを取り外します (図 4)。
- 3) コントロールパネルを左に引いて外します (図 5)。



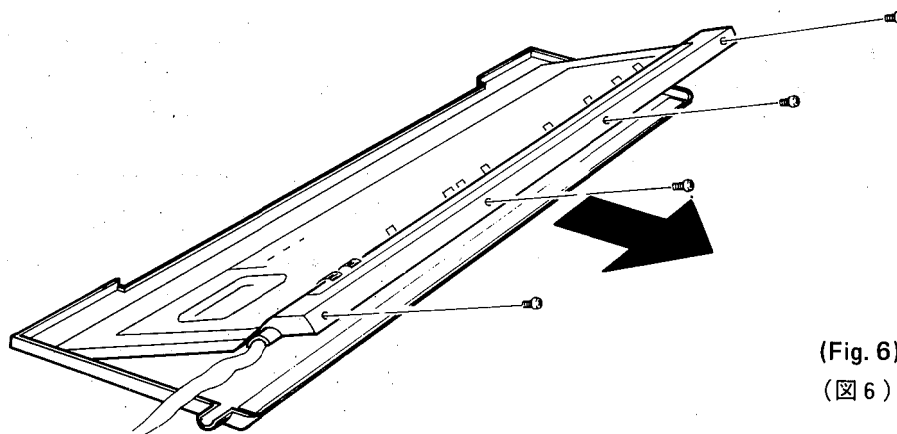
(Fig. 5)
(図 5)

● Panel Cover Removal

Remove the four retaining screws and take off the panel cover by pulling it towards you (Fig. 6).

●パネルカバーの取り外し

ネジ4本を外し、パネルカバーを手前に引いて外します (図 6)。



(Fig. 6)
(図 6)

● Keyboard Unit Removal

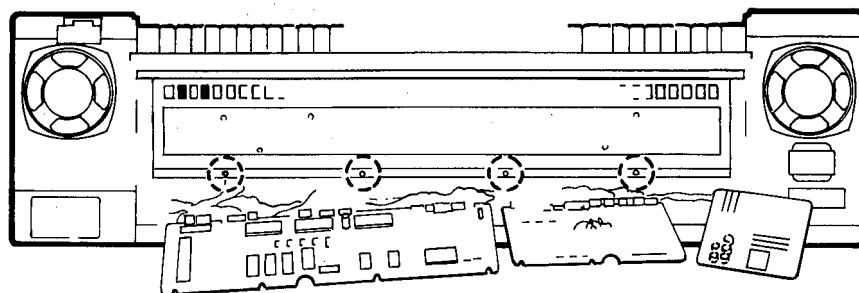
- (1) Remove the key stopper rail.
- (2) Remove the DA, AM and DC circuit boards.
- (3) Take off the keyboard unit by removing the four retaining screws (Fig. 7).

●キーボードの取り外し

- 1) 口金を外す。
- 2) DM、AM、DCシートを外す。
- 3) ネジ4本を外してキーボードを外します (図7)。

(Fig. 7)

(図7)

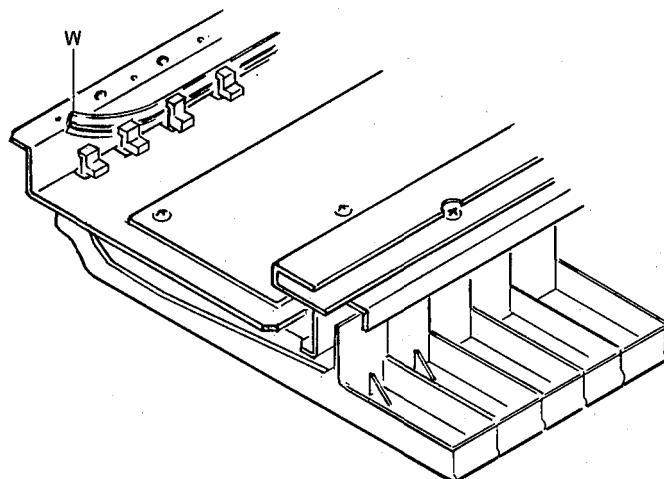


● Key Removal

- (1) Remove the key stopper (W) as shown in Fig. 8.
- (2) Remove the key by pushing it down in the direction of arrow as shown in Fig. 9.

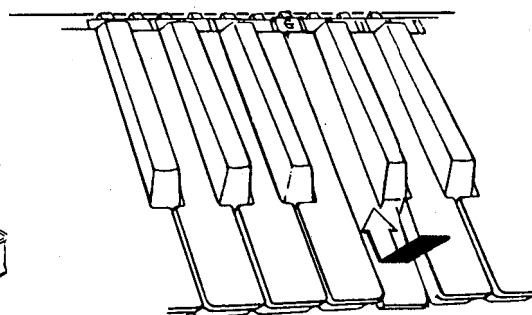
●鍵の取り外し

- 1) 図8のようにストッパー(W)を外す。
- 2) 矢印の方向に押して、鍵のフックを支点から外し、上にもち上げる。(図9)



(Fig. 8)

(図8)



(Fig. 9)

(図9)

LSI DATA TABLE (LSI 端子機能表)

HD63B01Y0A (XB688001) SCAN-CPU

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	Vss		Ground	33	Vcc		DC Supply (+5V)
2	XTAL	I	Clock (8MHz)	34	P47	O	Port 4
3	EXTAL	I		35	P46	O	
4	MP0	I	Mode program	36	P45	O	
5	MP1	I		37	P44	O	
6	RES	I	Reset	38	P43	O	
7	STBY	I	Stand-by mode signal	39	P42	O	Ground
8	NMI	I	Non-maskable interrupt	40	P41	O	
9	P20	I/O	Port 2	41	P40	O	
10	P21	I/O		42	Vss		
11	P22	I/O		43	P17	O	
12	P23	I/O		44	P16	O	Port 1
13	P24	I/O		45	P15	O	
14	P25	I/O	Port 5	46	P14	O	
15	P26	I/O		47	P13	O	
16	P27	I/O		48	P12	O	
17	P50	I	Port 6	49	P11	O	Port 3
18	P51	I		50	P10	O	
19	P52	I		51	P37	I/O	
20	P53	I		52	P36	I/O	
21	P54	I		53	P35	I/O	Port 7
22	P55	I	Port 7	54	P34	I/O	
23	P56	I		55	P33	I/O	
24	P57	I		56	P32	I/O	
25	P60	I/O		57	P31	I/O	
26	P61	I/O	Port 6	58	P30	I/O	Enable
27	P62	I/O		59	P74	O	
28	P63	I/O		60	P73	O	
29	P64	I/O		61	P72	O	
30	P65	I/O		62	P71	O	
31	P66	I/O	Port 6	63	P70	O	
32	P67	I/O		64	E	I	

YM3012 (IT301200) DAC (2-Channel serial input Floating D/A converter)

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	VDD	I	DC supply (+5V)	9	CH1	O	Sample and hold analog SW output (ch1)
2	CLOCK	I	Timing clock	10	CH2	O	" (ch2)
3	D.GND	I	Digital ground	11	COM	I	Ch1 ch2 analog SW common input
4	SD	I	Serial data input	12	A.OUT	O	Analog output to Buffer AMP
5	SAM2	I	Sample and hold (ch2)	13	MP	I	Middle point 1/2 VDD bias
6	SAM1	I	" (ch1)	14	BC	I	Bias compensation
7	ICL	I	Initial clear	15	RB	O	Bias-R
8	A. GND	I	Analog ground	16	A. GND	I	Analog ground

HD63B03YP (XA444001) MAIN-CPU, TONE-CPU

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	V _{ss}	I	Ground	33	V _{cc}	O	DC Supply (+5V)
2	XTAL	I	Clock (8MHz)	34	A15	O	Address bus
3	EXTAL	I		35	A14	O	
4	MP0	I	Mode program	36	A13	O	
5	MP1	I		37	A12	O	
6	RES	I	Reset	38	A11	O	
7	STBY	I	Stand-by mode signal	39	A10	O	
8	NMI	I	Non-maskable interrupt	40	A9	O	Ground
9	P20	I/O	Port 2	41	A8	O	
10	P21	I/O		42	V _{ss}	O	
11	P22	I/O		43	A7	O	Address bus
12	P23	I/O		44	A6	O	
13	P24	I/O		45	A5	O	
14	P25	I/O		46	A4	O	
15	P26	I/O	Port 5	47	A3	O	Data bus
16	P27	I/O		48	A2	O	
17	P50	I/O		49	A1	O	
18	P51	I/O		50	A0	O	
19	P52	I/O		51	D7	I/O	
20	P53	I/O		52	D6	I/O	
21	P54	I/O	Port 6	53	D5	I/O	
22	P55	I/O		54	D4	I/O	
23	P56	I/O		55	D3	I/O	
24	P57	I/O		56	D2	I/O	
25	P60	I/O		57	D1	I/O	
26	P61	I/O		58	D0	I/O	
27	P62	I/O	Port 6	59	BA	O	Bus available
28	P63	I/O		60	LIR	O	Load instruction resistor
29	P64	I/O		61	R/W	O	Read/Write control
30	P65	I/O		62	WR	O	Write
31	P66	I/O		63	RD	O	Read
32	P67	I/O		64	E	O	Enable

MSM82C55A-2RS (XB920001) I/O Port

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	PA3		Port A	40	PA4		Port A
2	PA2			39	PA5		
3	PA1			38	PA6		
4	PA0			37	PA7		
5	RD		Read control	36	WR		Write control
6	CS		Chip Select	35	RST		Reset
7	GND		DC Supply (OV)	34	D0	I/O	Data bus
8	AD1		Port address	33	D1	I/O	
9	AD0			32	D2	I/O	
10	PC7			31	D3	I/O	
11	PC6			30	D4	I/O	
12	PC5		Port C	29	D5	I/O	
13	PC4			28	D6	I/O	
14	PC0			27	D7	I/O	
15	PC1			26	V _{cc}		DC Supply
16	PC2		Port B	25	PB7		Port B
17	PC3			24	PB6		
18	PB0			23	PB5		
19	PB1			22	PB4		
20	PB2			21	PB3		

YM2414 (XB768001) OPZ

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	V _{ss}		GND	24	oM	I	Clock 3.58 MHz
2	IRQ	O	Interrupt data	23	o1	I	Synchro pulse for DAC
3	IC	I	Initial clear	22	VDD	I	DC Supply (+5V)
4	AD0	I	Address bus	21	S0	O	Tone signal data
5	WR	I	Write control	20	SH1	O	Sample and hold (Ch1)
6	RD	I	Read control	19	SH2	O	Sample and hold (Ch2)
7	CS	I	Chip Select	18	D7	I/O	Data bus
8	CT1	O	Control data out 1	17	D6	I/O	
9	CT2	O	Control data out 2	16	D5	I/O	
10	D0	I/O	Data bus	15	D4	I/O	
11	V _{ss}		GND	14	D3	I/O	
12	D1	I/O	Data bus	13	D2	I/O	

YM2154 (IT215400) RYP4

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	V _{SS}	I	Digital ground	34	CT1/ SH3	O	CT1/LED control SH3/Sample and hold
2	INT	O	Interrupt request	35	SHR/ SH2	O	SHR/Sample and hold SH2/ "
3	S2	M	Exponent Output to DAC	36	SHL/ SH1	O	SHL/ " S SH1/ "
4	S1	O		37	CTO	O	LED control
5	S0	O		38	RD	I	Read Enable
6	B9	O		39	WR	I	Write Enable
7	B8	O	Mantissa Output to DAC	40	CS	I	Chip select
8	B7	O		41	A0	I	Address bus
9	B6	O		42	A1	I	
10	B5	O		43	A2	I	
11	B4	O	ϕ B/Clock for DAC BO/Mantissa (LSB)	44	A3	I	Data bus
12	B3	O		45	A4	I	
13	B2	O		46	A5	I	
14	B1	O		47	A6	I	
15	ϕ B/BO0	O	Serial data output	48	D0	I/O	ROM data 2 (ch 7 ~ 12) " 1 (ch 1 ~ 6)
16	SD	O		49	D1	I/O	
17	V _{SS}	I		50	D2	I/O	
18	VREF	I		51	D3	I/O	ROM data syncro pulse ROM address 2 (ch7 ~ 12) " 1 (ch1 ~ 6)
19	VDD2	I	Reference voltage for ADC	52	D4	I/O	
20	VGND	I	Analog DC supply	53	D5	I/O	
21	AN1	I	Analog data in	54	D6	I/O	
22	AN2	I		55	D7	I/O	Digital DC supply (+5V) ROM CLOCK Master clock pulse "
23	AN3	I		56	RDA2	I	
24	AN4	I		57	RDA1	I	
25	AN5	I	Initial clear	58	RSYNC	O	ROM data syncro pulse ROM address 2 (ch7 ~ 12) " 1 (ch1 ~ 6)
26	AN6	I		59	RAD2	O	
27	AN7	I		60	RAD1	O	
28	AN8	I		61	VDD	I	Digital DC supply (+5V) ROM CLOCK Master clock pulse "
29	AN9	I	Initial clear	62	ϕ 1 OUT	O	
30	AN10	I		64	M1	O	
31	IC	I		64	ϕ M1	O	
32	CT3/ ST	O	CT3/LED control ST/Strobe DAC data				
33	CT2/ SH4	O	CT2/LED control SH4/Sample and hold				

T9500 (IG143300) DRVIF (Interface for DRV3, DR13 and uCOM.)

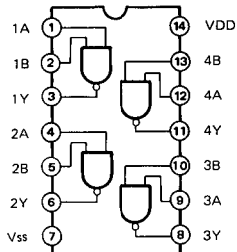
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	ϕ B	O	Clock output	15	D ₃	I/O	Data bus
2	G/L	O	Timing signal	16	D ₄	I/O	
3	T ₂	I	Test pin	17	D ₅	I/O	
4	TPO	O	Data output to iG 0608	18	D ₆	I/O	
5	SDO	O	Serial data output	19	D ₇	I/O	Chip select Test pin Select DRV3 or TC401 Serial data input Serial data input Interrupt output (open drain) Initial clear Clock Power supply +5V
6	RDO	O	Serial data output	20	CS	I	
7	A ₀	I	Address bus	21	T1	I	
8	A ₁	I		22	4/8	I	
9	A ₂	I		23	RDI	I	
10	R/W	I	Read write select	24	SDI	I	
11	D ₀	I/O	Data bus	25	IRQ	O	Interrupt output (open drain) Initial clear Clock Power supply +5V
12	D ₁	I/O		26	IC	I	
13	D ₂	I/O		27	ϕ 2	I	
14	V _{SS}	I		28	VDD	I	

T7617 (IG143200) DRV3 (Reads switch information, displays LED.)

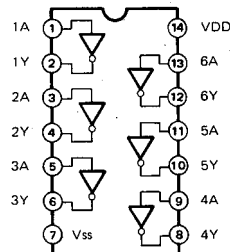
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	VDD	I	Power supply +5V	9	DP4	O	LED driving pins
2	SDO	O	Serial data output	10	SW4	I	LED driving pins
3	SDI	I	Serial data input	11	DP3	O	LED driving pins
4	RDO	O	Serial data output	12	SW3	I	LED driving pins
5	RDI	I	Serial data input	13	DP2	O	LED driving pins
6	ϕ	I	Clock	14	SW2	I	LED driving pins
7	G/L	I	Timing signal	15	DP1	O	LED driving pins
8	V _{SS}	I	Power supply ground	16	SW1	I	Switch reading pin

IC BLOCK DIAGRAM (ICブロック図)

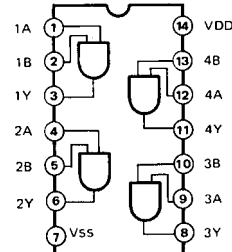
- TC74HC00P (IR000000)
 - TC40H000P (IG080700)
- Quad 2 Input NAND



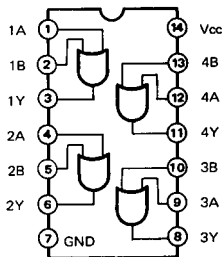
- TC74HC04P (IR000400)
 - TC40H004P (IG051000)
 - TC4069UBP (IG001720)
- Hex Inverter



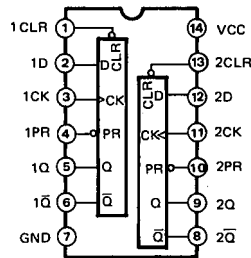
- TC74HC08P (IR000800)
- Quad 2 Input AND



- TC74HC32P (IR003200)
- Quad 2 Input OR

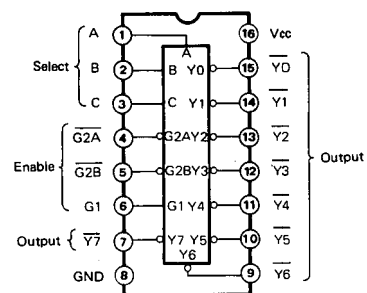


- TC74HC74P (IR007400)
- Dual D-Type Flip-Flop

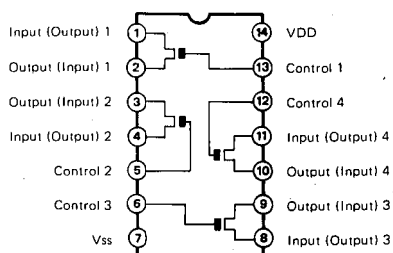


INPUTS				OUTPUTS	
PR	CLR	CLK	D	Q	Q-bar
L	H	X	X	H	L
H	L	X	X	L	H
L	L	X	X	H	H
H	H	↑	H	H	L
H	H	↑	L	L	H
H	H	L	X	Q _o	Q _o -bar

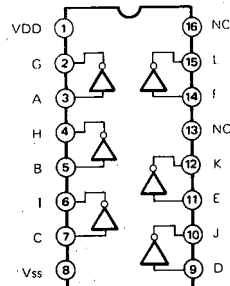
- TC74HC138P (IR013800)
- 3 to 8 Demultiplexer



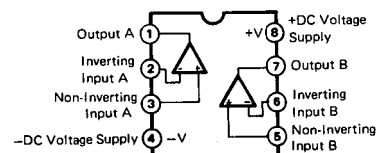
- TC4016BP (IG001690)
- Quad Bilateral Switch



- TC5020BP (IG138400)
- Hex Buffer/Converter (Inverting)

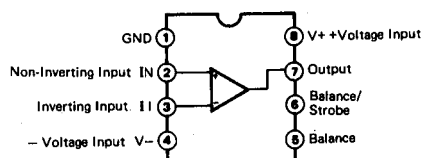


- NJM4558DV (IG001390)
- Dual Operational Amplifier



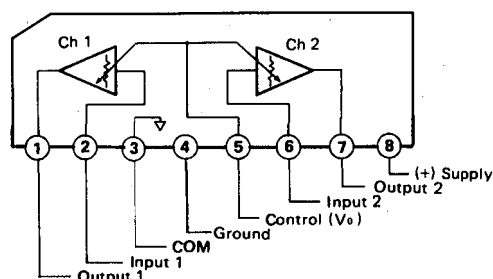
● **IR9311 (IG134900)**

Voltage Comparator



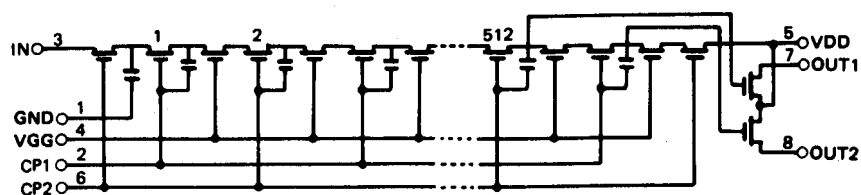
● **M5222L (IG120700)**

VCA (2 ch)



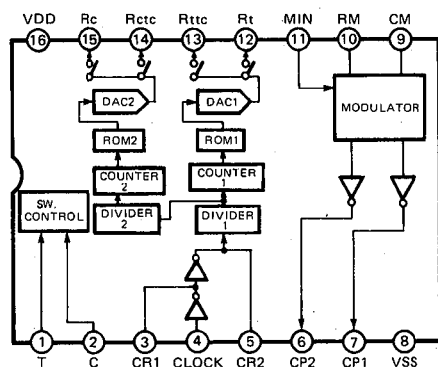
● **MN3204 (IG100800)**

512-Stage Low Voltage Operation,
Low Noise BBD for Analog Signal Delays



● **BU3903 (XA960001)**

BBD Modulator



■ TEST PROGRAM

1. Test Program Entry

While pressing the C_1 and C_6 keys, turn on the POWER switch.

2. Test 1: RAM check

When the Test Program is initiated, the RAM check is performed.

(1) RAM1 (IC12) check

If an error is detected, the 1st beat LED of the TEMPO will light. If the test is ok, the 1st beat LED of the TEMPO will be on and then turned off.

(2) RAM2 (IC13) check

If an error is detected, the 2nd beat LED of the TEMPO will light. If the test is ok, the 2nd beat LED of the TEMPO will be on and then turned off.

(3) RAM3 (IC14) check

If an error is detected, the 3rd beat LED of the TEMPO will light. If the test is ok, the 3rd beat LED of the TEMPO will be on and then turned off.

(4) RAM4 (IC15) check

If an error is detected, the 4th beat LED of the TEMPO will light. If the test is ok, the 4th beat LED of the TEMPO will be on and then turned off.

(5) RAM0 (IC16) check

If an error is detected, all LEDs of the TEMPO will light. If the test is ok, all LEDs of the TEMPO will be on and then turned off.

3. Test 2: LED check

If key C_1 is pressed, LED indicators will be on. Afterward, if key C_1 is pressed again, the other side LED indicators of the ACCOMPANIMENT, ORC. LOWER and SOLO will be ON.

4. Test 3: Level check

If key D_1 is pressed, a continuous sound (A_3 note) will be produced. If key D_1 is pressed again, the tone will diminish.

5. Return to normal operating mode

If key C_6 is pressed, the routine will reset the system to normal operating mode.

■ INTILIZATION

While pressing the C₆ key, turn on the POWER switch, the memory of the MUSIC PROGRAMMER, REGISTRATION MEMORY and CUSTOM ACCOMPANIMENT 1-8 are set to the factory preset as shown in the table.

	1	2	3	4	5
SOLO					
SOLO ON	ON	ON	OFF	ON	ON
TONE Switch	TROMBONE	POPSYNTH	PICCOLO	SLAPSYNTH	VIOLIN
SUSTAIN 1/2	OFF	OFF	OFF	OFF	OFF
CHORUS	ON	OFF	OFF	OFF	OFF
PORTAMENT	ON	OFF	OFF	OFF	ON
Volume	24	21	32	29	32
PORTAMENT Vol	1	25	25	1	17
Orc. U					
Orc. U ON	ON	ON	ON	ON	OFF
TONE Switch	BRASS	STRING	MUSIC BOX	JAZZ GUITAR	STRINGS
SUSTAIN 1/2	OFF	OFF	SUS 2	OFF	SUS 1
CHORUS	OFF	ON	ON	OFF	OFF
DUET/TRIO	OFF	OFF	DUET	OFF	OFF
Volume	28	23	32	32	32
Orc. L					
Orc. L ON	ON	ON	OFF	OFF	ON
TONE SW	PIANO	STRING ENS	TOY PIANO	CLAVI	HARMONICA
SUSTAIN 1/2	SUS 1	SUS 2	SUS 2	SUS 2	SUSN 1
CHORUS	OFF	OFF	OFF	ON	ON
TO UPPER	OFF	OFF	ON	ON	ON
Volume	20	23	32	20	22
ACCOMPANIMENT					
RHYTHM SW	SWING	8 BEAT	MARCH/POLKA	DISCO	COUNTRY
RHYTHM Vol	29	29	29	28	29
ABC	FINGERD CHORD, MEMORY ON				
BASS Vol	28	28	32	28	28
CHORD Vol	24	24	19	18	24
TEMPO	132	88	116	120	120
FOOT SW	GLIDE	FILL IN	FILL IN	FILL IN	GLIDE
PITCH BEND	2ND	2ND	3RD	2ND	OCT
KEY VELOCITY	NORMAL	NORMAL	LOW	NORMAL	NORMAL
KEY SPLIT	B2	F#2	F#2	F#2	F#2

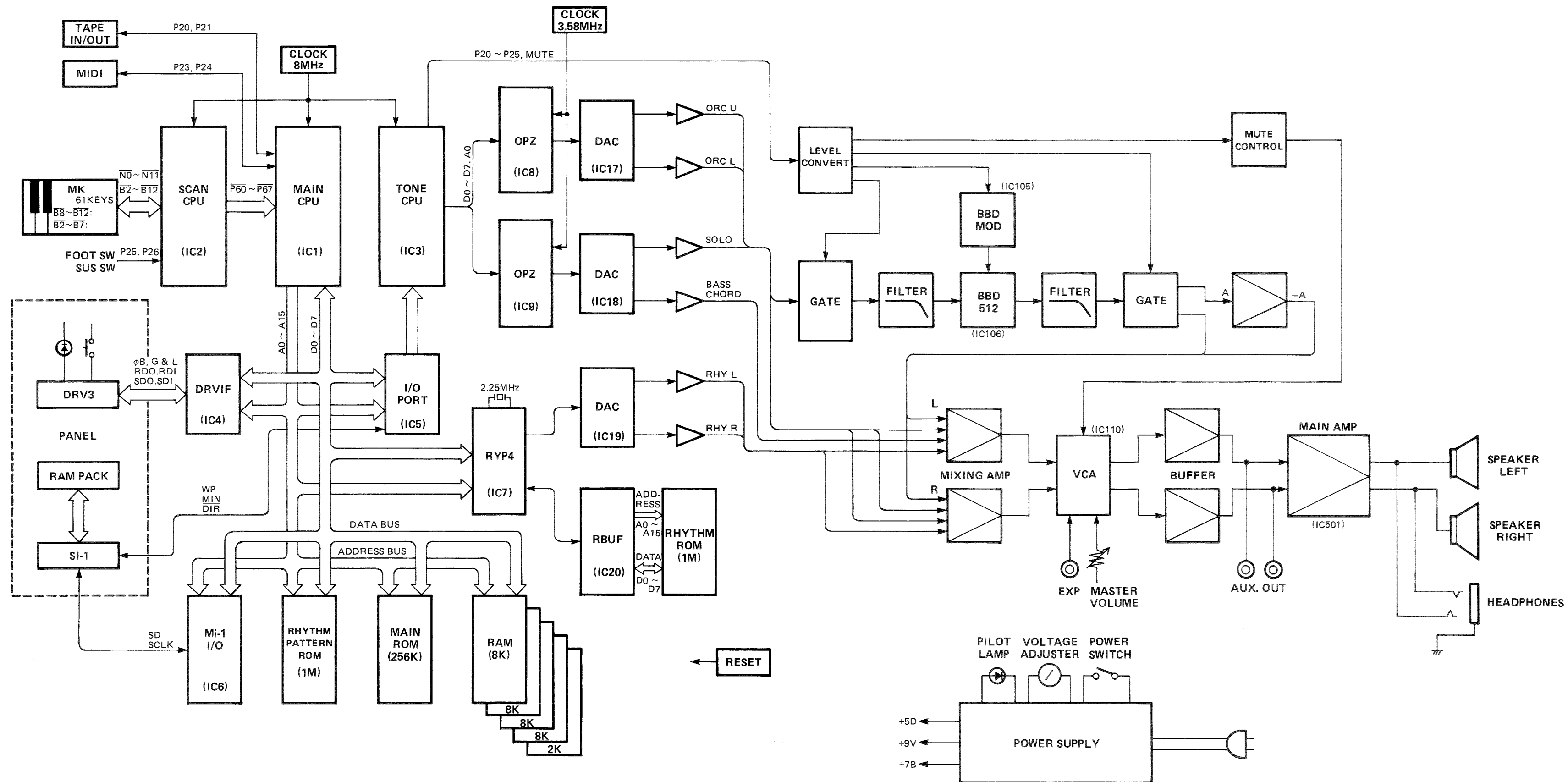
*: The range of volume data is 1 — 32. (1 = MIN 32 = MAX)

PSR-6300 MIDI Implementation Chart

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Change	1 1 — 16	1 1 — 16	
Mode	Default Messages Altered	Mode 3 × *****	Mode 1 Omni, Mono/Poly ×	
Note Number :	True voice	36-96 *****	36-96 36-96	
Velocity	Note on Note off	○ 90H, v = 1 — 127 × 90H, v = 0	○ v = 1 — 127 ×	
After Touch	Key's Ch's	× ×	× ×	
Pitch Bender		○	○	
Control Change	1	○	○	Modulation wheel
	5	○	○	Portamento Time
	7	○	○	Volume
	64	○	○	Sustain
	65	○	○	Portamento
Program Change :	True #	0-15 *****	0-127 0-15	
System Exclusive		○	○	
System :	Song Pos	×	×	
	Song Sel	×	×	
Common:	True	×	×	
System :	Clock	○	○	
Real Time:	Commands	○	○	
Aux :	Local ON/OFF	×	○	
	All Notes OFF	×	○	
Messages:	Active Sense	○	○	
	Reset	×	○	

Notes

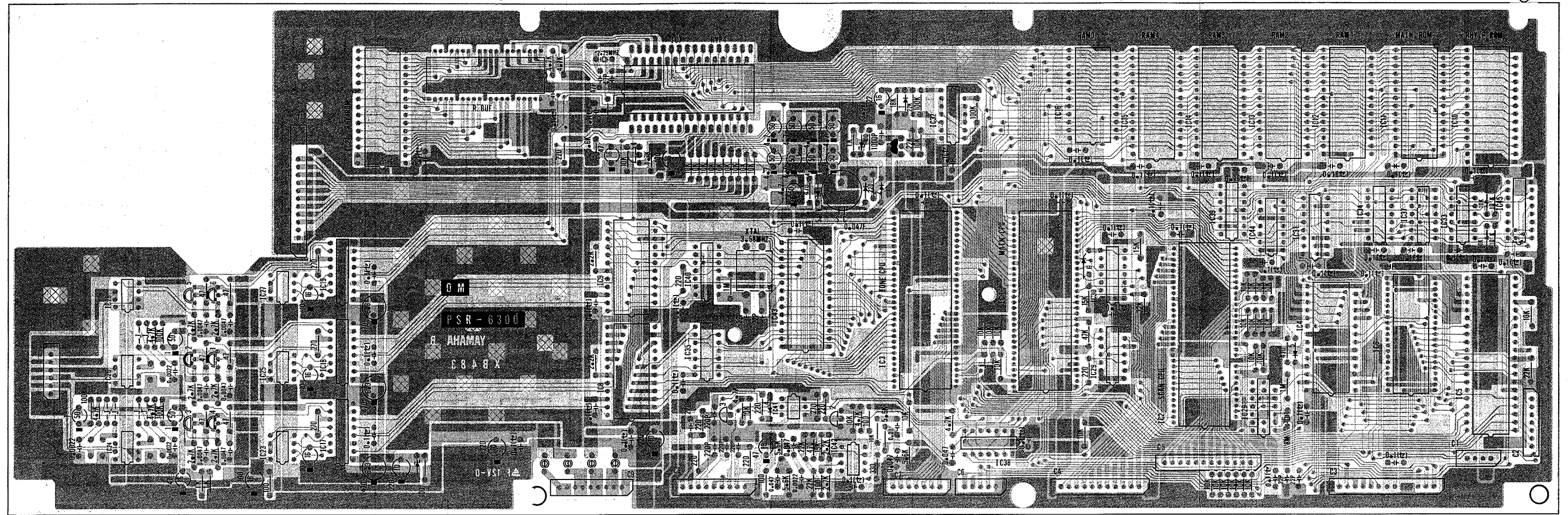
■BLOCK DIAGRAM(ブロックダイアグラム)



PSR-6300

CIRCUIT BOARDS (シート基板図)

DM Circuit Board



(Components side)

Notes

1. Circuit Board : XB483B0

2. IC

- IC1 : HD63B03YP (XA44401) MAIN CPU
- IC2 : HD63B01YOA (XB688001) SCAN CPU
- IC3 : HD63B03YP (XA44401) TONE CPU
- IC4 : T9500 (IG143300) DRVIF
- IC5 : MSM82C55A-2RS (XB920001) I/O Port
- IC6 : MI-1 (XB809001) I/O Port
- IC7 : YM-2154 (IT215400) RYP4
- IC8, 9 : YM-2414 (XB768001) OPZ
- IC10 : TC531000P-7881 (XC223001) MAIN ROM
- IC11 : MAIN ROM (XB819001) 256K EPROM
- IC12 ~ 15 : TC5564PL-20 (XA606001) CMOS SRAM
- IC16 : TC5517BPL-2 (IG137200) 16K SRAM
- IC17 ~ 19 : YM3012 (IT301200) SUX DAC
- IC20 : (XB811001) RBUF
- IC21 : μ PD23C1000C (XC224001) RHY ROM
- IC23 ~ 28 : NJM4558DV (IG001390) OP AMP
- IC29, 30 : TC74HC74P (IR007400) DFF
- IC31, 45 : TC74HC138P (IR013800) DECO-8
- IC32 : TC40H000P (IG080700) QUAD NAND
- IC33, 34 : TC74HC32P (IR003200) OR
- IC35 : TC74HC00P (IR000000) NAND
- IC36 : (XC409500) 8MHZ
- IC37 : TC74HC04P (IR000400) INV
- IC38 ~ 40 : TC40H004P (IG051000) INV
- IC41 : PC-900 (IK000420) Photo Coupler
- IC42 : IR9311 (IG134900)
- IC43 : TONE ROM (XB820001) 256K EPROM
- IC44 : TC74HC08P (IR000800) AND

3. FET

1 ~ 6 : 2SK246Y

4. Transistor

1 : 2SA733A Q, P

2 ~ 4 : 2SC1815 Y, GR

5. Diode

1 ~ 6 : 1SS176

6. Zener Diode

3.9V : MTZ3.98

5.6V : MTZ5.68

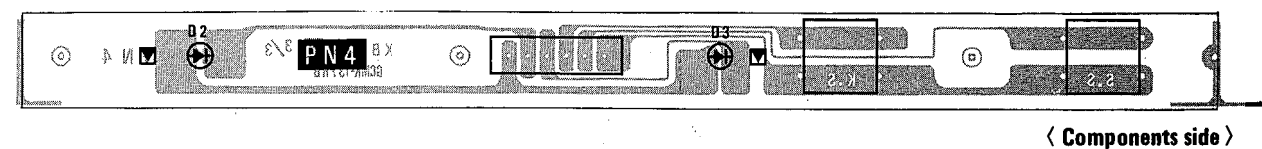
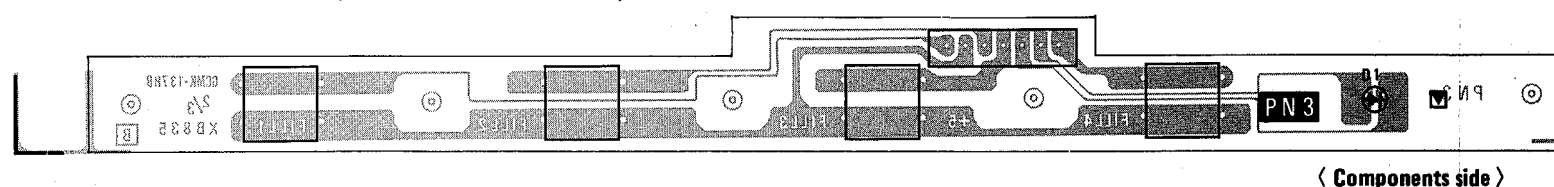
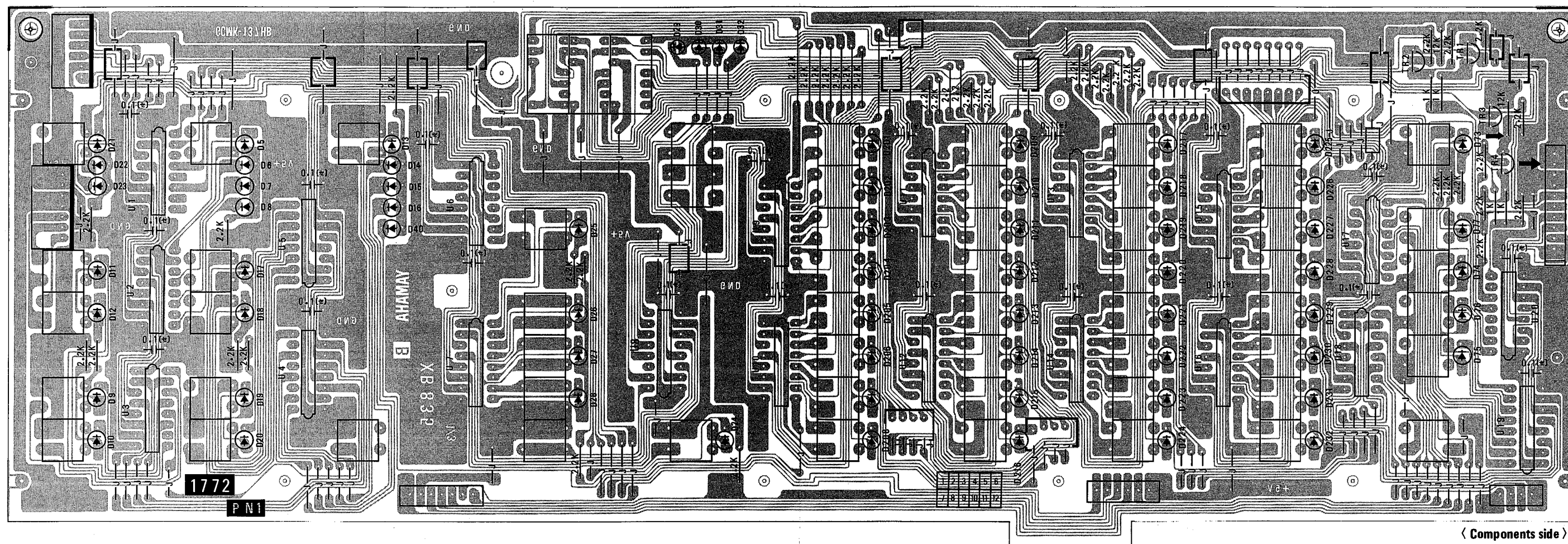
5.1V : MTZ5.18

7. SC : 0.047F 5.5V

8. 0.1 (t) : Semi-conductive Ceramic Cap

9. Coil

: SN3-205



- Notes)
1. Circuit Board : XB835B0
 2. IC
U1 ~ 20 : T7617 (IG143200) DRV3
 3. Transistor
TR1 ~ 4 : 2SC1740 R, S
 4. LED
D1 ~ 3 : GL-9P4R9 RE (IF008100)
D29 : GL-9P4R8 RE (IF008080)
D30 ~ 32 : GL-9PG48 GR (IF008090)
D33, 41, 49 : SL-1179 (VC341600)
Others : SLZ 190B-01 RE (VC341300)
 5. 0.1 (ε) : Monolithic Ceramic Cap.

Top view of the PSR-6300 circuit board. The board is populated with several components, including switches (SW108, SW145, SW146, SW147, SW148, SW107, SW119) and connectors (CN, R116, R119). The board is labeled with 'PSR-6300' and 'D119'.

SW70

SW71

PN5

#1772 PSR-6300

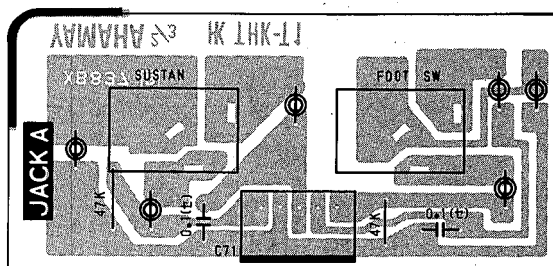
SW72

CN

Notes:

1. Circuit Board : XB836B0
2. IC :
U21 ~ 37 : T7617 (IG143200) DRU3
3. Transistor :
TR5 ~ 8 : 2SC1740 R, S, T
4. LED :
D93 ~ 95 : GL-9PR48 RE (IF008080)
Others : SLZ 190B-01 RE (VC341300)

● JACK A Circuit Board

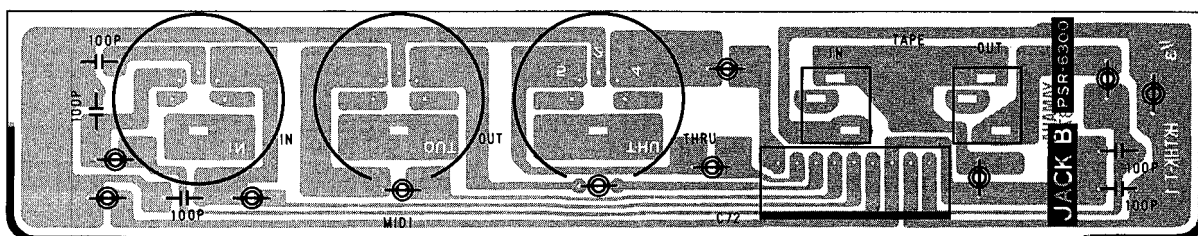


< Components side >

Note)

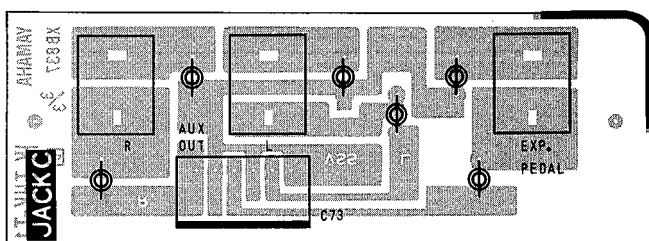
1. Circuit Board : XB837B0

● JACK B Circuit Board



< Components side >

● JACK C Circuit Board



< Components side >

PORTATONE

PSR-6300

PARTS LIST

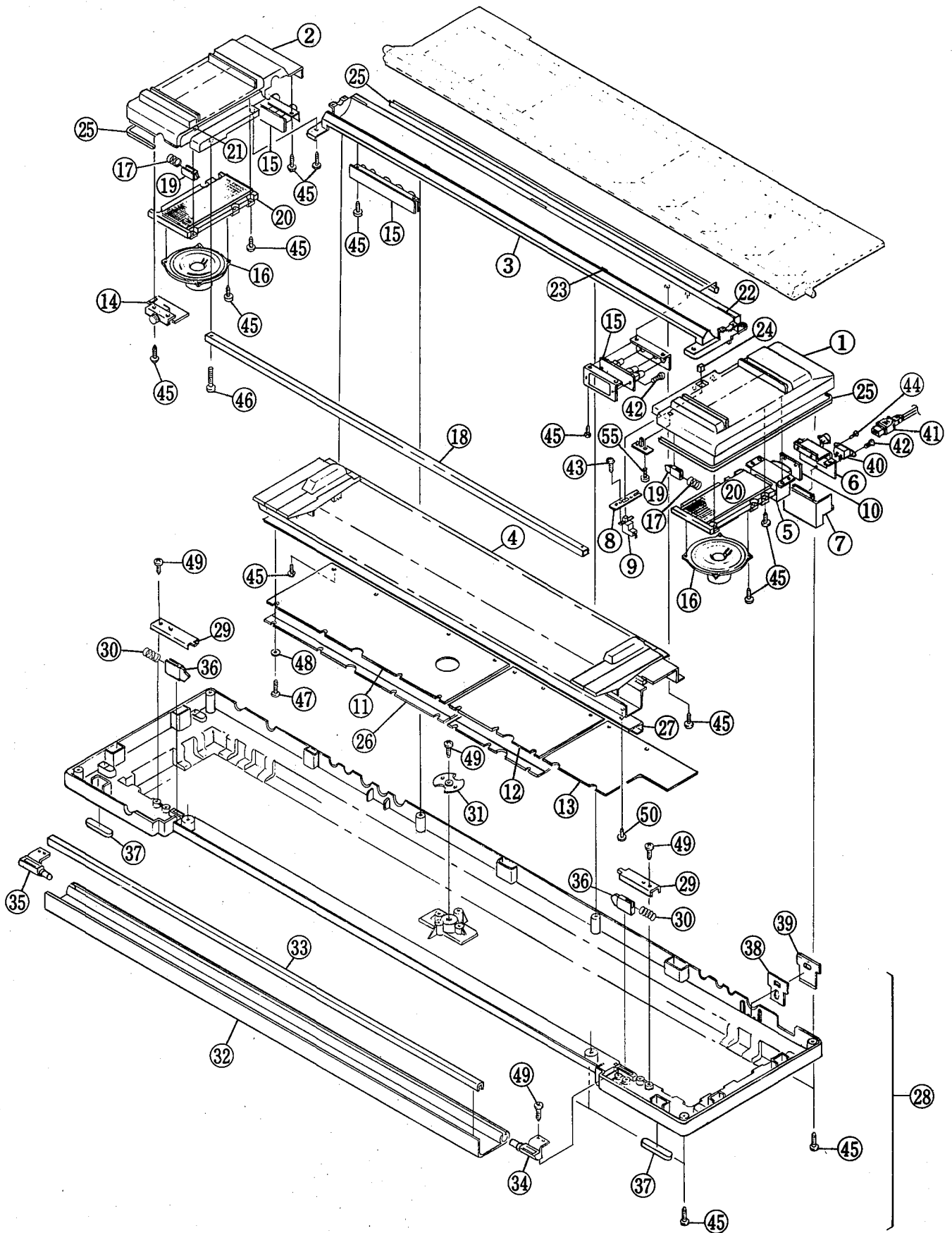
Notes DESTINATION ABBREVIATIONS

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

ELECTRICAL PARTS(電気部品)

Ref. No.	Part No.	Description	部 品 名	Remarks	ランク
	VC286000	Circuit Board	DM	DM シート	78
	VC285900	Circuit Board	AM	AM シート	19
	NX002290	Circuit Board	DC	DC シート	17
	NX002300	Circuit Board	HP	HP シート	07
	NA113970	Circuit Board	AC	AC シート	10
	VC299600	Circuit Board	PN1	PN1 シート	26
	NX002310	Circuit Board	PN2	PN2 シート	23
	NX002320	Circuit Board	PN5	PN5 シート	08
	VC299800	Circuit Board	JACK	JACK シート	12
	VC309200	Circuit Board	SI	SI シート	12
	VC378100	Circuit Board	VR	VR シート	16
	VC286000	Circuit Board	DM	DM シート	78
	IG001390	IC	NJM4558DV	IC	OP AMP.
	IG134900	IC	IR9311	IC	COMPARATOR
	IG051000	IC	TC40H004P	IC	INV
	IG080700	IC	TC40H000P	IC	QUAD NAND
	IG143300	IC	T9500	IC	DRVIF
	XA444001	IC	HD63B03YP	IC	MPU
	XB688001	IC	HD63B01Y0A	IC	CPU
	XB768001	IC	YM2414	IC	OPZ
	XB809001	IC	MI-1	IC	I/O
	XB811001	IC		IC	RBUF
	XB920001	IC	MSM82C55A-2RS	IC	
	IG137200	IC	TC5517BPL-2	IC	16K SRAM
	XA606001	IC	TC5564PL-20	IC	CMOS SRAM
	XB819001	IC		IC	MAIN ROM
	XB820001	IC		IC	TOPE ROM
	XC223001	IC	TC531000P-7881	IC	MAIN ROM
	XC224001	IC	μ PD23C1000C	IC	RHY ROM
	IT215400	IC	YM-2154	IC	RYP4
	IT301200	IC	YM-3012	IC	SUX DAC
	IR000000	IC	TC74HC00P	IC	NAND
	IR000400	IC	TC74HC04P	IC	INV
	IR000800	IC	TC74HC08P	IC	AND
	IR003200	IC	TC74HC32P	IC	OR
	IR007400	IC	TC74HC74P	IC	DFF
	IR013800	IC	TC74HC138P	IC	DECO-8
	IK000420	Photo Coupler	PC-900	フォト カプ ラ	
	IA073340	Transistor	2SA733A Q,P	ト ラ ン ジ ス タ	
	IC181550	Transistor	2SC1815 Y,GR	ト ラ ン ジ ス タ	
	IC260310	Transistor	2SC2603 E,F	ト ラ ン ジ ス タ	
	IE102600	FET	2SK246 Y	F E T	
	IX000760	Diode	1SS176	ダイ オード	
	VA007600	Zener Diode	MTZ5.6B	ツェ ナー ダイ オード	
	VA093100	Zener Diode	MTZ3.9B	ツェ ナー ダイ オード	
	VA093900	Zener Diode	MTZ5.1B	ツェ ナー ダイ オード	
	FG413100	Ceramic Cap.	1000P 50V	セラ コ ン B	
	FZ004110	Semiconductive Cera. Cap.	0.1μ 16V	半 導 体 セラ コ ン	
	GE901870	Coil	10μ SN3-205	コ イ ル	
	VB670900	Quartz Crystal Unit	TS3.5795MHz	水 晶 振 動 子	
	QU007600	Ceramic Resonator	CSA2.250M	セラ ミ ッ ク 振 動 子	
	QU008500	Ceramic Resonator	CSA8.00MT	セラ ミ ッ ク 振 動 子	
	VC409500	Resonator	8MHz	振 動 子	
	VA097800	Gold Cap.	0.047F 5.5V	ゴ ー ル ド キャ パ シ タ	
	VC285900	Circuit Board	AM	AM シート	19
	IG001390	IC	NJM4558DV	IC	OP AMP.
	IG120700	IC	M5222L	IC	VCA
	XA960001	IC	BU3903	IC	BBD MOD
	IG001690	IC	TC4016BP	IC	SW
	IG001720	IC	TC4069UBP	IC	INV
	IG138400	IC	TC5020BP	IC	INV
	IG100800	IC	MN3204P	IC	BBD
	IA111510	Transistor	2SA1115 E,F	ト ラ ン ジ ス タ	
	IC260310	Transistor	2SC2603 E,F	ト ラ ン ジ ス タ	
	IX000760	Diode	1SS176	ダイ オード	
	VA093900	Zener Diode	MTZ5.1B 5.1V	ツェ ナー ダイ オード	
	FG413100	Ceramic Cap.	1000P 50V	セラ コ ン B	
	FG713220	Ceramic Cap.	2200P 50V	セラ コ ン	
	FZ004110	Semiconductive Cera. Cap.	0.1μ 16V	半 導 体 セラ コ ン	
	GE901870	Coil	10μ SN3-205	コ イ ル	
	NX002290	Circuit Board	DC	DC シート	17
	NX002300	Circuit Board	HP	HP シート	07
	IG089400	IC	LA4440	IC	POWER AMP.
	IG136200	IC	SC-3052V	IC	5V2A
	IC182600	Transistor	2SC1826 Y,G,B0	ト ラ ン ジ ス タ	
	IH000720	Diode	W03B	ダイ オード	

Ref. No.	Part No.	Description	部品名	Remarks	ランク
	IH000870	Diode Stack	4D4B41 200V	RED	04
	IH001130	Diode Stack	D5FB20 200V		05
	IF001850	Zener Diode	RD10EB2 10V		01
	IF008080	LED	GL-9PR48		01
	HV353470	Flame Carbon Resistor	4.7Ω 1/4		01
	FG413100	Ceramic Cap.	1000P 50V		01
	FZ005300	Electrolytic Cap.	2200μ 16V		03
	FZ006370	Electrolytic Cap.	1000μ 18V		02
	FZ005080	Electrolytic Cap.	1000μ 25V		
	FJ249220	Electrolytic Cap.	2200μ 25V		03
	FZ007280	Semiconductive Cera. Cap.	0.1μ 50V	U	01
	VA039200	Coil	20μ FL5R200F		01
	LB607520	Phone Jack	HLJ4306		03
	KB001240	Fuse	T250V 2A		03
	KB002690	Fuse	250V 1.6A		01
	GE300600	Ferrite Bead	BL02RN1-R62		01
	GE300610	Ferrite Bead	BL02RN1-R62T2		01
	LB201530	Fuse Holder	PC-FH1		01
	CB055980	Holder,LED			01
	IL000570	Mica Base	2SA1106		01
	AA102790	Chassis,Headphones		ヘッドホンシャーシー	01
	NA113970	Circuit Board	AC	ACシート 規格認定コン コイル	10
	FI384100	Ceramic Cap.	0.01μ 400V		01
	GE900490	Coil	26μ SN8S-309		07
	KB001240	Fuse	T250V 2A	U ヒューズホルダー SNコイルカバー	03
	LB201530	Fuse Holder	PC-FH1		01
	CB826620	Cover,Coil			01
	VC299600	Circuit Board	PN1	PN1シート	26
	IG143200	IC	T7617	DRV3 RED GREEN RED	03
	IC174000	Transistor	2SC1740 R,S		03
	IF008080	LED	GL-9PR48		01
	IF008090	LED	GL-9PG48		01
	IF008100	LED	GL-9PR49		01
	VC341300	LED	SLZ 190B-01	RED LEDディスプレイ	01
	KA906960	Push Switch	KEV10903		01
	VC341600	LED Display	SL-1179		04
	NX002310	Circuit Board	PN2	PN2シート	23
	NX002320	Circuit Board	PN5	PN5シート	08
	IG143200	IC	T7617	DRV3 RED RED	03
	IC174000	Transistor	2SC1740 R,S		03
	IF008080	LED	GL-9PR48		01
	VC341300	LED	SLZ 190B-01		01
	KA906960	Push Switch	KEV10903		01
	CB055980	Holder,LED		LEDホルダー	01
	VC299800	Circuit Board	JACK	JACKシート 半導体セラコン コイル	12
	FZ004110	Semiconductive Cera. Cap.	0.1μ 16V		01
	VA039200	Coil	20μ FL5R200F		01
	VC309200	Circuit Board	SI	I/O 抵抗アレイ	12
	XB810001	IC	SI-1		05
	VC397300	Resistor Array	RMLS4-224J		01
	VC397400	Resistor Array	RMLS8-224J	抵抗アレイ 抵抗アレイ ソケット	01
	VC397500	Resistor Array	RMLS9-224J		01
	VB436300	Socket	34P		07
	VC376100	Circuit Board	VR	VRシート	16
	VC687200	Slide Pot.	A10K RS20111A4	スライドVR スライドVR	
	HQ460020	Slide Pot.	B10K S2018P40		03
	VC238800	Rotary Pot.	10K RKBB1000	ロータリーVR ロータリーVR	03
	VC238900	Rotary Pot.	10K RKBB1000		03
	NB114180	Power Supply Unit		電源ユニット 電源トランス 電圧切替器	18
	GA052310	Power Transformer			11
	LB202920	Voltage Selector	HXW0131-01-410		03
	MZ032250	Cable,Power Switch	PSW	PSW束線 プッシュSW 電源コネクタ	
	KA803210	Push Switch	SDL1P		03
	LB202910	AC Inlet	PA-126		03

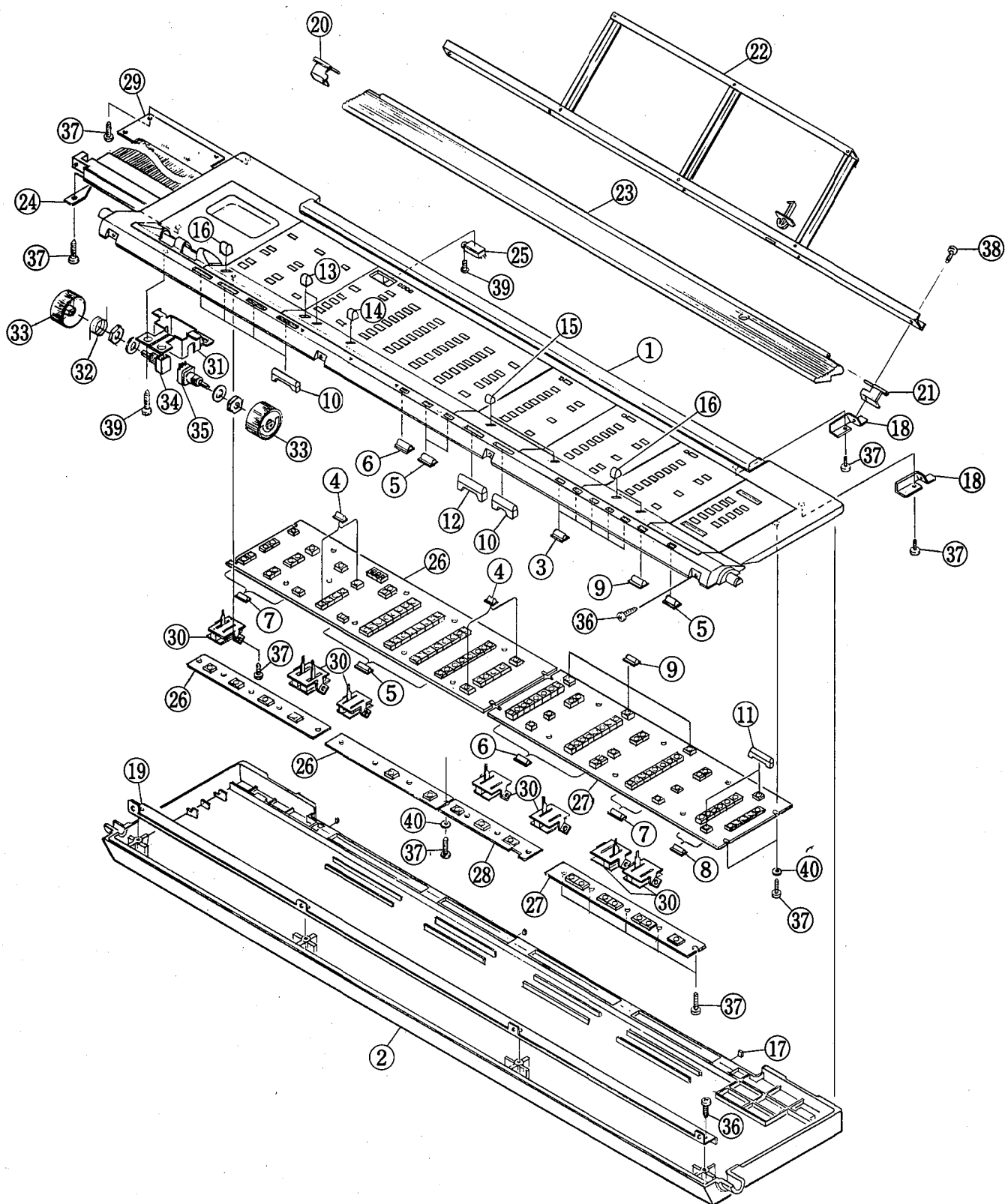
OVERALL ASSEMBLY (総組立)

OVERALL ASSEMBLY(総組立)

Ref. No.	Part No.	Description		部 品 名	Remarks	ランク
1	VC157800	Upper Case	Right	上 ケース (R)		09
2	VC115100	Upper Case	Left	上 ケース (L)		08
3	VC158000	Upper Case	Center	上 ケース (C)		14
4	VC245400	Keyboard Assembly	C61K6	LC 鍵盤 Ass'y		25
5	NB114180	Power Supply Unit		電源ユニット		18
6	AA102580	Chassis, AC		AC シャーシー		03
7	CB056160	Cover, AC		AC カバー		04
8	AA102590	Power Switch Chassis		パワースイッチシャーシ		01
9	VC378400	Switch Cover	BL	パワースイッチカバー		
10	NA113970	Circuit Board	AC	AC シート		10
11	VC286000	Circuit Board	DM	DM シート		78
12	VC285900	Circuit Board	AM	AM シート		19
13	NX002290	Circuit Board	DC	DC シート		17
14	NX002300	Circuit Board	HP	HP シート		07
15	VC299800	Circuit Board	JACK	JACK シート		12
16	XB889001	Speaker	12cm 4Ω 5W	スピーカ		08
17	AA102530	Spring		ラッチバネ		01
18	AA102680	Keyboard Spacer		口金		06
19	CB055360	Latch		ラッチ		01
20	CB055370	Baffle Board		バッフルボード		05
21	CB055650	Button Rubber	A	ゴムボタン A		01
22	CB055660	Button Rubber	B	ゴムボタン B		01
23	CB055670	Button Rubber	C	ゴムボタン C		01
24	CB055570	Knob	Red	ツマミ	Power Switch	01
25	CB055680	Insulation Rubber		防振ラバー		01
26	VA962100	Spacer		スペーサー		01
27	VC159600	Holder		MK 取付金具		04
28	VC158200	Lower Case Assembly		下ケース Ass'y		22
29	AA102510	Holder		ラッチ押え板		01
30	AA102530	Spring		ラッチバネ		01
31	AA102840	Angle Bracket, Leg		脚取付金具		01
32	BA017310	Front Board		前面板		09
33	CB055700	Edge	BL	エッジ		02
34	CB055340	Shaft, Front Board	Right	蓋軸 (R)		02
35	CB055350	Shaft, Front Board	Left	蓋軸 (L)		02
36	CB055360	Latch	BL	ラッチ		01
37	CB055690	Foot	BL	ゴム足		01
38	AA102720	Cover, Voltage Selector		ボルト選択セレクターカバー	E, X	
39	AA102730	Dummy Cover		ダミーカバー	J, U, C	02
40	LB202910	AC Inlet	PA-126	電源コネクタ		03
41	MG001970	AC Cord	2ｼﾝ 6A 2.5M	電源コード	A	
41	MG002010	AC Cord	2ｼﾝ 6A 2.5M	電源コード	B	
41	MG001960	AC Cord	2ｼﾝ 6A 2.5M	電源コード	E	
41	MG001950	AC Cord	2ｼﾝ 7A 2.44M	電源コード	U, C	
41	MG001940	AC Cord	2ｼﾝ 6A 2.5M	電源コード	J	06
41	MG001990	AC Cord	2ｼﾝ 6A 2.5M	電源コード	M	
41	MG002000	AC Cord	2ｼﾝ 6A 2.5M	電源コード	X	
42	E0030086	Flat Head Tapping Screw	3.0X8 ZMC2Y	皿 B タイト	PACK	01
43	E1030066	Bind Head Tapping Screw	3.0X6 ZMC2Y	バインド B タイト	PACK	01
44	E1030086	Bind Head Tapping Screw	3.0X8 ZMC2Y	バインド B タイト	PACK	01
45	EJ340106	Pan Head Tapping Screw	4.0X10 ZMC2BL	ナベ P タイト	PACK	01
46	EJ040200	Pan Head Tapping Screw	4.0X20 ZMC2Y	ナベ P タイト	PACK	01
47	E1040066	Bind Head Tapping Screw	4.0X8 ZMC2Y	バインド T P ネジ	PACK	01
48	EV200046	Flat Washer	4.0 ZMC2Y	平座金	PACK	01
49	EJ330086	Pan Head Tapping Screw	3.0X8 ZMC2BL	ナベ P タイト	PACK	01
50	EJ030066	Pan Head Tapping Screw	3.0X6 ZMC2Y	ナベ S タイト	PACK	01

* : New Parts (新規部品) NR

ランク : Japan Only

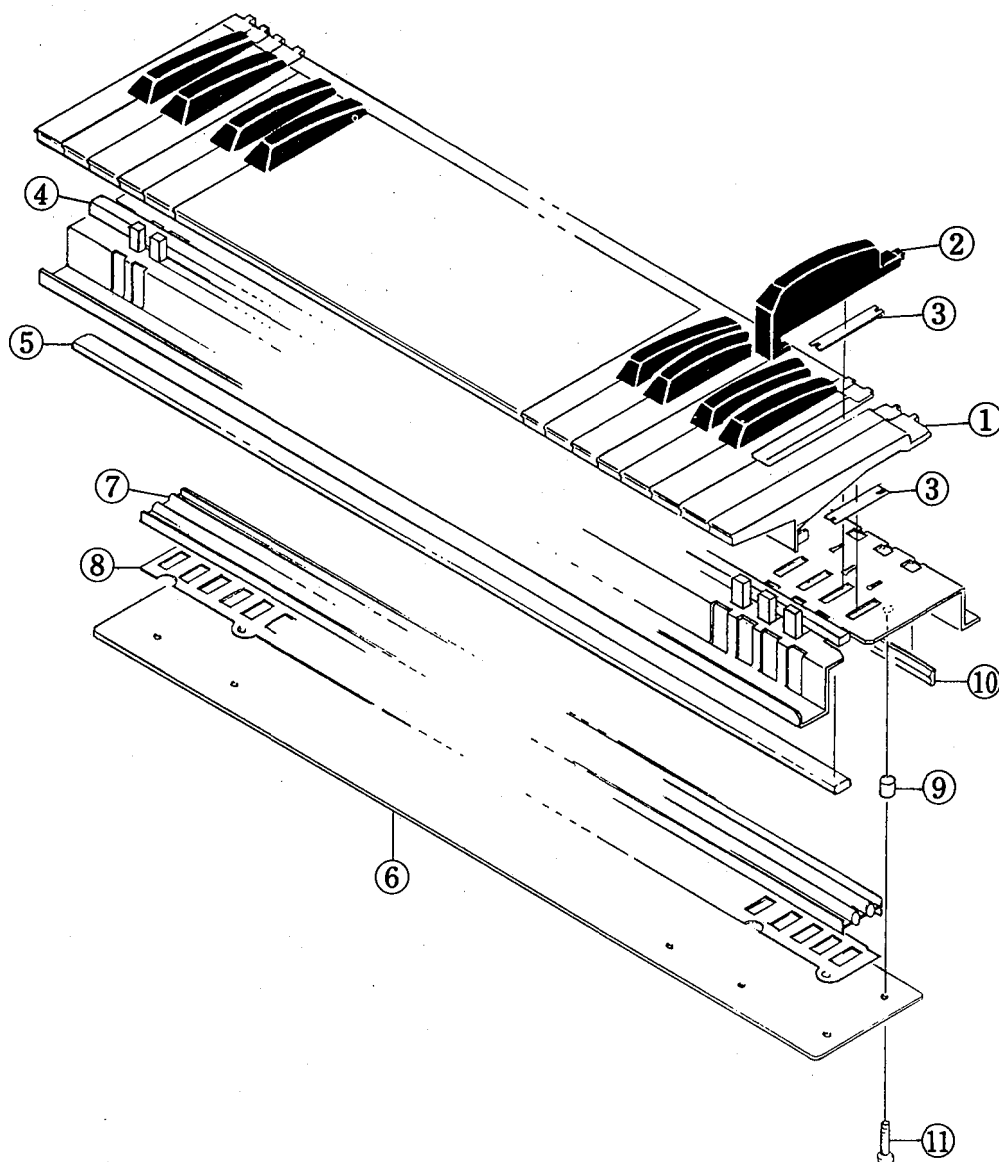
PANEL ASSEMBLY(パネル Ass'y)

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* : New Parts (新規部品) NR

6

KEYBOARD ASSEMBLY(鍵盤)



Ref. No.	Part No.	Description		部 品 名	Remarks	ランク
*	VC245400	Keyboard Assembly	C61K6	L C 鍵盤 A s s 'y		25
1	VA850000	White Key	C, F	白 鍵 C, F		02
1	VA850100	White Key	D	白 鍵 D		02
1	VA850200	White Key	B, E	白 鍵 B, E		02
1	VA850300	White Key	G	白 鍵 G		02
1	VA850400	White Key	A	白 鍵 A		02
1	VA853800	White Key	C'	白 鍵 C'		02
2	VA850500	Black Key		黒 鍵		01
3	VC077600	Spring		バネ		
4	VC078900	Felt	836X6X4 Red	フェルト		03
5	VC079500	Felt	836X9X3.5 Red	フェルト		03
6	VC099400	Circuit Board	MK	M K シート	C61	13
7	VC077700	Rubber Contact		可 動 導 電 ゴ ム		08
8	VC078600	Insulation Spacer		絶 縁 ス ペ ー サ ー		03
9	EK003740	Spacer	4.0X5	ス ペ ー サ ー		01
10	VC079800	Stopper		ス ト ッ パ ー		02
11	EI030106	Bind Head Tapping Screw	3.0X10 ZMC2Y	バ イ ン ド T P ネ ジ	PACK	01

* : New Parts (新規部品) NR

ランク : Japan Only