

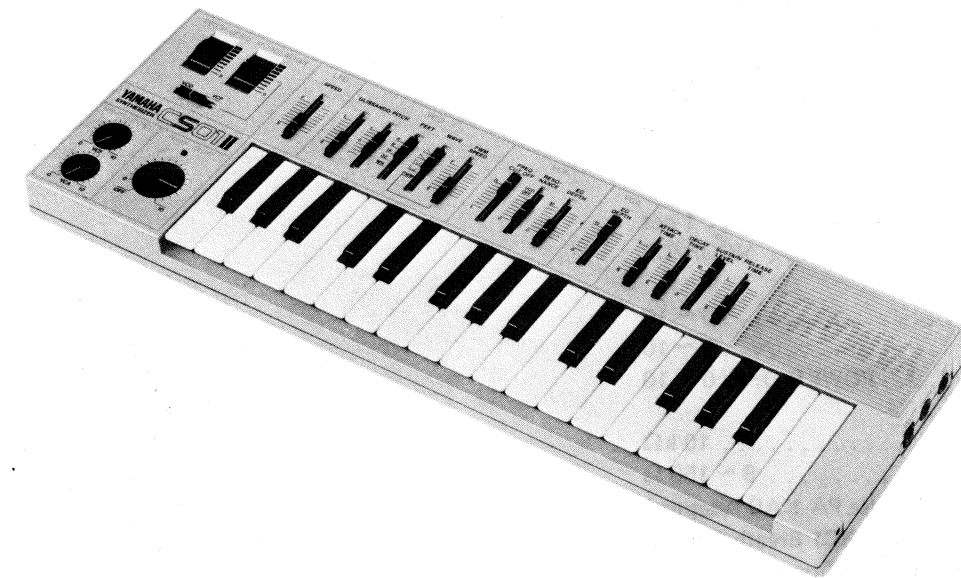
CS01II

YAMAHA

SYNTHESIZER

CS01II

SERVICE MANUAL



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006571

■ SPECIFICATIONS

KEYBOARD 32 keys, F₂ ~ C₅

LFO

SPEED 0.8 ~ 21 Hz

GLISSANDO

SPEED 0 ~ 6 ± 2 Sec

VCO

PITCH - ~ 0 ~ +

FEET 4', 8', 16', 32', NOISE

WAVE \wedge , \searrow , \square , \square , PWM

PWM SPEED 0.6 ~ 12 Hz

VCF

CUT OFF L ~ H

RESONANCE 0 ~ 10 / VCO OFF

EG DEPTH 0 ~ 10

VCA

EG DEPTH 0 ~ 10

EG

ATTACK TIME S ~ L

DECAY TIME S ~ L

SUSTAIN LEVEL 0 ~ 10

RELEASE TIME S ~ L

WHEELS

PITCH BEND 1 oct

MODULATION VCO/VCF

BREATH CONTROL

VCF 0 ~ 10

VCA 0 ~ 10

POWER/ VOLUME POWER OFF/ 0 ~ 10

SIDE PANEL

LINE OUT 10 k Ω

PHONES 8 ~ 150 Ω

DC IN 12V(Use PA-1 AC Adaptor)

BREATH CONTROL Use BC1 Breath Control

POWER SOURCE "R6" or "AA" battery x 6 (9V)

AC Adaptor PA-1 (DC 12V, 300 mA)

POWER CONSUMPTION No Output, 550 mW

Maximum Output, 2700 mW

DIMENSIONS (WxHxD) 489 x 36 x 160 mm

(19-1/4" x 1-1/2" x 6-3/8")

WEIGHT 1.5 kg (3 lbs, 5 oz)

ACCESSORIES

Breath Controller BC1

AC Adaptor PA-1

Soft Case SC-01

Stereo Headphones MH10

* Specifications are subject to change without notice.

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
	FD:35:16:80	Polystyrol Capacitor	68P	スコチン			021
	FG:41:21:00	Ceramic Capacitor	100P	セラコン			010
	FG:41:21:20	"	120P	"			010
	FG:41:23:90	"	390P	"			010
	FG:41:26:80	"	680P	"			010
	FG:41:31:00	"	1000P	"			010
*	Ui:22:74:70	Electrolytic Capacitor	47 μ F/10V	ケミコン			010
*	Ui:22:81:00	"	100 μ F/10V	"			010
*	Ui:23:71:00	"	10 μ F/16V	"			010
*	Ui:23:72:20	"	22 μ F/16V	"			010
*	Ui:24:64:70	"	4.7 μ F/25V	"			010
*	Ui:26:54:70	"	0.47 μ F/50V	"			010
*	Ui:26:62:20	"	2.2 μ F/50V	"			010
	UJ:12:82:20	"	100 μ F/10V	"			010
	FZ:00:32:60	"	470 μ F/10V	"			010
*	FZ:00:51:00	"	1 μ F/50V	"			01*
	UK:33:74:70	Bipolar Electrolytic Capacitor	47 μ F/16V	BPケミコン			020
	UK:34:64:70	"	4.7 μ F/25V	"			010
	UK:34:61:00	"	1 μ F/50V	"			010
	KA:40:10:50	Slide Switch	2-2	スライドスイッチ	MODULATION VCF/VCA		030
	KA:40:10:60	"	2-5	"	FEET,WAVE		040
	LB:20:14:10	Base pin	2P	NHコネクター			010
	LB:20:21:40	Jack DC-IN	S-G9312	DC-INジャック			020
	LB:30:16:40	Jack,Mini,Stereo	S-G8040	ステレオミニジャック			020
	LB:30:16:50	Jack,Phone,Stereo		フォンジャック	PHONES,LINE OUT		030
	LB:60:29:10	Base pin	12P	NHコネクター			020
	MZ:81:55:50	Earth Ass'y #81555		アース線材キット			010
	AA:82:42:30	Spring,Battery		接点バネ			020
	AA:82:42:40	Spring,Wheel		ホイール戻りバネ			020
	BB:80:18:70	Terminal,Battery		端子板			010
*	CB:82:95:70	Knob,Wheel	Silver only	ホイール			020
*	CB:83:01:80	"	Black only	"			020
	CB:82:52:60	LED Spacer		LEDスペーサー			010
	NA:80:90:80	Circuit Board,MK	#8939	MKシート			091
	iF:00:00:40	Diode	1S1555	ダイオード			010
	Mi:80:13:50	Flat Cable	12P	フラットケーブル			030
	BB:00:44:90	Contact	SHF-001T08CS	コンタクト			010
	LB:60:29:20	Housing 2.5pitch	H12P-SHF	2.5ピッチハウジング			010

* : New Parts (新部品)

ランク : Japan only

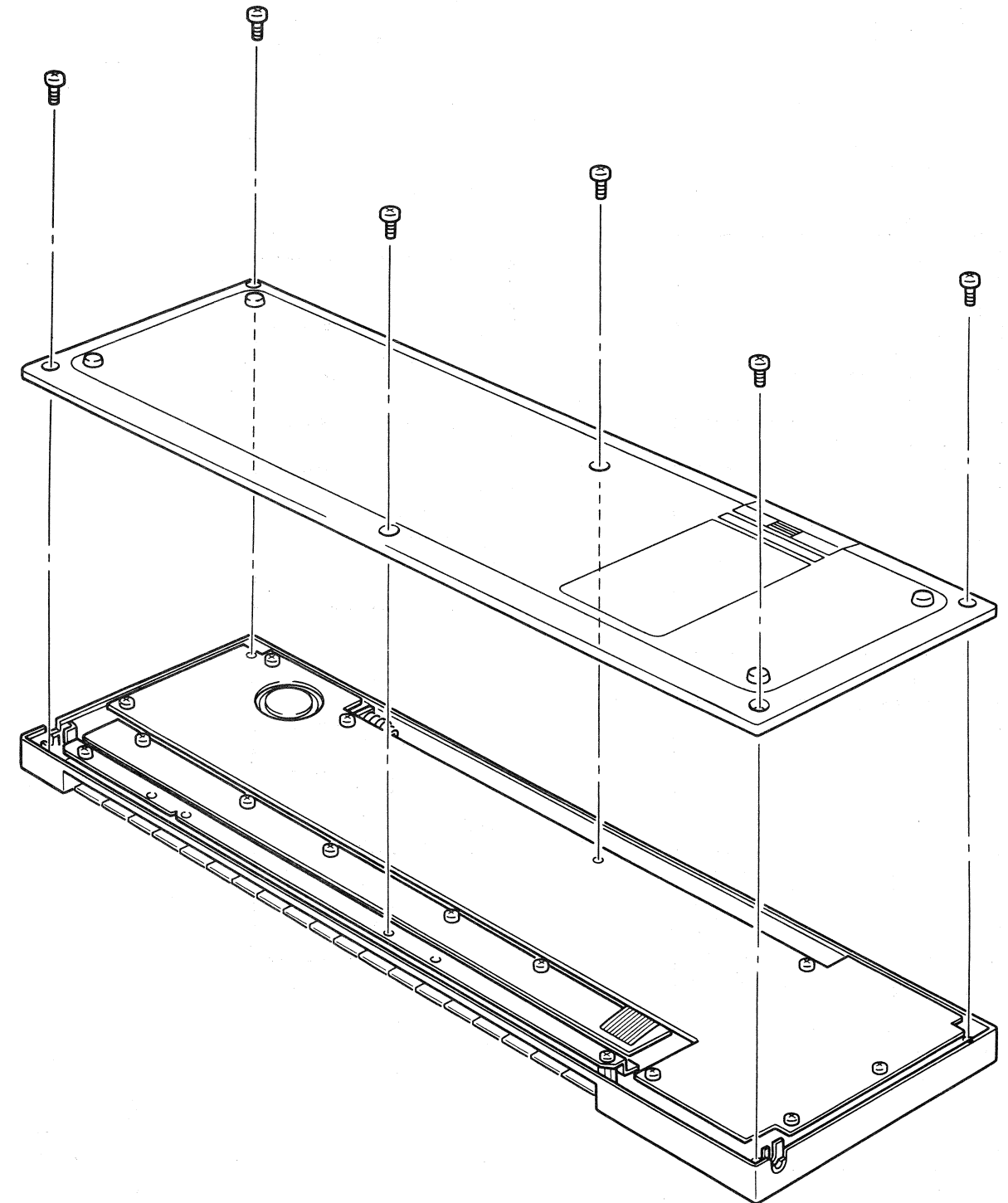
■DISASSEMBLY INSTRUCTIONS

■ Removal of Bottom Panel

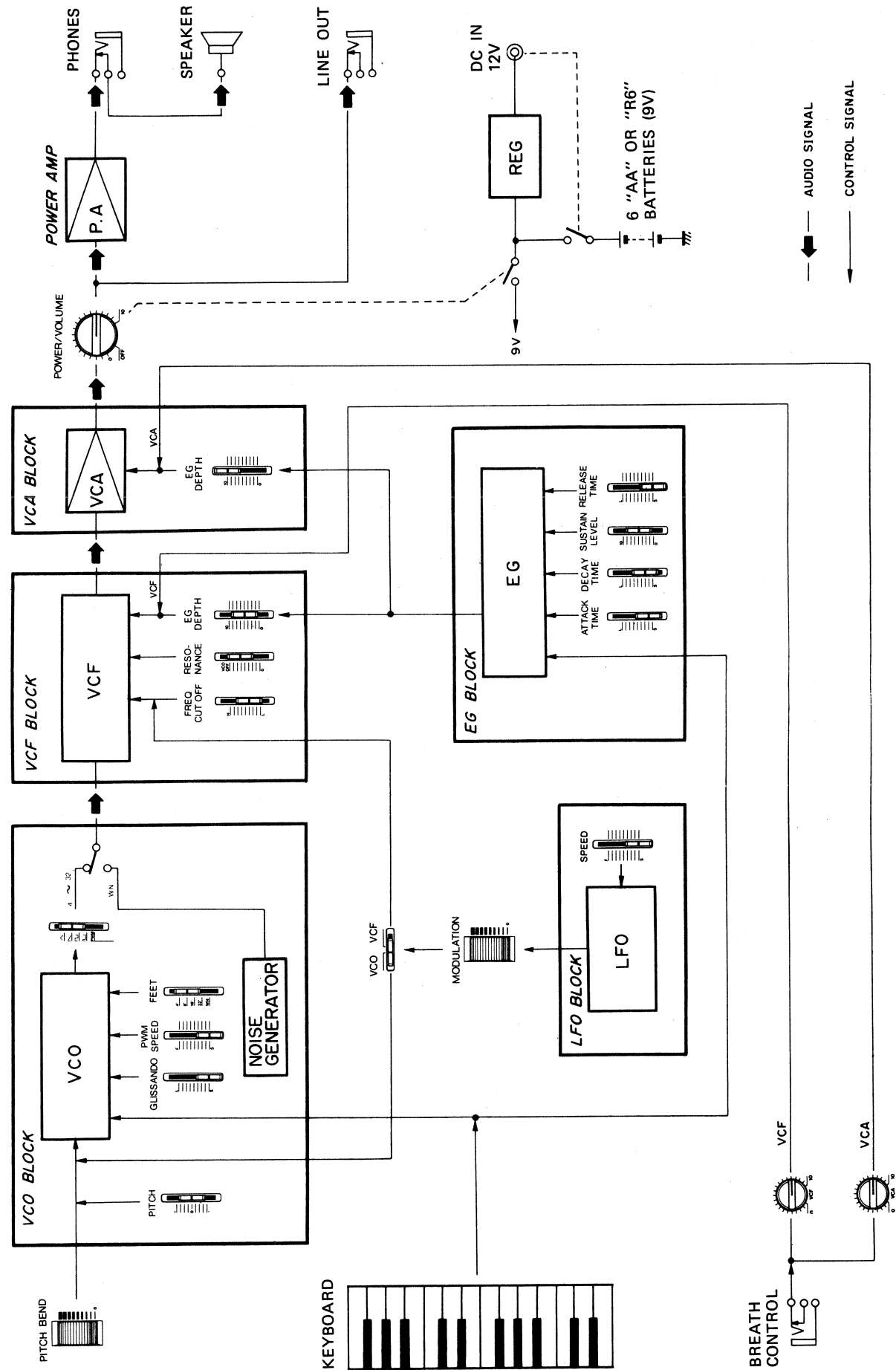
Remove all screws illustrated below and take away the bottom panel.

■ 下ケースの開閉

下ケース部のネジ6本を外すと下ケースを開けることができます。



■BLOCK DIAGRAM



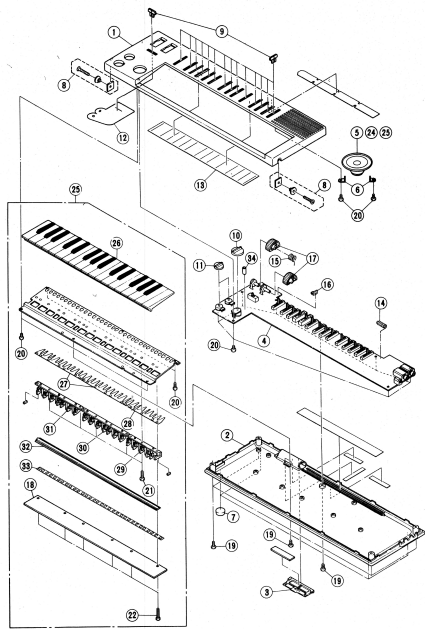
Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
NA	81:20:90	Circuit Board PN	Silver	PNシート			28*
NA	81:22:90	"	Black	"			28*
iG	00:11:80	IC	TC4013BP	IC			051
iG	00:13:90	"	NJM4558DV	"			030
iG	02:60:00	"	iG02600	"			041
iG	04:58:00	"	LA4138	"			051
iG	05:38:00	"	M5232L	"			040
iG	05:63:00	"	iG05630	"			090
iG	06:12:00	"	NJM78M09H	"			041
iT	10:37:00	"	YM10370	"			121
iA	10:15:70	Transistor	2SA1015(O.Y)	トランジスタ			031
iA	11:64:00	"	2SA1164(Y)	"			031
iC	07:52:20	"	2SC752(Y)	"			031
iC	18:15:70	"	2SC1815(O.Y)	"			031
iF	00:00:40	Diode	1S1555	ダイオード			010
iF	00:11:90	LED	TLR-124	LED			020
iF	00:21:40	Zener Diode	RD5.6EB2	ツェナーダイオード			010
iF	00:57:00	"	RD5.1EB2	"			010
iH	00:05:90	Diode	10E-1	ダイオード			010
HS	31:17:50	Rotary Pot. Resistor	B10K,300°	ロータリーボリューム	BREATH CONTROL		020
HS	31:17:60	"	A10K,300°	"	POWER/VOLUME		050
HS	31:18:00	"	A10K,90°	"	PITCH BEND		030
HS	31:18:10	"	B10K,90°	"	MODULATION		030
HT	77:00:70	Trim Pot. Resistor	B20K	半固定抵抗			021
HT	77:00:90	"	B1000K	"			021
HQ	46:00:20	Slide Pot. Resistor	B10K	スライドボリューム	PITCH,EG,VCA EG, SUSTAIN,CUT OFF		030
HQ	46:00:40	"	A1M,SW	"	GLISSANDO		040
HQ	46:00:60	"	C500K	"	PWM SPEED		030
HQ	46:00:70	"	RD1M	"	LFO SPEED		041
HQ	46:00:90	"	A2M	"	ATTACK,DECAY, RELEASE TIME		030
HQ	46:01:40	"	B10K,SW	"	RESONANCE		040
HU	57:71:20	Metal Film Resistor	12K Ω	金属皮膜抵抗			021
HU	57:72:70	"	27K Ω	"			021
HU	57:73:30	"	33K Ω	"			021
HU	57:82:20	"	220K Ω	"			021
HZ	00:25:60	Metal Film Resistor	2.2K Ω	リニア抵抗			010
FA	15:32:20	Mylar Capacitor	0.0022 μ F	マイラーコン			021
FA	15:42:20	"	0.022 μ F	"			021
FA	11:43:30	"	0.033 μ F	"			021
UA	21:51:00	"	0.1 μ F	"			021
FA	15:51:50	"	0.15 μ F	"			021
FS	68:44:70	Semi-Conductive Ceramic Capacitor	0.047 μ F/25V	半導体セラコン			010
FZ	00:41:10	"	0.1 μ F/16V	"			010

* : New Parts (新部品)

ランク : Japan only

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EXPLODED VIEW (All over)



CS01 II

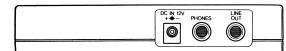
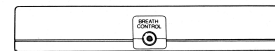
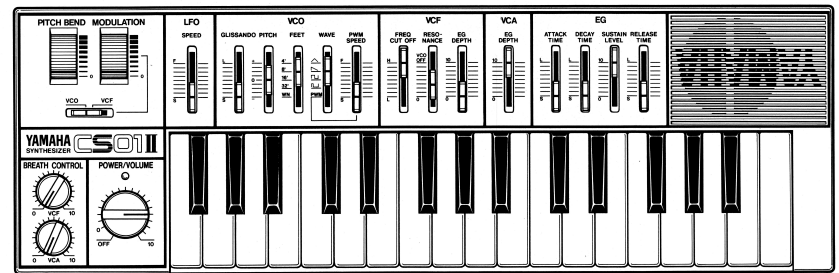
PARTS LIST

Part No.	Part No.	Description	部品名	Remarks	Current Model	Markets	ランク
1	CB.82.95.10	Top Case	Silver	上ケース			100
2	CB.82.95.20	Bottom Case	Silver	下ケース			090
3	CB.83.01.30	Battery Cover	Black	電池蓋			030
4	NA.81.20.90	Circuit Board	Silver	プリント基板			29#
5	NA.81.22.90	Speaker	Black	スピーカー			25#
6	AA.82.42.50	Holder Speaker		スピーカー固定金具			010
7	CB.03.71.20	Leg		スベリ足			010
8	BB.82.42.70	Strip Pin Set	1-B2427	鍵盤ハンダピンセット			020
9	CB.82.95.40	Knob, Side	Silver	ツマミ, スライダ			020
10	CB.82.95.50	Knob, Rotary, Large	Silver	ツマミ, ロータリ-式			020
11	CB.82.95.60	Knob, Rotary, Small	Silver	ツマミ, ロータリ-式			020
12	CA.80.33.90	Outproof Cover	Black	防塵カバー			010
13	CA.80.33.90						010
14	AA.82.42.30	Spring, Battery		電池バネ			020
15	AA.82.42.40	Spring, Wheel		ホイール戻りバネ			020
16	BB.80.18.70	Terminal, Battery		端子			010
17	CB.82.95.70	Knob, Wheel	Silver only	ホイール			020
18	CB.83.01.80		Black only				020
19	NA.80.90.80	Circuit Board MK		MKシート			091
20	EI.33.00.86	Bridged Tapping Screw	3x1.02(MC2-B)	バネ付タッピングネジ			010
21	EI.33.00.86		3x.852(MC2-B)				010
22	EI.33.00.86		3x.852(MC2-B)				010
23	BB.20.13.80	Housing, ZP	10PHH	ZPハウジング			010
24	BB.00.44.30	Contact Pin		コンタクトピン			010
25	BB.82.42.00	Keyboard Assy	1-B2420	鍵盤アッシー			161
26	CB.04.03.70	White Key	F	白鍵			010
27	CB.04.03.80		G				010
28	CB.04.03.90		A				010
29	CB.04.04.00		B				010
30	CB.04.04.10		C				010
31	CB.04.04.20		D				010
32	CB.04.04.30		E				010
33	CB.04.04.40		F, C				010
34	CB.04.04.50	Black key	F, C	黒鍵			010
35	AA.05.30.70	Spring, Keyboard	F12	鍵バネ			020
36	AA.05.30.80		F8				020
37	CB.04.04.80	Holder	F8	ホルダー			030
38	CB.04.04.70		F12				020
39	CB.04.11.20		LF12				020
40	CB.04.22.70	Rubber Contact	F32-6	接触ゴム			040
41	CB.04.16.00	Insulation Spacer		絶縁スペーサー			020
42	CB.82.92.60	LED Spacer		LEDスペーサー			010

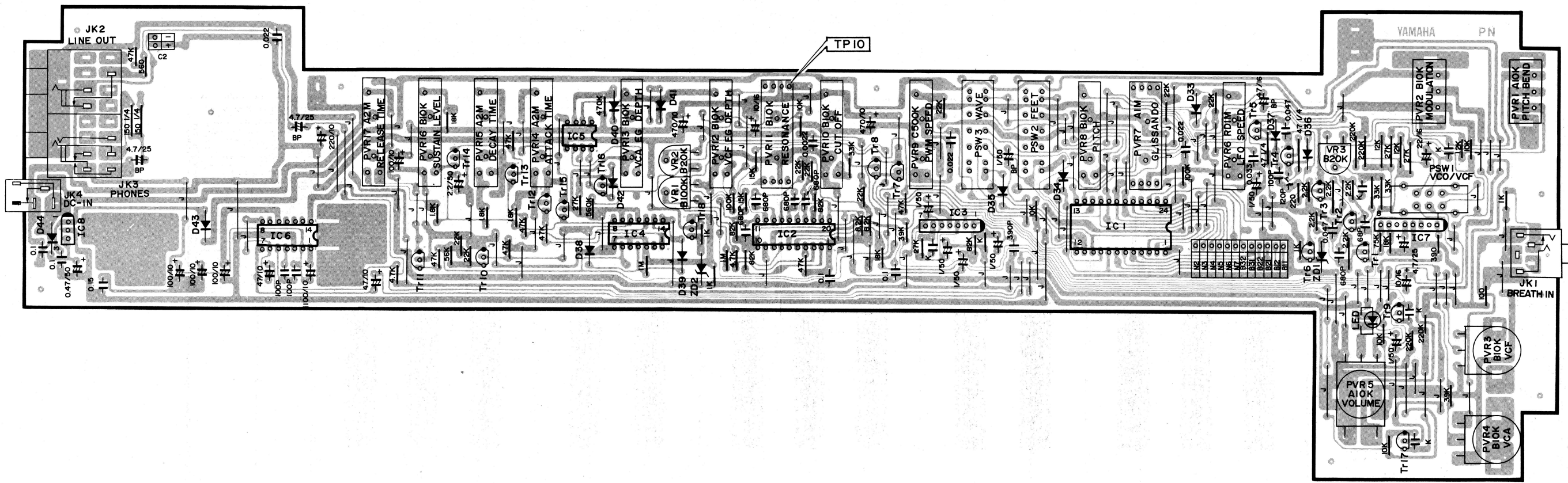
* New Parts (新部品) ランク : Japan only

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PANEL LAYOUT



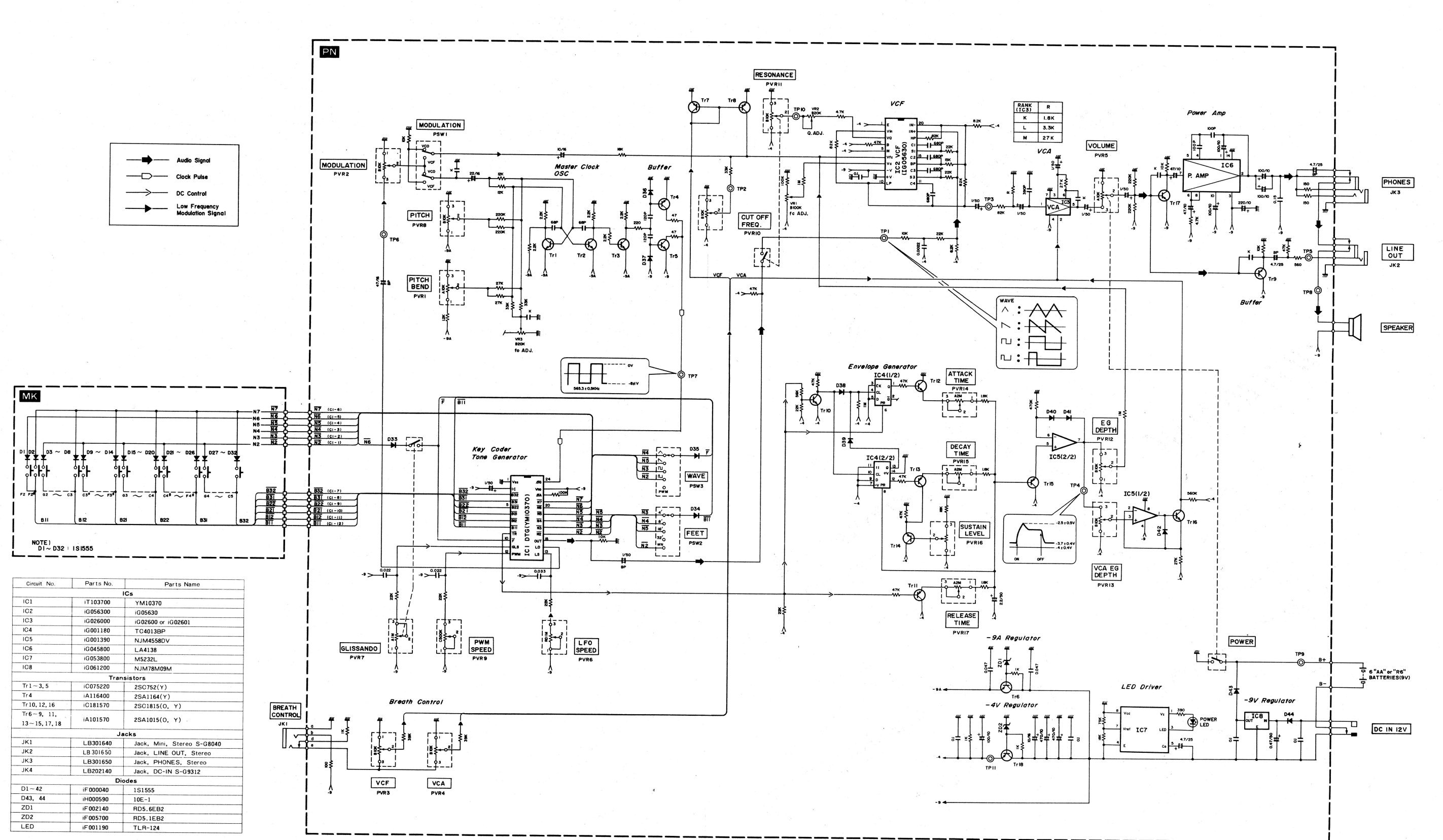
PRINTED CIRCUIT BOARD LAYOUT / GENERAL ADJUSTMENTS



Circuit No.	Parts No.	Parts Name
ICs		
IC1	iT103700	YM10370
IC2	iG056300	iG05630
IC3	iG026000	iG02600 or iG02601
IC4	iG001180	TC4013BP
IC5	iG001390	NJM4558DV
IC6	iG045800	LA4138
IC7	iG053800	M5232L
IC8	iG061200	NJM78M09M
Transistors		
Tr1-3, 5	iC075220	2SC752(Y)
Tr4	iA116400	2SA1164(Y)
Tr10, 12, 16	iC181570	2SC1815(O, Y)
Tr6-9, 11, 13-15, 17, 18	iA101570	2SA1015(O, Y)
Jacks		
JK1	LB301640	Jack, Mini, Stereo S-G8040
JK2	LB301650	Jack, LINE OUT, Stereo
JK3	LB301650	Jack, PHONES, Stereo
JK4	LB202140	Jack, DC-IN S-G9312
Diodes		
D1-42	iF000040	1S1555
D43, 44	iH000590	10E-1
ZD1	iF002140	RD5.6EB2
ZD2	iF005700	RD5.1EB2
LED	iF001190	TLR-124

ITEM 調整項目	TEST POINT 測定点	PROCEDURE	セッティングと測定値	WHERE TO ADJUST 調整 VR
Master Oscillator	IC1 pin24	●Place both [PITCH BEND] and [PITCH] controls in the "0" position and adjust VR3 for a frequency of 565.3kHz±0.5 kHz with a frequency counter.	●[PITCH BEND] を "0" の位置にし, [PITCH] を中央 "0" にしたときに 565.3±0.5kHz になるように調整します。	VR3
VCF	IC3 pin 1	●By depressing B4 key, adjust VR1 to achieve maximum amplitude with [FREQ CUT OFF] and [RESONANCE] controls at the center position.	●[CUT OFF], [RESONANCE] を中央にし, B4のKeyを押したとき波形がピークになるように調整する。	VR1
	TP10	●Place [FEET] control in the "WN" position and adjust [RESONANCE] control for a voltage of -1V±0.1V.	●[FEET] を "WN" にし, [RESONANCE] で測定点の電圧を -1±0.1V にする。	VR2
Battery Indicator	IC3 pin 1	●First set VR2 for a voltage of 0.5V _{P-P} or less. Then gradually turn it and adjust so that the output waveform reaches 0.8V _{P-P} .	●出力波形が0.5V _{P-P} 以下になるように調整し, その後すこしずつVRをまわして, 出力波形が0.8V _{P-P} になるように調整する。	
		●Power indicator LED flashes when the battery voltage is less than 6.5V (±0.5V). Recommended that all batteries be replaced.	●電池の電圧が6.5±0.5V以下でLEDが点滅します。	

COMPLETE CIRCUIT DIAGRAM



Circuit No.	Parts No.	Parts Name
ICs		
IC1	iT103700	YM10370
IC2	iG056300	iG05630
IC3	iG026000	iG02600 or iG02601
IC4	iG001180	TC4013BP
IC5	iG001390	NJM4558DV
IC6	iG045800	LA4138
IC7	iG053800	M5232L
IC8	iG061200	NJM78M09M
Transistors		
Tr1-3, 5	iC075220	2SC752(Y)
Tr4	iA116400	2SA1164(Y)
Tr10, 12, 16	iC181570	2SC1815(O, Y)
Tr6-9, 11, 13-15, 17, 18	iA101570	2SA1015(O, Y)
Jacks		
JK1	LB301640	Jack, Mini, Stereo S-G8040
JK2	LB301650	Jack, LINE OUT, Stereo
JK3	LB301650	Jack, PHONES, Stereo
JK4	LB202140	Jack, DC-IN S-G9312
Diodes		
D1-42	iF000040	1S1555
D43, 44	iH000590	10E-1
ZD1	iF002140	RD5.6EB2
ZD2	iF005700	RD5.1EB2
LED	iF001190	TLR-124