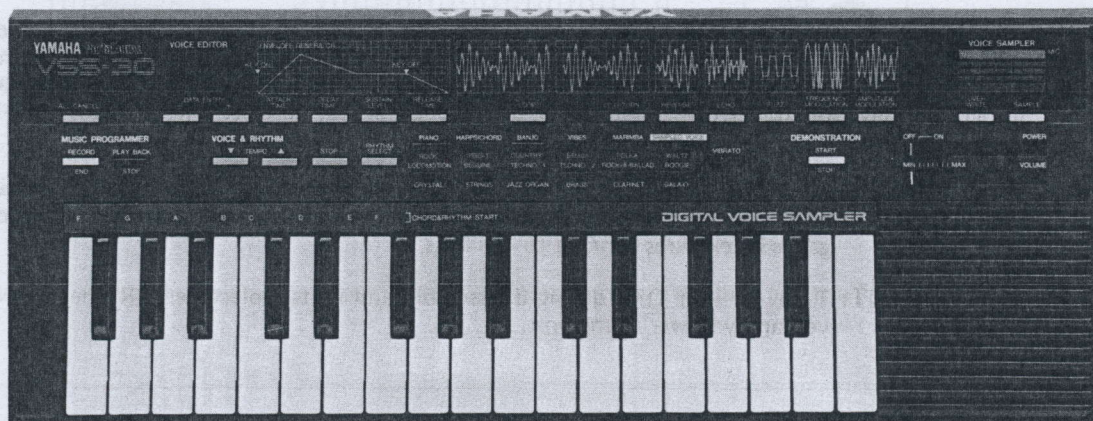


YAMAHA PortaSound VSS-30

SERVICE MANUAL



VSS-30

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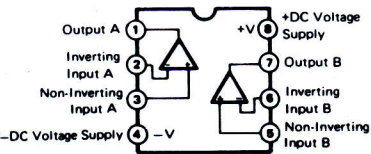
LSI DATA TABLE (LSI端子機能表)

YM2416 (XD082001) GE11

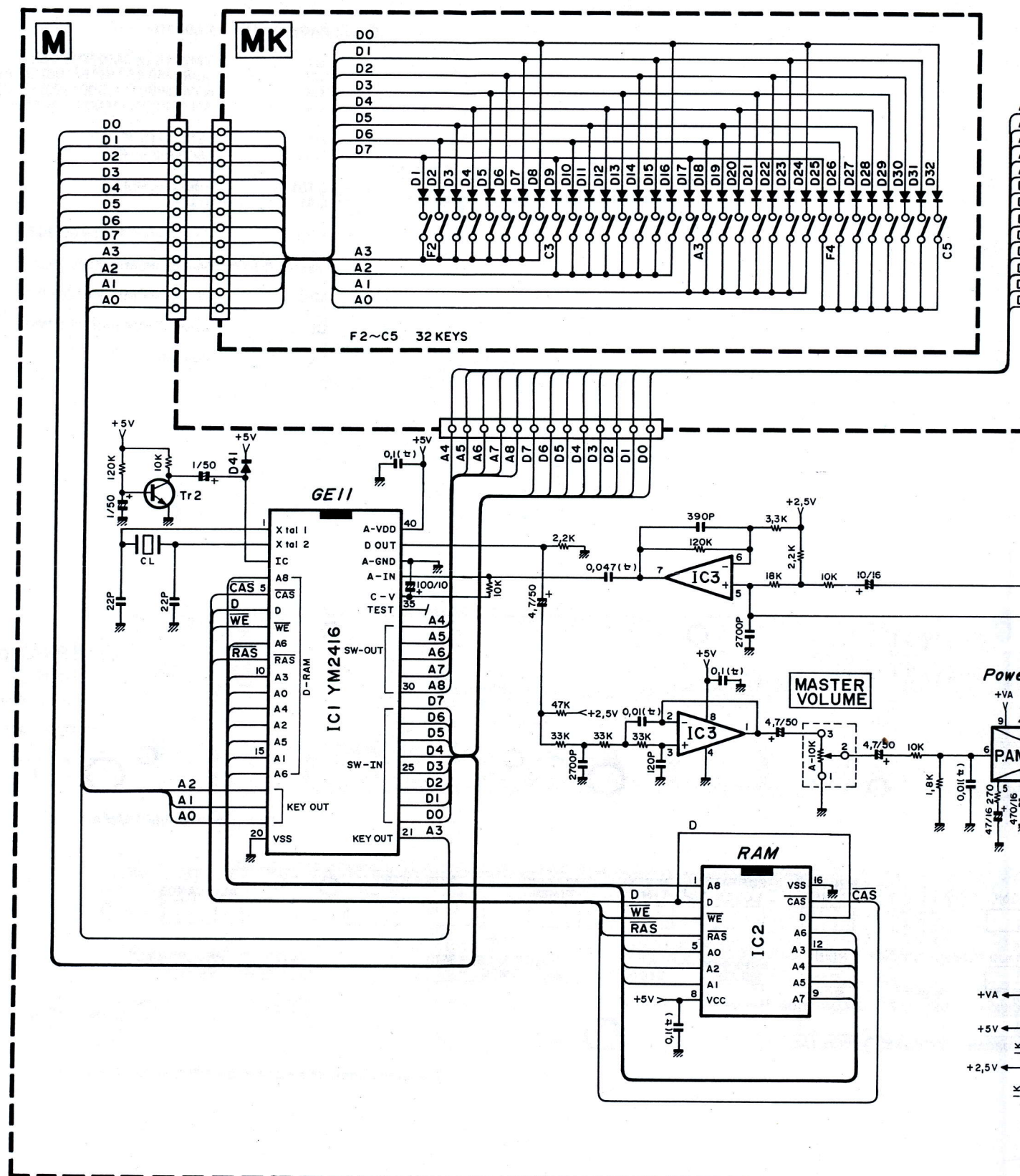
Pin No.	Pin Name	I/O	Function	Pin No.	Pin Name	I/O	Function
1	xtal1		Clock	21	A3	O	Output port (for keyboard switches)
2	xtal2			22	D0	I	
3	IC	I	Initial clear	23	D1	I	Input port (for keyboard and panel switches)
4	A8	I	External memory input	24	D2	I	
5	CAS	O	External memory control	25	D3	I	
6	D	O	Data output	26	D4	I	
7	WE	O	Write control	27	D5	I	
8	A6	I	External memory input	28	D6	I	
9	RAS	O	External memory control	29	D7	I	Output port (for panel switches)
10	A3	I	External memory input	30	A8	O	
11	A0	I		31	A7	O	
12	A4	I		32	A6	O	
13	A2	I		33	A5	O	
14	A5	I		34	A4	O	
15	A1	I	Output port (for keyboard switches)	35	SP OFF	O	Amplifier/speaker separating control
16	A6	I		36	VCC		DC supply
17	A2	O		37	SAMPL A1	I	Sampling signal IN
18	A1	O		38	A-GND		Ground
19	A0	O	Ground	39	OUT	O	Musical sound/voice
20	VSS			40	A-VDD		DC supply

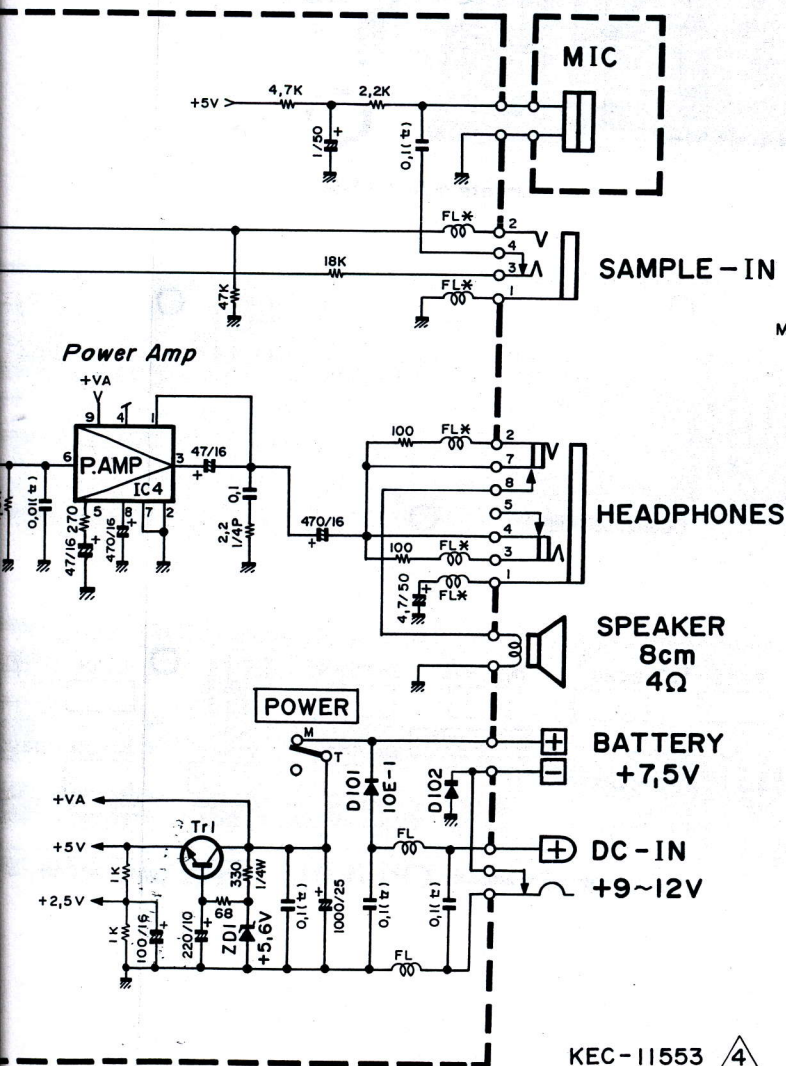
IC BLOCK DIAGRAM (ICブロック図)

NJM4558DV (IG001390)
Dual Operational Amplifier



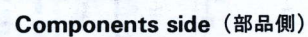
OVERALL CIRCUIT DIAGRAM (総回路図)





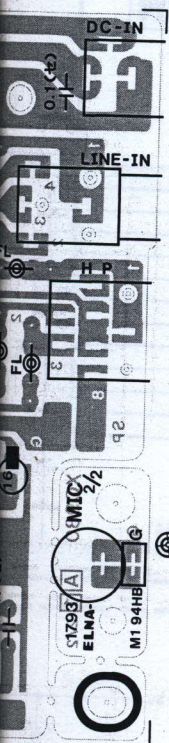
IC1 : YM2416 (XD082001) GEII
 IC2 : M881256-15 (IG155100) DRAM
 IC3 : NJM4558DV (IG001390) OP AMP.
 IC4 : AN7140 (IG116800) 5W ICH
 Tr1 : 2SD880 (O),(Y)
 Tr2 : 2SC2603 (E),(F)
 D41 : ISS133
 D101,102 : IOE-1
 ZD1 : Zener Diode MTZ5.6C 20mA
 Marked O, (t) : Semiconductive Cera. Cap.
 MIC : Condenser MIC WM-034B
 CL : Ceramic Resonator 3,58MHz
 FL : Coil 20µH
 Marked * : North European model only

● **M Circuit Board**



The image displays two views of the Atari 2600 Game Boy PCB. The top view shows the component side with labels like 1793, PN, and various component values (040, 035, 034, 033). The bottom view shows the component-free side with labels for functions like SAMPLE, WRITE, OVER, AMPLITUDE MODULATION, FREQUENCY MODULATION, FUZZ, ECHO, REVERSE, U-TURN, VIBRATO, and various sound effects like WALTZ, BOOGIE, ROCK-A-BALLAD, etc.

- 4



side (部品側)

[M Circuit Board]

Notes)

Circuit Board:

XC98010

IC1: YM2416 (XD082001)
 IC2: MB81256-15 (IG)
 IC3: NJM4558DV (IG)
 IC4: AN7140 (IG1168)

Tr1: 2SD880 O, Y
 Tr2: 2SC2603 E, F

D101: 10E-1 26MM
 D41: 1SS133

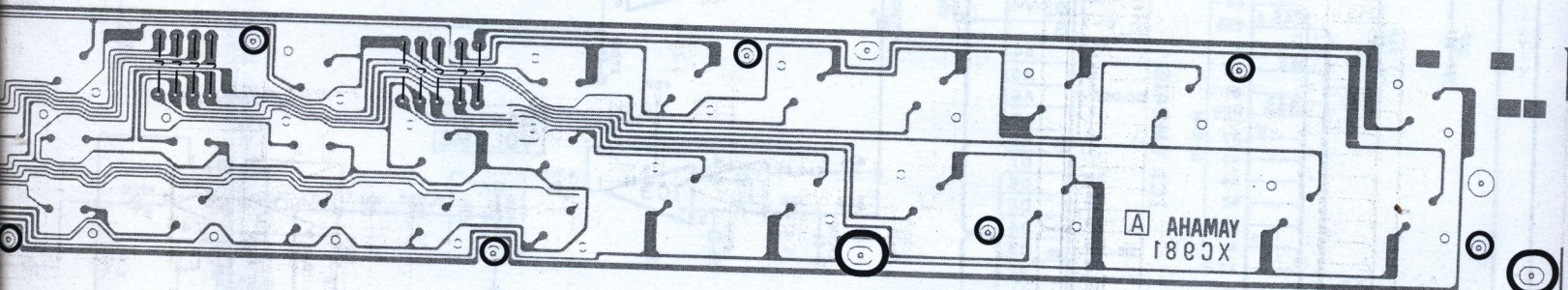
ZD-1: Zener Diode MTZ

Marked 0.1 (セ): Semiconductive C

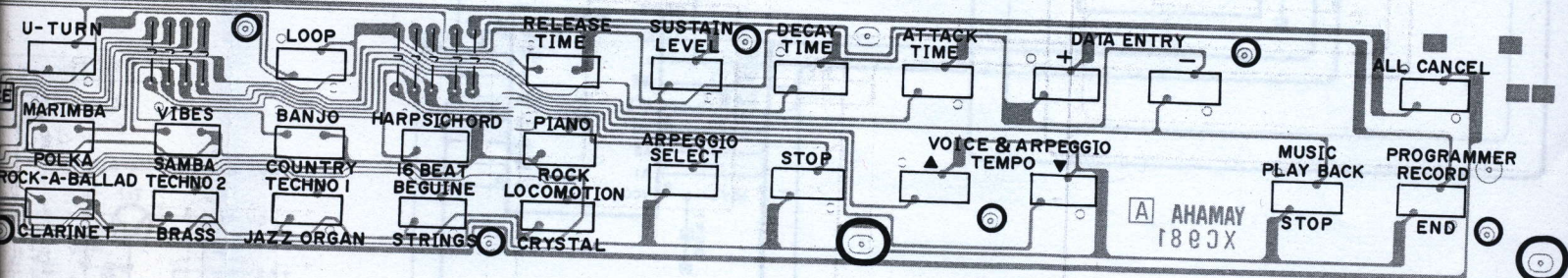
MIC: Condenser MIC W

CL: Ceramic Resonator

FL: Coil 20μ



Components side (部品側)



The application of switches on PN Circuit Board

[M Circuit Board]

Notes)

Circuit Board:

XC98010

IC1:

YM2416 (XD082001) GE11

IC2:

MB81256-15 (IG155100) DRAM

IC3:

NJM4558DV (IG001390) OP AM

IC4:

AN7140 (IG116800) 5W 1CH

Tr1:

2SD880 O, Y

Tr2:

2SC2603 E, F

D101:

10E-1 26MM

D41:

1SS133

ZD-1:

Zener Diode MTZ5.6C 20mA

Marked 0.1 (t): Semiconductive Cera. Cap.

MIC:

Condenser MIC WM-034B

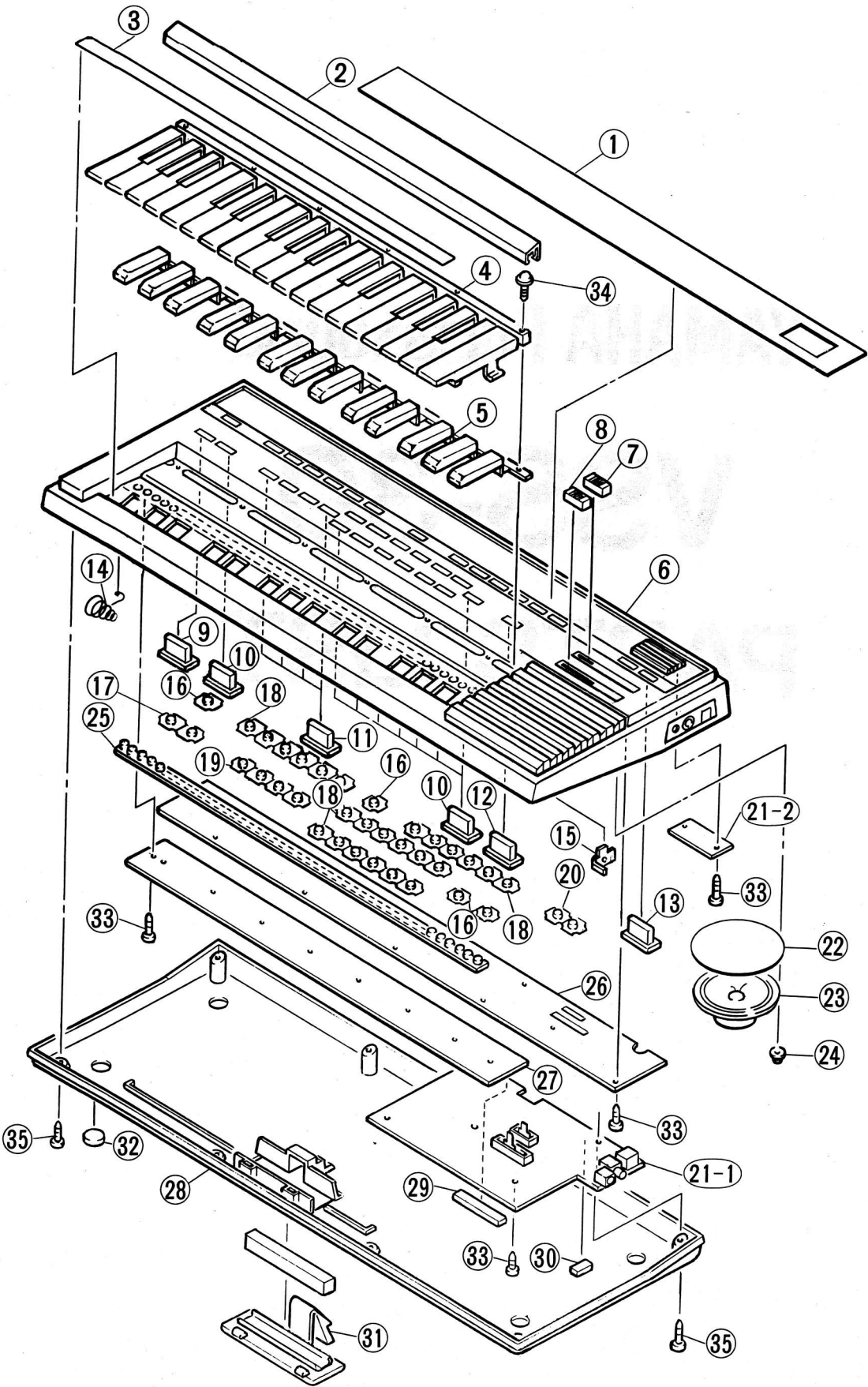
CL:

Ceramic Resonator 3.58MHz

FL:

Coil 20 μ

OVERALL ASSEMBLY (総組立)



OVERALL ASSEMBLY (総組立)

VSS-30

Ref. No.	Part No.	Description	部品名	Remarks	ランク
1	VC535900	Panel Seal	パネルシール		
2	VC537700	Keyboard Holder	鍵盤押さえ		04
3	VC537000	Stopper Cloth	ストップバークロス		03
4	VC536100	White Key Assembly	白鍵 A s s 'y		01
5	VC536300	Black Key Assembly	黒鍵 A s s 'y		
6	VC535200	Upper Case	上ケース		
7	VC539000	Knob	スライッドツマミ	POWER	10
8	VC545200	Knob	スライッドツマミ	VOLUME	01
9	VC545000	Knob	スライッドツマミ	RECORD	01
10	VC539200	Knob	スライッドツマミ	PB, SELECTOR	01
11	VC544900	Knob	スライッドツマミ	TEMPO, STOP, ARP	01
12	VC545100	Knob	スライッドツマミ	DEMONSTRATION	01
13	VC544800	Knob	スライッドツマミ		01
14	VC540200	Spring Terminal	端子板		01
15	BB005460	Terminal	端子板		01
16	VC544100	Rubber Contact	接点ラバー		01
17	VC544200	Rubber Contact	接点ラバー		01
18	VC544700	Rubber Contact	接点ラバー		01
19	VC544300	Rubber Contact	接点ラバー		01
20	VD631300	Rubber Contact	接点ラバー		01
21	VD627800	Circuit Board	Mシート	H OTHERS	
21-1	VD628300	Circuit Board	Mシート		
21-2		Circuit Board	Mシート		
22	VC535700	Speaker Cloth	MICシート		
23	XC042001	Speaker	スピーカー		
24	EK003650	Self Threading Nut	セルフスレッドナット		04
25	VC548300	Rubber Contact	接点ラバー		01
26	NX002720	Circuit Board	P Nシート	KEY SWITCH	03
27	NX002730	Circuit Board	M Kシート		
28	VC540700	Lower Case Assembly	下ケース A s s 'y		06
29	VD629100	Cushion	防振スポンジ		01
30	VD629200	Cushion	防振スポンジ		01
31	VB227600	Battery Cover	バッテリーカバー		01
32	CB043750	Foot	ゴム足		01
33	EI026080	Bind Head Tapping Screw	A*イント*タッピン*ネジ		01
34	EK030030	BW Head Tapping Screw	BW*イント*タッピン*ネジ		01
35	EI326126	Bind Head Tapping Screw	A*イント*タッピン*ネジ		01

* New Parts (新規部品)

ELECTRICAL PARTS (電気部品)

ランク: Japan only

Ref. No.	Part No.	Description	部品名	Remarks	ランク
	VD627800	Circuit Board	Mシート	H OTHERS	
	VD628300	Circuit Board	Mシート		
	NX002720	Circuit Board	P Nシート		
	NX002730	Circuit Board	M Kシート		
	VD627800	Circuit Board	Mシート	H OTHERS	
	VD628300	Circuit Board	Mシート		
	IG001390	IC	I C	H OTHERS	
	IG116800	IC	I C	OP AMP	03
	IG155100	IC	I C	5W 1CH	04
	XD082001	IC	I C	DRAM	15
	ID088000	Transistor	トランジスタ	GE11	
	IC260310	Transistor	トランジスタ		03
	IH000590	Diode	ダイオード		03
	IF003450	Diode	ダイオード		01
	IF010720	Zener Diode	ダイオード		01
	VA855600	Slide Pot.	ツェナーダイオード		01
	UJ149220	Electrolytic Cap.	スライドボリューム	MASTER VOL	01
	FZ005030	Semiconductive Cera. Cap.	ケミコン		03
	VC961000	Condenser MIC.	半導体セラコン		03
	VR835000	Coil	マイクローホン		01
	QU008000	Ceramic Resonator	コイル		03
	VA856400	Slide Switch	セラミック振動子		01
	VA855500	Pin Jack	スライドスイッチ	POWER SW	03
	VR230400	Phone Jack	ピンジャック	SAMPLE IN	02
	VC664500	DC IN Connector	ホンジャック	HEADPHONE	03
	NX002720	Circuit Board	電源コネクタ	DC IN	01
	IF003450	Diode	P Nシート		
			ダイオード		01
	NX002730	Circuit Board	M Kシート		
	IF003450	Diode	ダイオード		01
	XC042001	Speaker	スピーカー		04

* New Parts (新規部品)

ランク: Japan only