

# **SEGA<sup>TM</sup> SERVICE MANUAL**

## **GENESIS II / MEGA DRIVE II (PAL-B/I/G, RGB)**



NO.	001
ISSUED	JUNE, 1993

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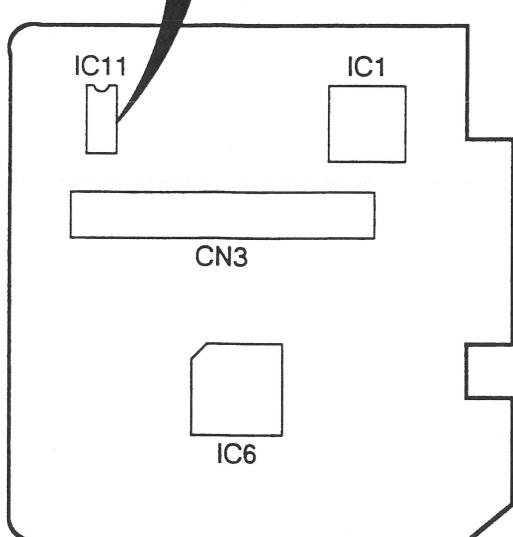
**Sega Enterprises, Ltd.**

## Before Using This Service Manual

This service manual includes data for the GENESIS II and MEGA DRIVE II .

- Parts of the circuits are different in the GENESIS II depending on the model of IC11 (RGB encoder used).  
Check the model of IC11 on the main circuit board and identify the type, F, S or SM.

Type	Model of IC11	Part No.
F	IC MB3514PF-G-BND-EF	313-5232-A
S	IC CXA1145M-T6 SOP	313-5213-A
SM	IC KA2195D	313-5236-A



MAIN C.B (Top View)

- Differences in the circuits are shown in the difference tables in the schematic and circuit board diagrams.
- In the parts list, differences are shown in the REMARKS columns.

# 1. SPECIFICATIONS

## RATINGS

Model	GENESIS II	MEGA DRIVE II		
		PAL-I	PAL-B	PAL-G, RGB
Power input	AC 120V, 60Hz	AC220V, 50Hz,	AC 240V, 50Hz	AC 220V, 50Hz
Power consumption	18 W	18 W	18 W	18 W
Usable temperature	Humidity 5-35 °C , 20-80%RH (non-condensing)			
Dimensions	220 (W) × 212 (D) × 59 (H) mm			

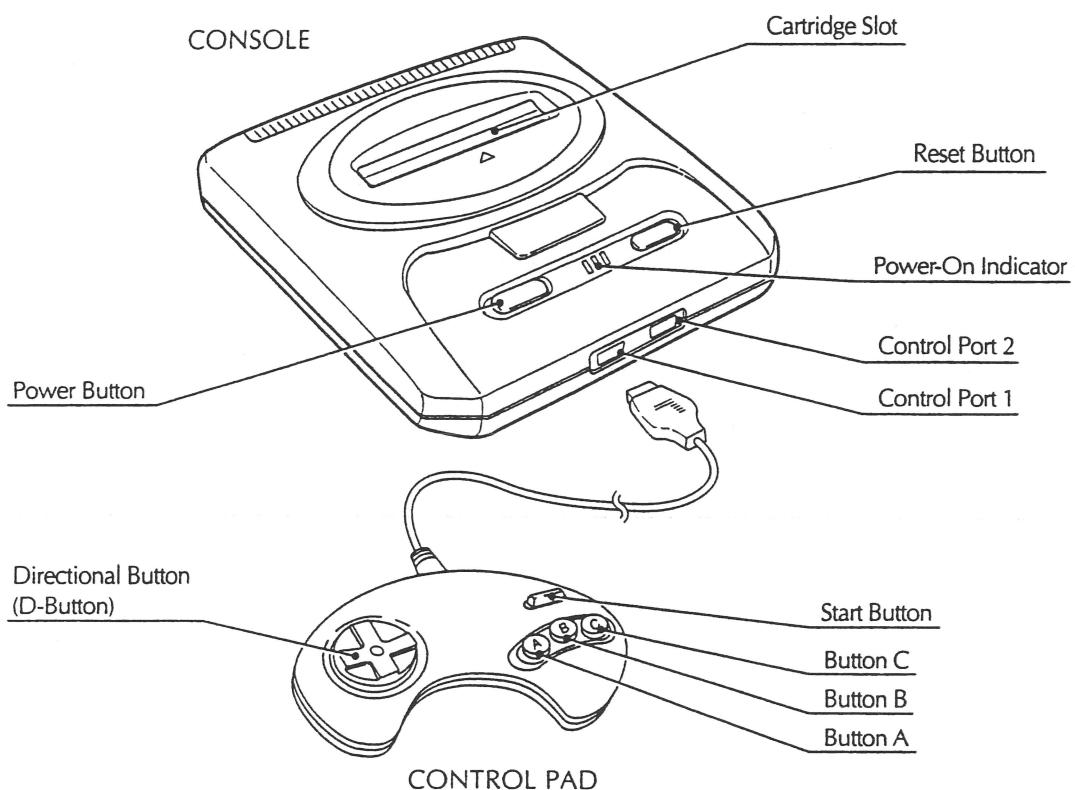
## SPECIFICATIONS

CPU	68000 (8M) & Z80A (4M)	
Memories	RAM	72k bytes
	VRAM	64k bytes
Audio		FM, PSG, PCM
Display capability	VDP	SEGA custom LSI
	Display	Regular color TV
	Colors	512
		VIDEO RGB
Control terminals		2, control pad, etc. can be attached
Reset button		Game restart function
Slots		For cartridge and extension

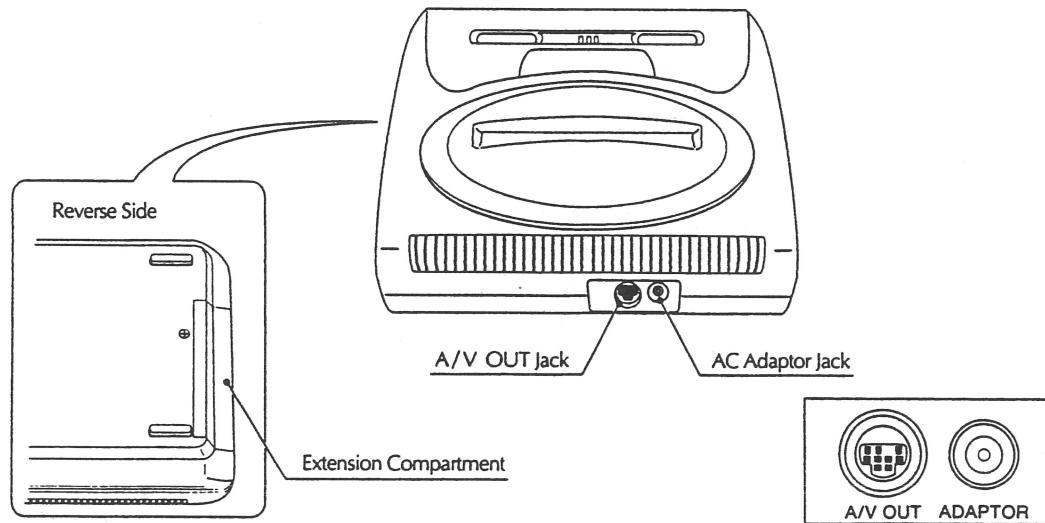
\* Design and specifications are subject to change without notice.

## 2. IDENTIFYING PARTS

### 2-1. FRONT & TOP VIEW OF CONSOLE

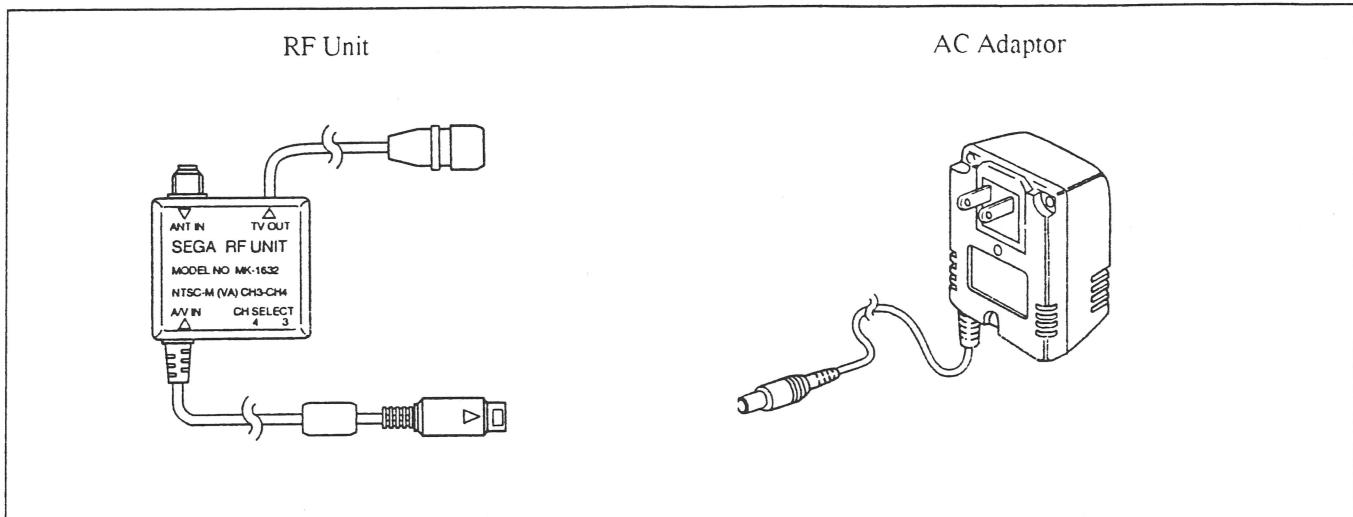


### 2-2. BACK VIEW OF CONSOLE

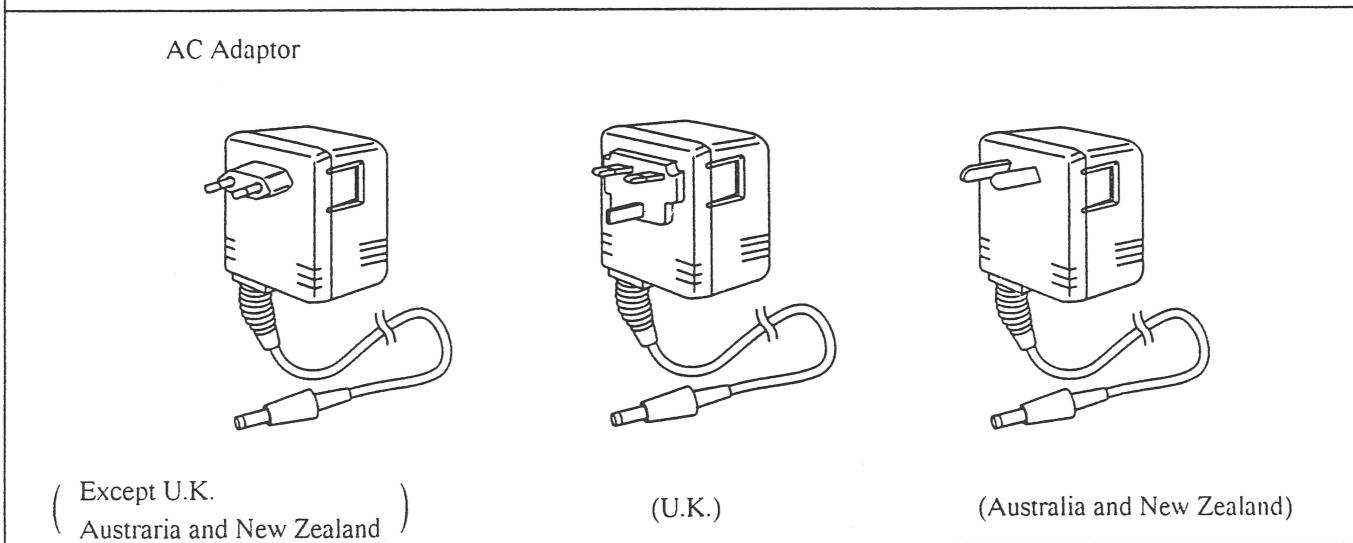
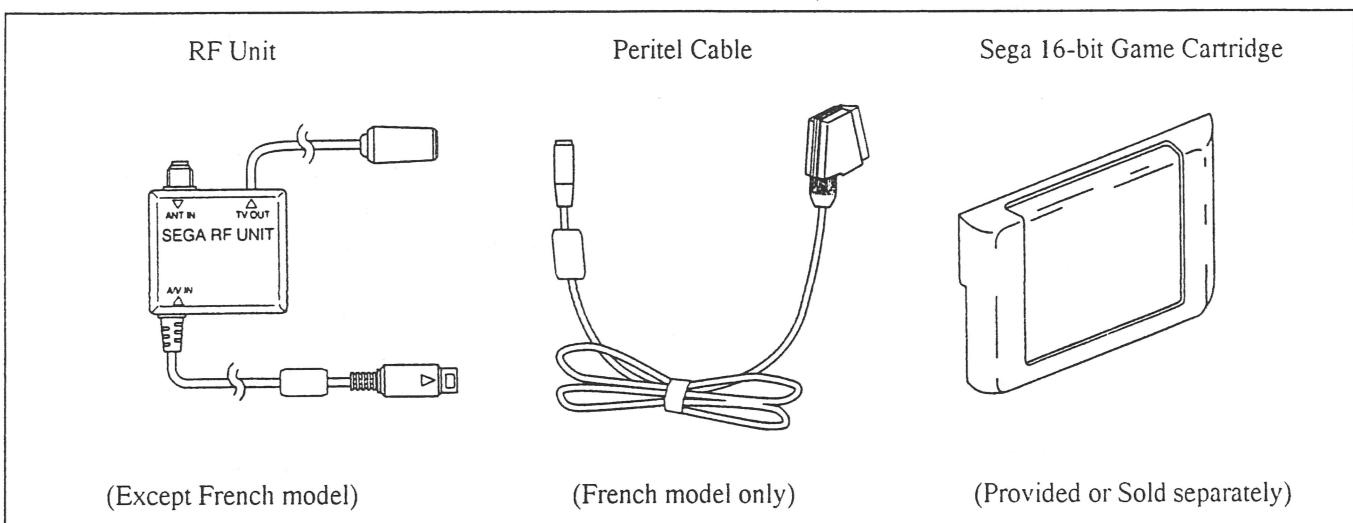


## 2-3. ACCESSORIES

### GENESIS II



### MEGA DRIVE II



### 3. DISASSEMBLY

#### 3-1. Dismantling procedure

##### Removal of bottom screws and top case

- 1) Turn the power button off.
- 2) Turn the unit over. (See Fig. 1)
- 3) Remove four screws (202).
- 4) Remove top case (1).

##### Main board removal (See Fig. 2)

- 1) Remove nine screws (201).
- 2) Remove the shield plate.
- 3) Remove two screws (203).
- 4) Remove the main board from the bottom case (2).

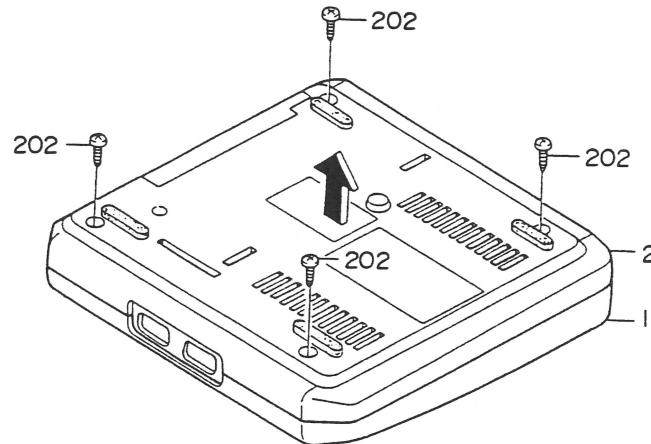


Fig. 1

#### 3-2. Reinstalling procedure

##### Main board reinstallation

- 1) Attach the 64-pin cover (8).
- 2) Attach the main board to the bottom case.
- 3) Tighten two screws (203).
- 4) Attach the shield plate.
- 5) Tighten nine screws (201).

##### Top case reinstallation

- 1) Turn off the tactile power switch (TACT SW) on the main board.
- 2) Attach the top case.
- 3) Engage the top case with the bottom case.

##### Tightening the screws on the bottom case.

- 1) Turn the unit over. (See Fig. 1)
- 2) Tighten four screws (202).

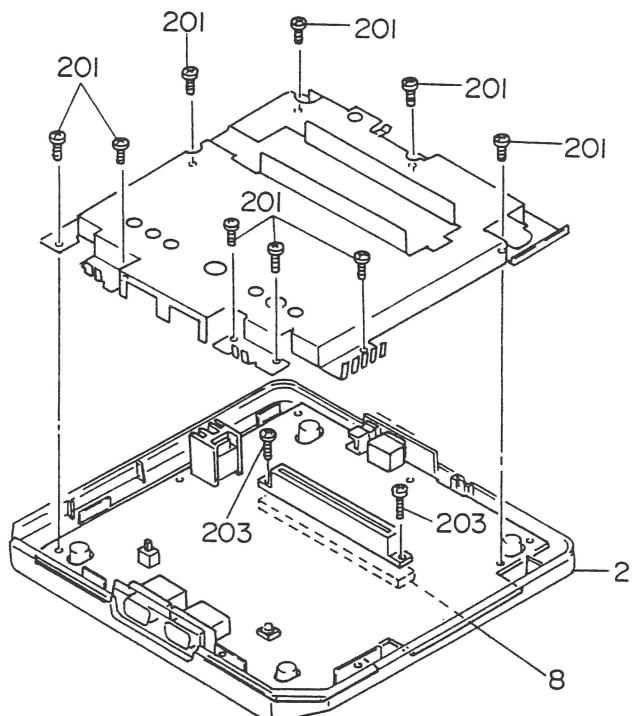
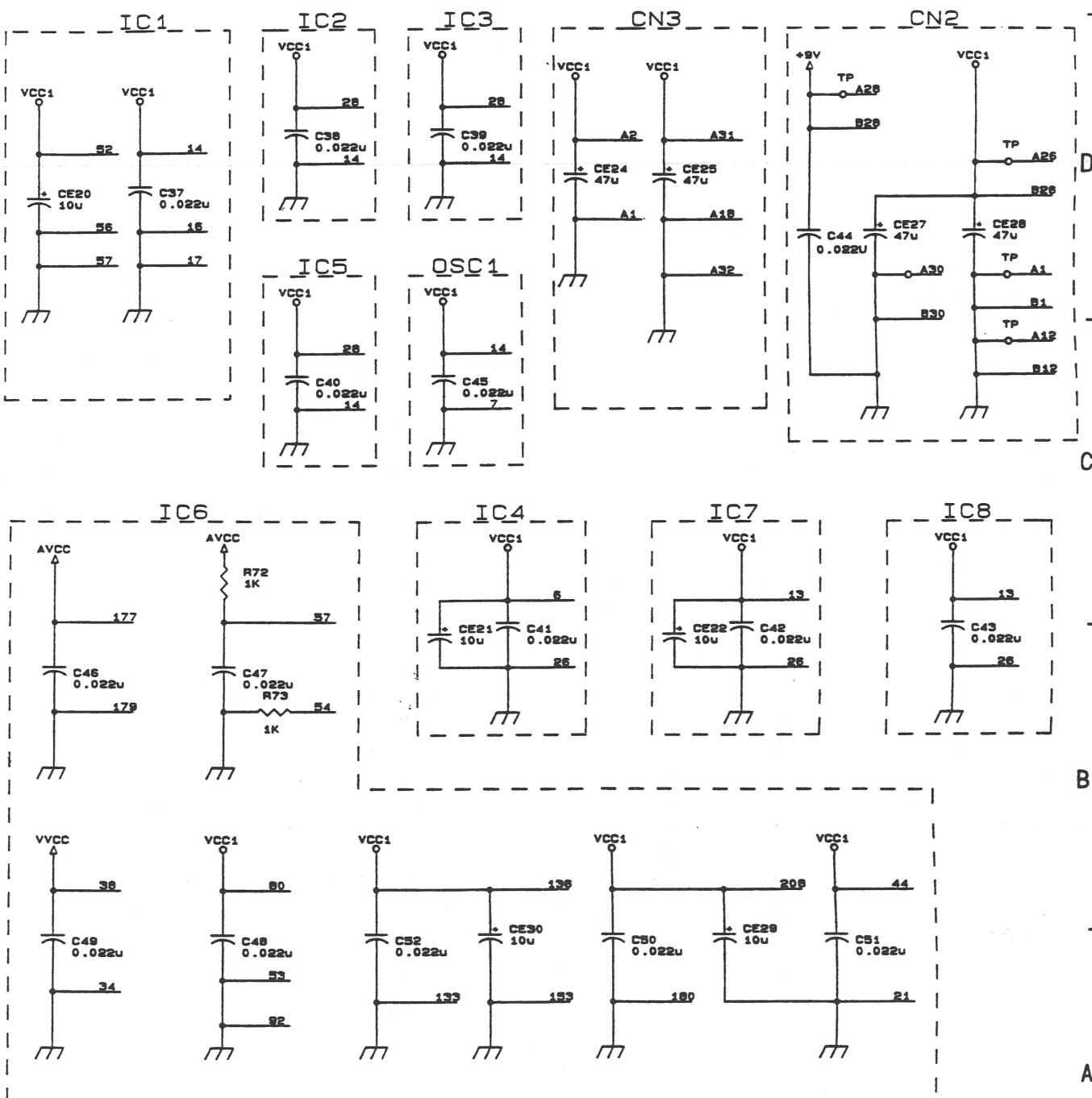


Fig. 2

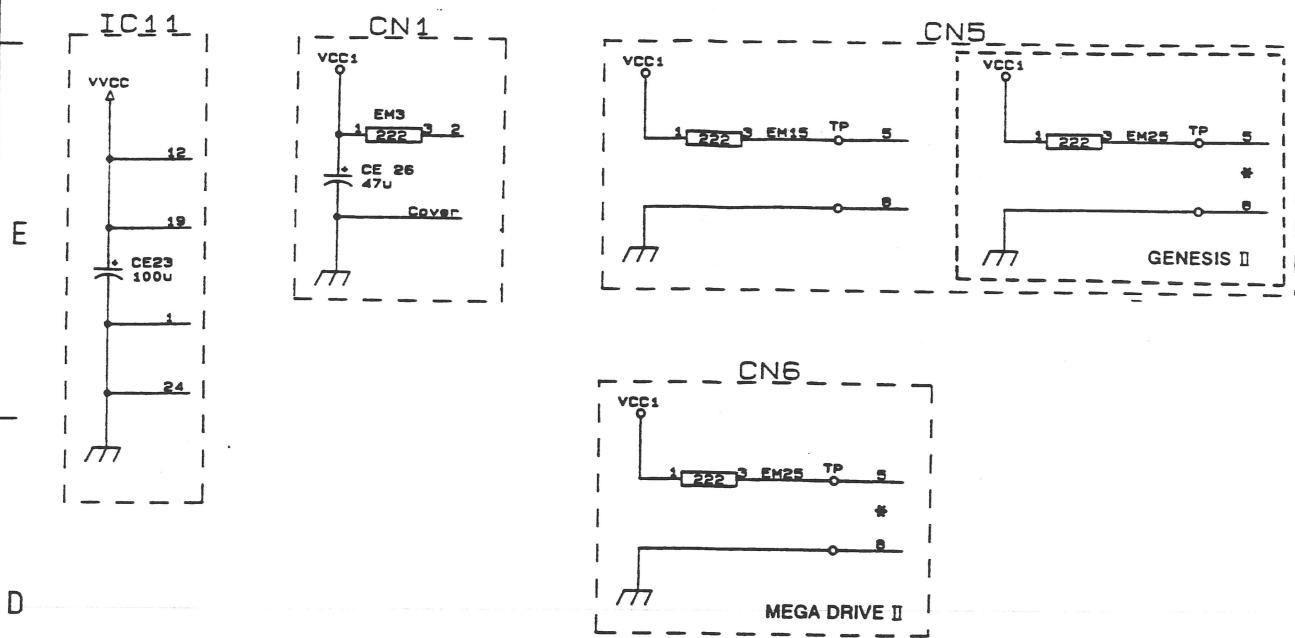
## \* DIFFERENCE TABLE FOR DIAGRAM-1

CIRCUIT No.	GRID	GENESIS II	MEGA DRIVE II
OSC1	C-5	53.693175MHz	53.203424MHz
C9	E-7	NOT USED	47P
C10	C-5	NOT USED	10P
C11	B-4	NOT USED	33P

## 5-2. SCHEMATIC DIAGRAM-2



### 5-3. SCHEMATIC DIAGRAM-3



### \* DIFFERENCE TABLE FOR DIAGRAM-4

CIRCUIT No.	GRID	GENESIS II			MEGA DRIVE II
		TYPE-F	TYPE-S	TYPE-SM	
IC11	E-6	MB3514PF-G-BND-EF	CXA1145-T6 SOP	KA2195D	MB3514PF-G-BND-EF
L2	E-7	100 $\mu$	100 $\mu$	NOT USED	100 $\mu$
L3	D-7	12 $\mu$	12 $\mu$	NOT USED	12 $\mu$
L6	D-7	NOT USED	NOT USED	NOT USED	100 $\mu$
CE14	D-6	220 $\mu$	10 $\mu$	10 $\mu$	220 $\mu$
C28	E-7	18P (CH)	18P (CH)	NOT USED	18P (CH)
C29	D-7	0.01 $\mu$	0.01 $\mu$	NOT USED	0.01 $\mu$
C30	D-7	180P (CH)	180P (CH)	NOT USED	180P (CH)
C32	E-6	15P (CH)	180P (CH)	NOT USED	15P (CH)
C57	D-5	100P (CH)	NOT USED	NOT USED	100P (CH)
C61	D-6	NOT USED	NOT USED	NOT USED	0.1 $\mu$
C62	D-7	NOT USED	NOT USED	NOT USED	12P (CH)
R47	E-6	12K	1.2K	NOT USED	12K
R54	D-6	NOT USED	24K	24K	NOT USED
R55	D-6	10K	1K	NOT USED	10K
R56	D-7	1.2K	1.2K	NOT USED	1.2K
R57	D-7	330	330	NOT USED	1K
R61	E-5	4.7K	10K	10K	4.7K

**IC2/3**

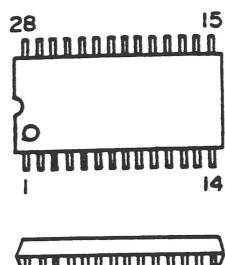
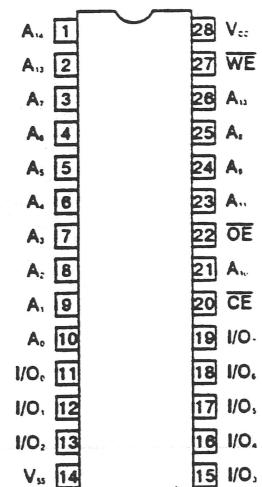
**IC HM65256BLFP-10**  
Parts No. : 315-0547-10A

**IC TC81832AFL-10**  
Parts No. : 315-0759-10A

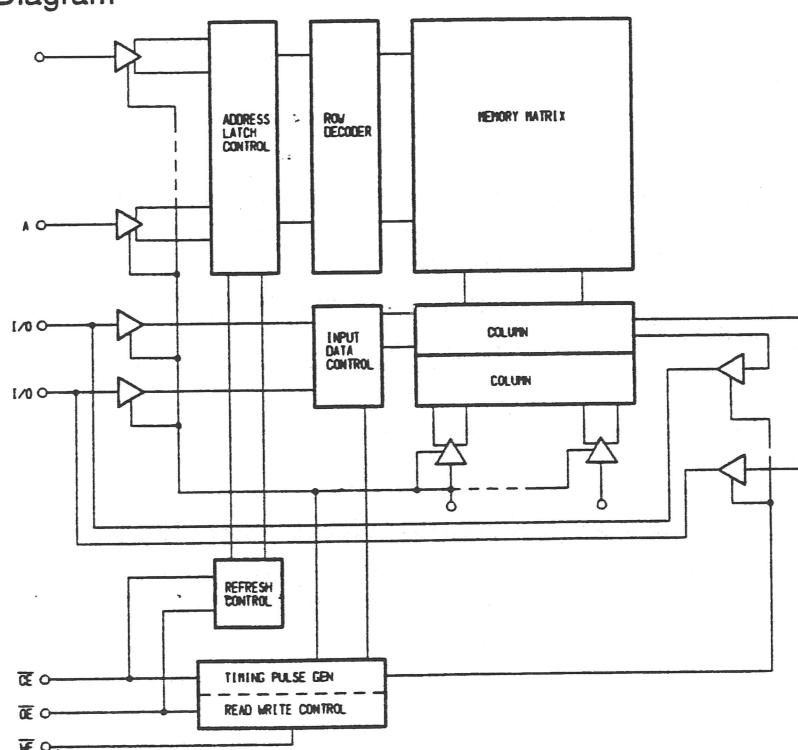
**IC TC51832FL-10**  
Parts No. : 315-0677-A

**IC LH5P832N-12**  
Parts No. : 315-0760-12A

**IC TC51832AFL-85**  
Parts No. : 315-0759-85A

**■ Outside View****■ Pin Layout****■ Operation Mode**

CE	OE	WE	I/O	MODE
L	L	H	Low Z	Read
L	X	L	High Z	Write
L	H	H	High Z	-
H	L	X	High Z	Refresh
H	H	X	High Z	Standby

**■ Block Diagram**

**IC4**

IC Z84C0006

Parts No. : 315-0738-R

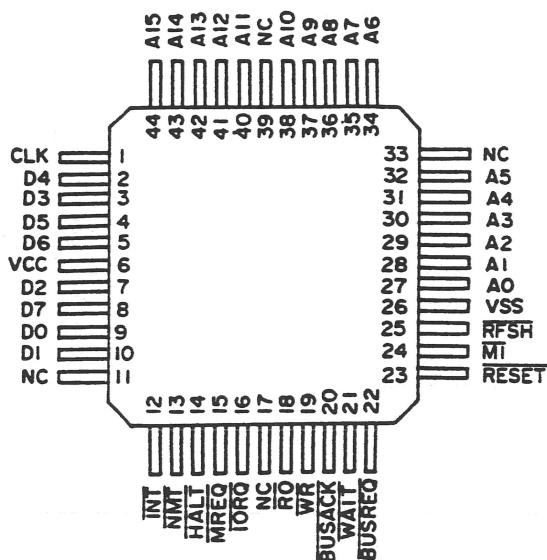
IC UPD9033GB-4-3B4

Parts No. : 315-5676-R

IC TMPZ84C00AU-6

Parts No. : 315-0782-R

## ■ Outside View



## ■ Description

Pin No.	Name	I/O	Function
1	CLK	I	Single-phase clock input. When the clock input is set to DC ("1" or "0" level continued), the MPU stops and holds that state.
2-5 7-10	D0-D7	I/O	8-bit bidirectional data bus.
6	Vcc	-	+5V power supply.
11/17	NC (PLCC Only)	-	Not connected internally. Set to open.
12	<u>INT</u>	I	Maskable interrupt request signal. Interrupts are given by a peripheral LSI. When the interrupt enable flipflop (IFF) is set to "1" by software, the interrupt is accepted. <u>INT</u> is usually used as the wired OR and a pull-up resistor is added externally.
13	<u>NMI</u>	I	Non-maskable interrupt request signal. This interrupt request has priority over the maskable interrupt and does not depend on the state of the interrupt enable flipflop (IFF).
14	<u>HALT</u>	I	Halt signal. "0" is output when the MPU executes a HALT command and is set to the HALT state.
15	<u>MREQ</u>	I	Memory request signal. "0" is output when there is an effective address for memory access on the address bus. MREQ also goes "0" together with the <u>RFSH</u> signal during memory refresh.

Pin No.	Name	I/O	Function
16	<u>IORQ</u>	O	<p>Input/output request signal.          "0" is output when the address for input/output is on the low-order 8 bits (A0-A7) of the address bus when an input or output is given. The <u>IORQ</u> signal is also output together with the <u>M1</u> signal when an interrupt is acknowledged to inform the peripheral LSI that the interrupt response vector can be superimposed on the data bus.</p>
18	<u>RD</u>	O	<p>READ signal.          "0" is output while the MPU can accept the data from a peripheral LSI. The data in the designated LSI or memory is gated by this signal and can be superimposed on the MPU data bus.</p>
19	<u>WR</u>	O	<p>WRITE signal.          This is output when the data to be stored in the memory or peripheral LSI is superimposed on the MPU data bus.</p>
20	<u>BUSACK</u>	O	<p>Bus acknowledge signal.          When the <u>BUSREQ</u> signal is input, the <u>BUSACK</u> signal informs the peripheral LSIs that the address bus and data bus of the MPU and the <u>MREQ</u>, <u>IORQ</u>, <u>RD</u> and <u>WR</u> signals have been set to high impedance.</p>
21	<u>WAIT</u>	I	<p>WAIT signal.          The <u>WAIT</u> signal informs the MPU that the designated memory or peripheral LSI is not ready for data transfer. The MPU continues in the wait state as long as the <u>WAIT</u> signal is "0".</p>
22	<u>BUSREQ</u>	I	<p>Bus request signal.          The <u>BUSREQ</u> signal requests to set the address bus and data bus of the MPU and the <u>MREQ</u>, <u>IORQ</u>, <u>RD</u> and <u>WR</u> signals to high impedance. <u>BUSREQ</u> is usually used as the wired OR and a pull-up resistor is connected externally.</p>
23	<u>RESET</u>	I	<p>Reset signal.          The <u>RESET</u> signal initializes the MPU and should be active ("0") for at least 3 clock-signal periods.</p>
24	<u>M1</u>	O	<p>Signal that indicates machine cycle 1.          "0" is output together with the <u>MREQ</u> in the command operation code fetch cycle. When 2-byte operation codes are executed, M1 is output each time the operation code is fetched. M1 is output with the <u>IORQ</u> signal in the maskable interrupt acknowledge cycle.</p>
25	<u>RFSH</u>	O	<p>Refresh signal.          "0" is output when the address that refreshes the dynamic memory is on the low-order 7 bits of the address bus. The <u>MREQ</u> signal also goes active ("0") in this state.</p>
26	Vss	-	0V power supply
27-32 34-38 40-44	A0~A15	O	<p>16-bit address bus.          Address the memory and input/output ports.          The address for refreshing is output during refreshing.</p>

## IC5

IC UPD4364G-15L

Parts No. : 315-0546-A

IC LC3564PM-10L

Parts No. : 315-0753-10A

IC KM6264BLG-10L

Parts No. : 315-0755-A

IC CXK5864CM-70LL-T6

Parts No. : 315-0773-A

IC MB8464A-80

Parts No. : 315-0651-A

IC LC3564PM-12L

Parts No. : 315-0753-12A

IC LC3664BML-85H

Parts No. : 315-0766-85

IC MB8464A-10LL

Parts No. : 315-0635-A

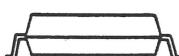
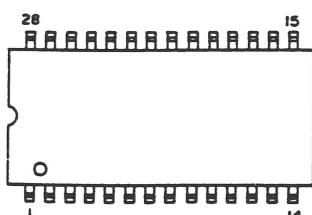
IC KM6264BLG-10

Parts No. : 315-0754-A

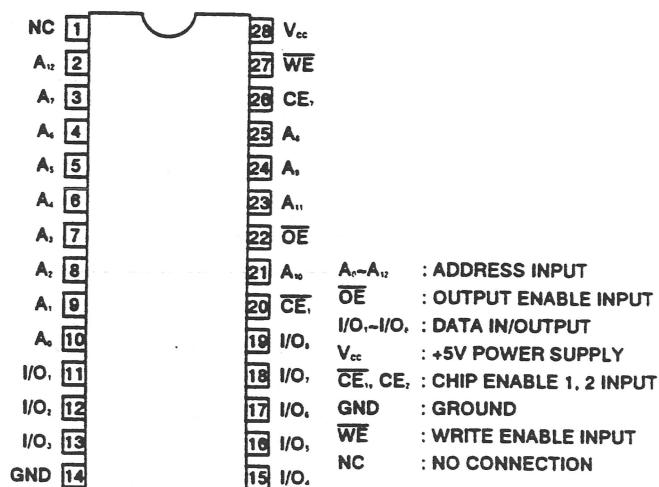
IC LC3664BML-10H

Parts No. : 315-0766-10

## ■ Outside View



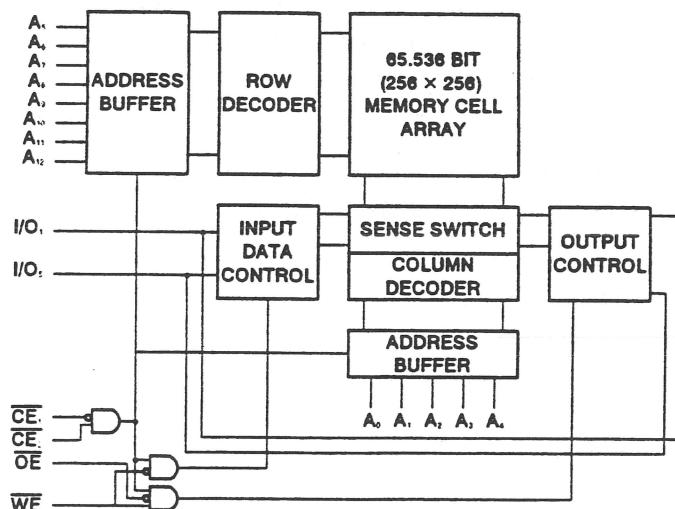
## ■ Pin Layout



## ■ Operation Mode

CE <sub>1</sub>	CE <sub>2</sub>	OE	WE	MODE	OUTPUT STATE	POWER SUPPLY CURRENT
H	X	X	X	Non-Select (Power Down)	High Impedance	I <sub>SB</sub>
X	L	X	X			
L	H	H	H	Output Disable		
L	H	L	H	Read	D <sub>OUT</sub>	I <sub>CCA</sub>
L	H	X	L	Write	D <sub>IN</sub>	

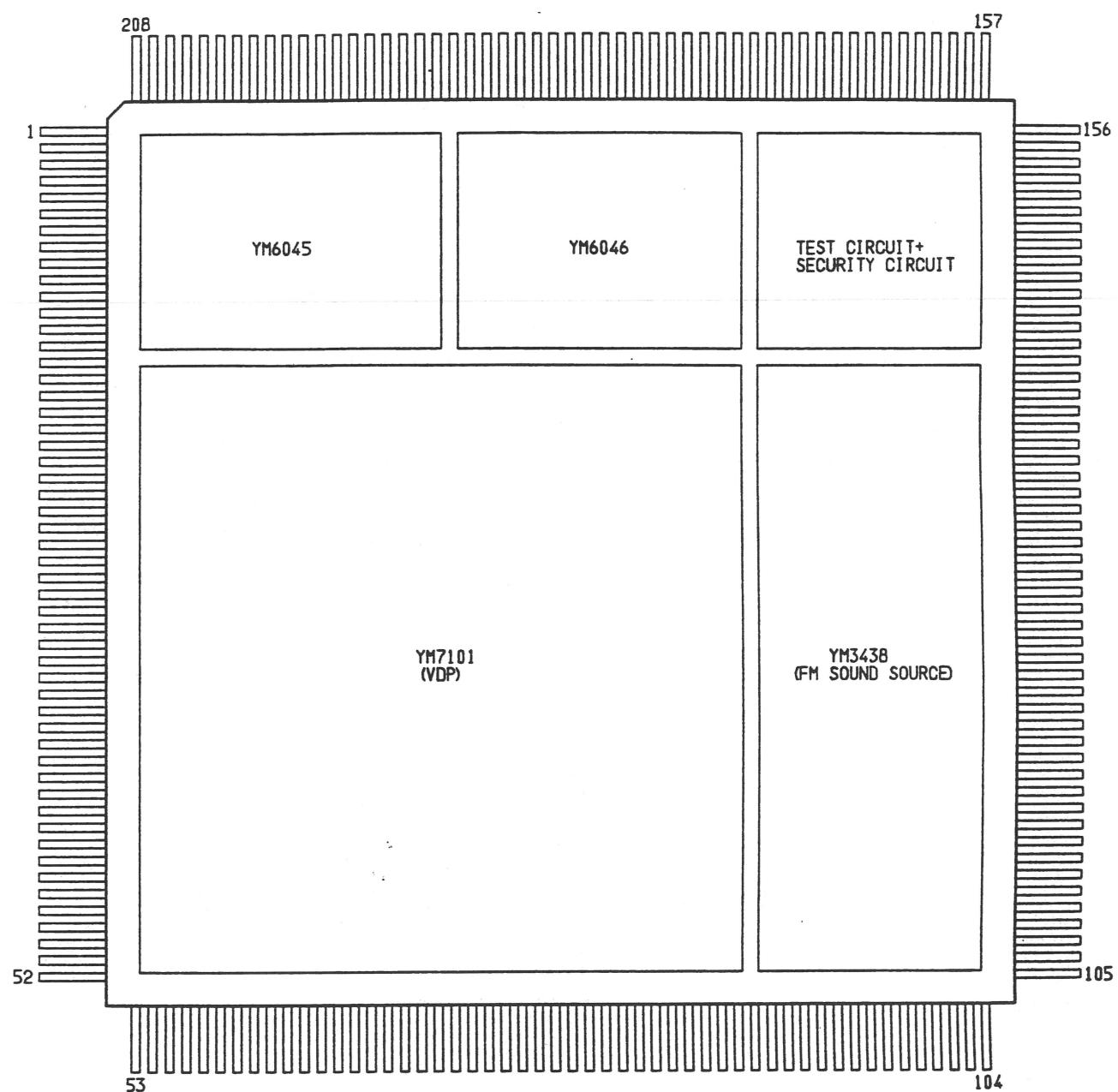
## ■ Block Diagram



## **IC6 IC CUSTOM FC1004 REV.**

Parts No. : 315-5660-R

### ■ Outside View



## ■ Description

Pin No.	Name	I/O	Function	Pin No.	Name	I/O	Function	
1	SD0	I	Dual Port RAM Interface Signals.	41	- VSYNC	O		
2	SD1			42	- CSYNC	I/O	VIDEO+PSG	
3	SD2			43	- HSYNC	I/O		
4	SD3			44	VDD	-	Power Supply.	
5	SD4			45	- M3	I		
6	SD5			46	- NTSC			
7	SD6			47	- VPA	O		
8	SD7			48	- HALT			
9	- SE1	O	Dual Port RAM Interface Signals.	49	- RESET	I	68000 Interface Signals.	
10	- SE0			50	FC0			
11	- SC			51	FC1			
12	- RAS1			52	- MREQ	I/O	Z80 Interface Signals.	
13	- CAS1			53	VSS	-	GND	
14	- WE1			54	AUSS	-	FM	
15	- WE0			55	MOR (ANLONG)	O		
16	- OE1			56	MOL (ANLONG)	-		
17	RD0	I/O	Dual Port RAM Interface Signals.	57	SOUND AVDD	-		
18	RD1			58	- SOUND	I/O	Use This Pin Set To Open Certainly.	
19	RD2			59	- ZRES	I/O	Z80 Interface Signals.	
20	RD3			60	- ZBAK	I		
21	VSS			61	- NMI	O		
22	RD4			62	- ZBR	I/O		
23	RD5			63	- WAIT			
24	RD6	I/O	Dual Port RAM Interface Signals.	64	- EOE	O	P-SRAM Interface.	
25	RD7			65	- NOE			
26	AD0			66	- ZRAM	O	SRAM Interface.	
27	AD1			67	- REF			
28	AD2			68	- CAS2	O		
29	AD3			69	- RAS2			
30	AD4			70	- ASEL			
31	AD5			71	- ROM			
32	AD6			72	- FDC			
33	AD7			73	- FDWR			
34	VIDEO AVSS		VIDEO+PSG	74	- CEO			
35	R (ANLONG)	O		75	- TIME	I		
36	G (ANLONG)			76	- CART			
37	B (ANLONG)	-		77	IA14	O		
38	VIDEO AVDD			78	- WRES	I		
39	- YS	O	I/O	79	- DISK	I/O		
40	SPA/B	I/O						

Pin No.	Name	I/O	Function
80	VDD	-	Power Supply.
81	TEST0	I/O	Test Signal. (Set To "0" Certainly.)
82	TEST1	I	Test Signals. (These Pins Set To All Open.)
83	TEST2		
84	TEST3		
85	PC0	I/O	Joy Pad Interface.
86	PC1		
87	PC2		
88	PC3		
89	PC4		
90	PC5		
91	PC6		
92	VSS	-	GND
93	PB0	I/O	Joy Pad Interface.
94	PB1		
95	PB2		
96	PB3		
97	PB4		
98	PB5		
99	PB6		
100	PA0		
101	PA1		
102	PA2		
103	PA3		
104	PA4		
105	PA5		
106	PA6		
107	- JAP	I/O	
108	- FRES		
109	ZV	I/O	Use This Pin Set To Open Certainly.
110	VZ		
111	IO		
112	ZA0	I/O	Z80 Address Bus.
113	ZA1		
114	ZA2		
115	ZA3		
116	ZA4		
117	ZA5		
118	ZA6		
119	ZA7		

Pin No.	Name	I/O	Function	
120	ZA8	I/O	Z80 Address Bus.	
121	ZA9			
122	ZA10			
123	ZA11			
124	ZA12			
125	ZA13			
126	ZA14			
127	ZA15			
128	- SRES	I		
129	SEL1			
130	CLK	I/O	68000 Interface Signals.	
131	SBCR	O	VIDEO+PSG	
132	ZCLK	I/O	Z80 Interface Signals.	
133	VSS	-	GND	
134	MCLK	I	68000 Data Bus.	
135	EDCLK	I/O		
136	VDD	-		
137	VD0	I/O		
138	VD1			
139	VD2			
140	VD3			
141	VD4			
142	VD5			
143	VD6			
144	VD7			
145	VD8			
146	VD9			
147	VD10	I/O	68000 Address Bus.	
148	VD11			
149	VD12			
150	VD13			
151	VD14			
152	VD15			
153	VSS	-		
154	VA1	I/O		
155	VA2			
156	VA3			
157	VA4			
158	VA5			
159	VA6			

Pin No.	Name	I/O	Function	Pin No.	Name	I/O	Function
160	VA7			200	ZD0		
161	VA8			201	ZD1		
162	VA9			202	ZD2		
163	VA10			203	ZD3		
164	VA11			204	ZD4		
165	VA12			205	ZD5		
166	VA13			206	ZD6		
167	VA14			207	ZD7		
168	VA15	I/O	68000 Address Bus.	208	VDD	-	Power Supply.
169	VA16						
170	VA17						
171	VA18						
172	VA19						
173	VA20						
174	VA21						
175	VA22						
176	VA23						
177	SOUND AVDD	-					
178	PSG (ANLONG)	O	VIDEO+PSG				
179	SOUND AVSS	-					
180	VSS	-	GND				
181	- INT	O	Z80 Interface Signals.				
182	- BR	O					
183	- BGACK	I/O					
184	- BG	I	68000 Interface Signals.				
185	- IPL1	O					
186	- IPL2	I					
187	- IORQ	O					
188	- ZRD	I	Z80 Interface Signals.				
189	- ZWR	I/O					
190	- M1	I					
191	- AS						
192	- UDS						
193	- LDS	I/O	68000 Interface Signals.				
194	R/W						
195	- DTAK						
196	- UWR	O	P-SRAM Interface.				
197	- LWR	I/O					
198	- CASO	I/O					
199	- RASO	O	P-SRAM Interface.				

## IC7/8

IC M5M4C264L-12

Parts No. : 315-0515

IC MB81461-12

Parts No. : 315-0423

IC V53C261Z10

Parts No. : 315-0616

IC KM424C64Z-12

Parts No. : 315-5543

IC M5M4C264L-15

Parts No. : 315-0515-15

IC HM53461ZP-12

Parts No. : 315-0481

IC KM424C64Z-10

Parts No. : 315-0622

IC UPD41264V-12

Parts No. : 315-0453

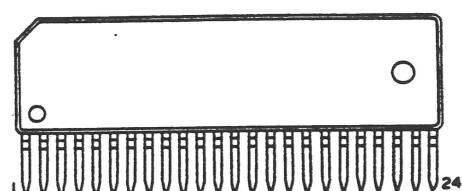
IC TMS4461-12

Parts No. : 315-0525

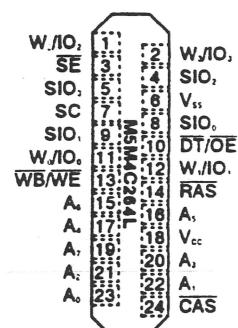
IC MSM51C262-10

Parts No. : 315-0623

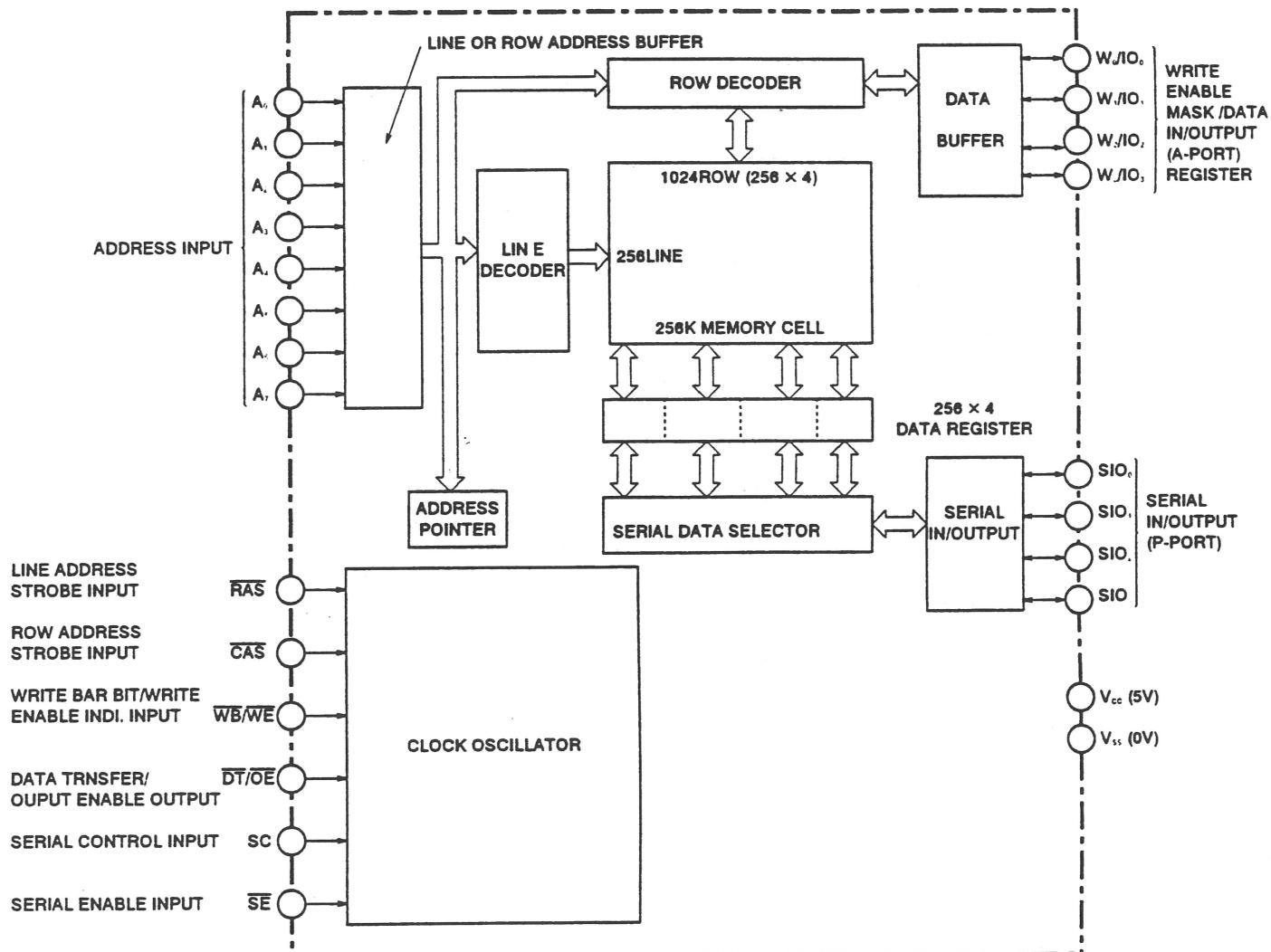
### ■ Outside View



### ■ Pin Layout



### ■ Block Diagram



**IC9/10**

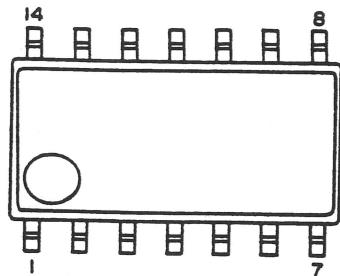
**IC BA10324AF-T1**

Parts No. : 313-5221-A

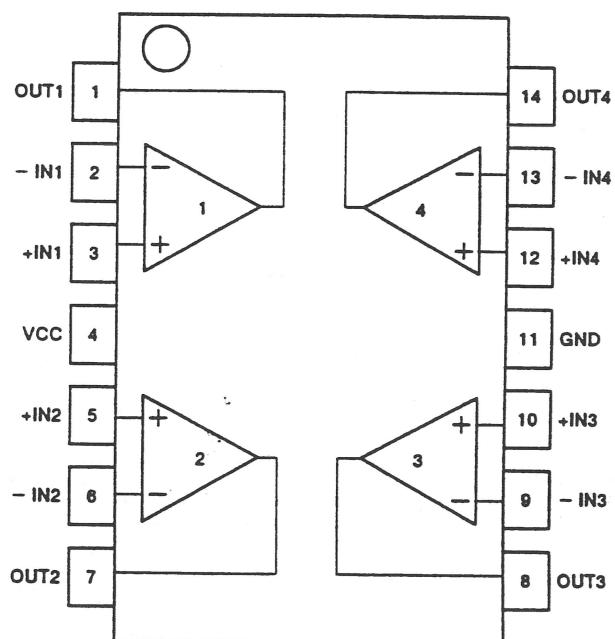
**IC LM324**

Parts No. : 313-5063-A

■ Outside View



■ Pin Layout



### 8-3. ELECTRICAL PARTS LIST

Notes: NTSC→GENESIS II  
PAL, RGB→MEGA DRIVE II

Circuit No.	Parts No.	Description	Remarks
IC 1	315-0685-A	IC HD68HC000CP8 PLCC HITACHI	
IC 1	315-0686-A	IC MC68HC000FN8 PLCC MOTOROLA	
IC 2	315-0547-10A	IC HM65256BLFP-10 SOP	
IC 2	315-0677-A	IC TC51832FL-10 SOP TOSHIBA	
IC 2	315-0759-85A	IC TC51832AFL-85 SOP TOSHIBA	
IC 2	315-0759-10A	IC TC51832AFL-10 SOP TOSHIBA	
IC 2	315-0760-12A	IC LH59P832N-12 SOP SHARP	NTSC
IC 3	315-0547-10A	IC HM65256BLFP-10 SOP	
IC 3	315-0677-A	IC TC51832FL-10 SOP TOSHIBA	
IC 3	315-0759-85A	IC TC51832AFL-85 SOP TOSHIBA	
IC 3	315-0759-10A	IC TC51832AFL-10 SOP TOSHIBA	
IC 3	315-0760-12A	IC LH59P832N-12 SOP SHARP	NTSC
IC 4	315-0738-R	IC Z84C0006 QFP ZILOG	
IC 4	315-5676-R	IC CUSTOM CHIP UPD9033GB-4-3B4 NEC	PAL,RGB
IC 4	315-0782-R	IC TMPZ84C00AU-6 (QFP) TOSHIBA	PAL,RGB
IC 5	315-0546-A	IC UPD4364G-15L SOP 28P NEC	
IC 5	315-0651-A	IC MB8464A-80 SOP 28P FUJITSU	
IC 5	315-0635-A	IC MB8464A-10LL SOP FUJITSU	
IC 5	315-0753-10A	IC LC3564PM-10L SOP SANYO	
IC 5	315-0753-12A	IC LC3564PM-12L SOP SANYO	
IC 5	315-0754-A	IC KM6264BLG-10 SOP SAMSUNG	
IC 5	315-0755-A	IC KM6264BLG-10L SOP SAMSUNG	
IC 5	315-0766-85	IC LC3664BML-85H SOP SANYO	
IC 5	315-0766-10	IC LC3664BML-10H SOP SANYO	
IC 5	315-0773-A	IC CXK5864CM-70LL-T6 (64K SRAM)	PAL,RGB
IC 6	315-5660-R	IC CUSTOM CHIP FC1004 REV.	
IC 7	315-0515	IC M5M4C264L-12 ZIP MITSUBISHI	NTSC
IC 7	315-0515-15	IC M5M4C264L-15 ZIP MITSUBISHI	
IC 7	315-0453	IC UPD41264V-12 ZIP NEC	
IC 7	315-0423	IC MB81461-12 ZIP FUJITSU	
IC 7	315-0481	IC HM53461ZP-12 ZIP HITACHI	
IC 7	315-0525	IC TMS4461-12SDL ZIP T.I	
IC 7	315-0616	IC V53C261Z10 ZIP VITELIC	
IC 7	315-0622	IC KM424C64Z-10 ZIP SAMSUNG	
IC 7	315-0623	IC MSM51C262-10ZS ZIP OKI	
IC 7	315-5543	IC KM424C64Z-12 ZIP SAMSUNG	
IC 8	315-0515	IC M5M4C264L-12 ZIP MITSUBISHI	
IC 8	315-0515-15	IC M5M4C264L-15 ZIP MITSUBISHI	
IC 8	315-0453	IC UPD41264V-12 ZIP NEC	
IC 8	315-0423	IC MB81461-12 ZIP FUJITSU	
IC 8	315-0481	IC HM53461ZP-12 HITACHI	
IC 8	315-0525	IC TMS4461-12SDL ZIP T.I	
IC 8	315-0616	IC V53C261Z10 ZIP VITELIC	
IC 8	315-0622	IC KM424C64Z-10 ZIP SAMSUNG	

Circuit No.	Parts No.	Description	Remarks
IC 8	315-0623	IC MSM51C262- 10ZS ZIP OKI	
IC 8	315-5543	IC KM424C64Z- 12 ZIP SAMSUNG	
IC 9	313-5063-A	IC LM324 SOP	
IC 9	313-5221-A	IC BA10324AF-T1 SOP ROHM	
IC 10	313-5063-A	IC LM324 SOP	
IC 10	313-5221-A	IC BA10324AF-T1 SOP ROHM	
IC 11	313-5213-A	IC CXA1145M-T6 SOP SONY	NTSC-S
IC 11	313-5232-A	IC MB3514PF-G-BND-EF FUJITU	NTSC-F,PAL,RGB
IC 11	313-5236-A	IC KA2195D SAMSUNG	NTSC-SM
IC 12	313-5214	IC UPC7805HF NEC	
IC 12	313-5230	IC TA7805S TOSHIBA	
OSC 1	230-5053-01D	XTAL OSC 53.693175 MCO- 7020D-1	NTSC
OSC 1	230-5058-01D	OSC 53.203424M 20PPM SYOWA	PAL,RGB
TR 1	482-0312	XSTR 2SC4177 CHIP M6 M7 NEC	
TR 1	482-0313	XSTR 2SC4081 CHIP ROHM	
TR 2	482-0312	XSTR 2SC4177 CHIP M6 M7 NEC	
TR 2	482-0313	XSTR 2SC4081 CHIP ROHM	
D 1	481-0149-01	DIODE 1S2473 RADIAL	
D 2	481-5038-01	DIODE 1SR-35-100A RADIAL	
L 1	NOT USED	NOT USED	
L 2	180-5060	PEAKING COIL 100UH 03TYPE RA	NTSC-F/S, PAL,RGB
L 2	NOT USED	NOT USED	NTSC-SM
L 3	180-5059	PEAKING COIL 12UH 03TYPE RA	NTSC-F/S, PAL,RGB
L 3	NOT USED	NOT USED	NTSC-SM
L 4	NOT USED	NOT USED	
L 5	NOT USED	NOT USED	
L 6	180-5060	PEAKING COIL 100UH 03TYPE RA	PAL,RGB
CF 1	270-5065	COMMON FILTER CM04RC04	
FB 1	271-0044	BEADS INDUCTOR CP BK2125 HS121	
FB 7	271-0043	BEADS INDUCTOR CP BK2125 HS601	
FB 13	271-0043	BEADS INDUCTOR CP BK2125 HS601	
FB 13	271-0044	BEADS INDUCTOR CP BK2125 HS121	PAL,RGB
EM 1	271-0045	EMI FILTER STB101KB	

Circuit No.	Parts No.	Description	Remarks
EM 2	271-0045	EMI FILTER STB101KB	
EM 3	271-0007	EMI FILTER STX222MB	
EM 11	271-0007	EMI FILTER STX222MB	
EM 12	271-0007	EMI FILTER STX222MB	
EM 13	271-0007	EMI FILTER STX222MB	
EM 14	271-0007	EMI FILTER STX222MB	
EM 15	271-0007	EMI FILTER STX222MB	
EM 16	271-0007	EMI FILTER STX222MB	
EM 17	271-0006	EMI FILTER STB271KB	
EM 18	271-0007	EMI FILTER STX222MB	
EM 21	271-0007	EMI FILTER STX222MB	
EM 22	271-0007	EMI FILTER STX222MB	
EM 23	271-0007	EMI FILTER STX222MB	
EM 24	271-0007	EMI FILTER STX222MB	
EM 25	271-0007	EMI FILTER STX222MB	
EM 26	271-0007	EMI FILTER STX222MB	
EM 27	271-0006	EMI FILTER STB271KB	
EM 28	271-0007	EMI FILTER STX222MB	
CE 1	150-0418	CAP E 10UF 16V U-TYPE L=5MM	
CE 2	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 3	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 4	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 5	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 6	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 7	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 8	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 9	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 10	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 11	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 12	150-0412	CAP E 220UF 6.3V U-TYPE	
CE 14	150-0023	CAP E 10UF 16V U-TYPE 20%	NTSC-S/SM
CE 14	150-0412	CAP E 220UF 6.3V U-TYPE	NTSC-F,PAL,RGB
CE 15	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 16	150-0159	CAP E 220UF 16V U-TYPE	
CE 17	150-0047	CAP E 100UF 10V U-TYPE	
CE 18	150-0062	CAP E 47UF 10V U-TYPE	
CE 19	150-0062	CAP E 47UF 10V U-TYPE	
CE 20	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 21	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 22	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 23	150-0047	CAP E 100UF 10V U-TYPE	
CE 24	150-0062	CAP E 47UF 10V U-TYPE	
CE 25	150-0062	CAP E 47UF 10V U-TYPE	
CE 26	150-0062	CAP E 47UF 10V U-TYPE	
CE 27	150-0062	CAP E 47UF 10V U-TYPE	
CE 28	150-0062	CAP E 47UF 10V U-TYPE	
CE 29	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 30	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 31	150-0023	CAP E 10UF 16V U-TYPE 20%	
CE 32	150-0023	CAP E 10UF 16V U-TYPE 20%	

Circuit No.	Parts No.	Description	Remarks
C 1	NOT USED	NOT USED	
C 2	151-0372	CAP CER CP 33PF 50V CH2125	
C 3	151-0354	CAP CER CP 100PF 50V CH2125	
C 4	NOT USED	NOT USED	
C 5	151-0354	CAP CER CP 100PF 50V CH2125	
C 6	NOT USED	NOT USED	
C 7	NOT USED	NOT USED	
C 8	NOT USED	NOT USED	
C 9	151-0363	CAP CER CHIP 47PF 50V CH2125	PAL,RGB
C 9	NOT USED	NOT USED	NTSC
C 10	151-0289	CAP CER CP 10PF 50V D CH2125	PAL,RGB
C 10	NOT USED	NOT USED	NTSC
C 11	151-0372	CAP CER CP 33PF 50V CH2125	PAL,RGB
C 11	NOT USED	NOT USED	NTSC
C 12	151-0305	CAP CER CP 1000PF 50V KB2125	
C 13	NOT USED	NOT USED	
C 14	151-0305	CAP CER CP 1000PF 50V KB2125	
C 15	NOT USED	NOT USED	
C 16	151-0354	CAP CER CP 100PF 50V CH2125	
C 17	151-0372	CAP CER CP 33PF 50V CH2125	
C 18	151-0354	CAP CER CP 100PF 50V CH2125	
C 19	NOT USED	NOT USED	
C 20	151-0311	CAP CER CP 5600PF 50V KB2125	
C 21	151-0305	CAP CER CP 1000PF 50V KB2125	
C 22	151-0311	CAP CER CP 5600PF 50V KB2125	
C 23	151-0305	CAP CER CP 1000PF 50V KB2125	
C 24	151-0312	CAP CER CP 0.01UF 50V KB2125	
C 25	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 26	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 27	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 28	151-0308	CAP CER CP 18PF 50V CH2125	NTSC-F/S, PAL,RGB
C 28	NOT USED	NOT USED	NTSC-SM
C 29	151-0312	CAP CER CP 0.01UF 50V KB2125	NTSC-F/S, PAL,RGB
C 29	NOT USED	NOT USED	NTSC-SM
C 30	151-0309	CAP CER CP 180PF 50V CH2125	NTSC-F/S, PAL,RGB
C 30	NOT USED	NOT USED	NTSC-SM
C 31	151-0354	CAP CER CP 100PF 50V CH2125	
C 32	151-0309	CAP CER CP 180PF 50V CH2125	NTSC-S
C 32	151-0361	CAP CER CP 15PF 50V CH2125	NTSC-F,PAL,RGB

Circuit No.	Parts No.	Description	Remarks
C 32	NOT USED	NOT USED	NTSC - SM
C 33	NOT USED	NOT USED	
C 34	NOT USED	NOT USED	
C 35	151-0265	CAP CER CP 0.1UF 25V ZF2125	
C 36	151-0265	CAP CER CP 0.1UF 25V ZF2125	
C 37	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 38	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 39	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 40	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 41	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 42	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 43	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 44	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 45	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 46	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 47	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 48	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 49	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 50	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 51	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 52	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 53	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 54	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 55	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 56	151-0311	CAP CER CP 5600PF 50V KB2125	
C 57	NOT USED	NOT USED	NTSC - S/SM
C 57	151-0354	CAP CER CP 100PF 50V CH2125	NTSC - F,PAL,RGB
C 58	151-0311	CAP CER CP 5600PF 50V KB2125	
C 59	151-0307	CAP CER CP 0.022UF 50V ZF2125	
C 60	NOT USED	NOT USED	
C 61	151-0265	CAP CER CP 0.1UF 25V ZF2125	PAL,RGB
C 62	151-0336	CAP CER CHIP 12PF 50V CH2125	PAL,RGB
CA 1	151-0401	C-PACK CP 33P*16 W/COMMON TDK	
R 9	476-2121-J-10	RES CHIP 120 OHM 1/10W 5%	
R 10	476-2222-J-10	RES CHIP 2.2kOHM 1/10W 5%	
R 11	476-2472-J-10	RES CHIP 4.7kOHM 1/10W 5%	
R 12	476-2222-J-10	RES CHIP 2.2kOHM 1/10W 5%	
R 13	NOT USED	NOT USED	
R 14	476-2122-J-10	RES CHIP 1.2kOHM 1/10W 5%	
R 15	476-2222-J-10	RES CHIP 2.2kOHM 1/10W 5%	
R 18	NOT USED	NOT USED	
R 21	476-2222-J-10	RES CHIP 2.2kOHM 1/10W 5%	
R 22	476-2103-J-10	RES CHIP 10kOHM 1/10W 5%	
R 23	476-2103-J-10	RES CHIP 10kOHM 1/10W 5%	
R 24	476-2103-J-10	RES CHIP 10kOHM 1/10W 5%	
R 25	476-2103-J-10	RES CHIP 10kOHM 1/10W 5%	

Circuit No.	Parts No.	Description	Remarks
R 26	476-2100-J-10	RES CHIP 10 OHM 1/10W 5%	
R 27	476-2151-J-10	RES CHIP 150 OHM 1/10W 5%	
R 28	476-2102-J-10	RES CHIP 1kOHM 1/10W 5%	
R 29	476-2100-J-10	RES CHIP 10 OHM 1/10W 5%	
R 30	476-2151-J-10	RES CHIP 150 OHM 1/10W 5%	
R 31	476-2102-J-10	RES CHIP 1kOHM 1/10W 5%	
R 32	476-2473-J-10	RES CHIP 47kOHM 1/10W 5%	
R 33	476-2513-J-10	RES CHIP 51kOHM 1/10W 5%	
R 34	476-2153-J-10	RES CHIP 15kOHM 1/10W 5%	
R 35	476-2473-J-10	RES CHIP 47kOHM 1/10W 5%	
R 36	476-2513-J-10	RES CHIP 51kOHM 1/10W 5%	
R 37	476-2153-J-10	RES CHIP 15kOHM 1/10W 5%	
R 38	476-2473-J-10	RES CHIP 47kOHM 1/10W 5%	
R 39	476-2473-J-10	RES CHIP 47kOHM 1/10W 5%	
R 40	476-2750-J-10	RES CHIP 75 OHM 1/10W 5%	
R 41	476-2750-J-10	RES CHIP 75 OHM 1/10W 5%	
R 42	476-2472-J-10	RES CHIP 4.7kOHM 1/10W 5%	
R 43	476-2472-J-10	RES CHIP 4.7kOHM 1/10W 5%	
R 44	476-2472-J-10	RES CHIP 4.7kOHM 1/10W 5%	
R 45	476-2472-J-10	RES CHIP 4.7kOHM 1/10W 5%	
R 46	476-2752-J-10	RES CHIP 7.5kOHM 1/10W 5%	
R 47	476-2122-J-10	RES CHIP 1.2kOHM 1/10W 5%	NTSC-S
R 47	476-2123-J-10	RES CHIP 12kOHM 1/10W 5%	NTSC-F,PAL,RGB
R 47	NOT USED	NOT USED	NTSC-SM
R 48	476-2222-J-10	RES CHIP 2.2kOHM 1/10W 5%	
R 49	476-2750-J-10	RES CHIP 75 OHM 1/10W 5%	
R 50	476-2562-J-10	RES CHIP 5.6kOHM 1/10W 5%	
R 51	476-2562-J-10	RES CHIP 5.6kOHM 1/10W 5%	
R 52	476-2562-J-10	RES CHIP 5.6kOHM 1/10W 5%	
R 53	476-2102-J-10	RES CHIP 1kOHM 1/10W 5%	
R 54	476-2243-J-10	RES CHIP 24kOHM 1/10W 5%	NTSC-S/SM
R 54	NOT USED	NOT USED	NTSC-F,PAL,RGB
R 55	476-2102-J-10	RES CHIP 1kOHM 1/10W 5%	NTSC-S
R 55	476-2103-J-10	RES CHIP 10kOHM 1/10W 5%	NTSC-F,PAL,RGB
R 55	NOT USED	NOT USED	NTSC-SM
R 56	476-2122-J-10	RES CHIP 1.2kOHM 1/10W 5%	NTSC-F/S, PAL,RGB
R 56	NOT USED	NOT USED	NTSC-SM
R 57	476-2102-J-10	RES CHIP 1kOHM 1/10W 5%	PAL,RGB
R 57	476-2331-J-10	RES CHIP 330 OHM 1/10W 5%	NTSC-F/S
R 57	NOT USED	NOT USED	NTSC-SM
R 58	476-2122-J-10	RES CHIP 1.2kOHM 1/10W 5%	
R 59	476-2122-J-10	RES CHIP 1.2kOHM 1/10W 5%	
R 60	476-2122-J-10	RES CHIP 1.2kOHM 1/10W 5%	

Circuit No.	Parts No.	Description	Remarks
R 61	476-2103-J-10	RES CHIP 10kOHM 1/10W 5%	NTSC - S/SM
R 61	476-2472-J-10	RES CHIP 4.7kOHM 1/10W 5%	NTSC - F,PAL,RGB
R 62	476-2472-J-10	RES CHIP 4.7kOHM 1/10W 5%	
R 63	476-2472-J-10	RES CHIP 4.7kOHM 1/10W 5%	
R 64	476-2472-J-10	RES CHIP 4.7kOHM 1/10W 5%	
R 65	476-2473-J-10	RES CHIP 47kOHM 1/10W 5%	
R 66	476-2103-J-10	RES CHIP 10kOHM 1/10W 5%	
R 67	476-2104-J-10	RES CHIP 100kOHM 1/10W 5%	
R 68	476-2331-J-10	RES CHIP 330 OHM 1/10W 5%	
R 69	476-2331-J-10	RES CHIP 330 OHM 1/10W 5%	
R 70	476-2331-J-10	RES CHIP 330 OHM 1/10W 5%	
R 71	476-2331-J-10	RES CHIP 330 OHM 1/10W 5%	
R 72	476-2102-J-10	RES CHIP 1kOHM 1/10W 5%	
R 73	476-2102-J-10	RES CHIP 1kOHM 1/10W 5%	
R 74	476-2151-J-10	RES CHIP 150 OHM 1/10W 5%	
R 75	476-2221-J-10	RES CHIP 220 OHM 1/10W 5%	
R 76	476-2752-J-10	RES CHIP 7.5kOHM 1/10W 5%	
R 77	476-2103-J-10	RES CHIP 10kOHM 1/10W 5%	
R 78	476-2103-J-10	RES CHIP 10kOHM 1/10W 5%	
R 79	476-2331-J-10	RES CHIP 330 OHM 1/10W 5%	
R 80	476-2331-J-10	RES CHIP 330 OHM 1/10W 5%	
R 81	476-2682-J-10	RES CHIP 6.8kOHM 1/10W 5%	
R 82	479-5005-0000	RES CHIP 0 OHM 1/10W 5%	
R 83	479-5005-0000	RES CHIP 0 OHM 1/10W 5%	
RA 1	477-0136	R- PACK CHIP 4*100 OHM 1/16W 5%	
RA 2	477-0136	R- PACK CHIP 4*100 OHM 1/16W 5%	
RA 3	477-0139	R- PACK CHIP 2*100 OHM 1/16W 5%	
RA 4	477-0136	R- PACK CHIP 4*100 OHM 1/16W 5%	
RA 5	477-0136	R- PACK CHIP 4*100 OHM 1/16W 5%	
RA 6	477-0136	R- PACK CHIP 4*100 OHM 1/16W 5%	
RA 7	477-0132	R- PACK CHIP 8*4.7kOHM W/COMM.	
RA 8	477-0148	R- PACK CHIP 4*2.2kOHM W/COMM.	
LED 1	390-5234	LED GL3PR8	
S 1	510-5019	TACTILE PUSH SW SKEVAA	
S 1	509-5207	TACT SW SKEVAA ALPS	
S 2	510-5046	PUSH SWITCH JPK0010-Z091 SMK	
CN 1	212-5364	MINI DIN CONN 9P TCS7913-43	
CN 3	209-5061	EDGE CONNECTOR 64P PSB4D32K-7R	
CN 5	209-5066	D-SUB 9P*2 UC0082-21#10-0	
CN 7	212-5353	CONN DC JACK EIAJ3 HEC3100	
EYLET CN3L	079-000003	EYLET 3.5*7	
EYLET CN3L	079-000005	EYLET 6*3.5*8	
EYLET CN3R	079-000003	EYLET 3.5*7	

Circuit No.	Parts No.	Description	Remarks
EYLET CN3R	079-000005	EYLET 6*3.5*8	
TS CN5L	012-P00308	TAP SCR PH 3 × 8	
EYLET CN5L	079-000001	EYLET 2.3*7	
TS CN5C	012-P00308	TAP SCR PH 3 × 8	
EYLET CN5C	079-000001	EYLET 2.3*7	
TS CN5R	012-P00308	TAP SCR PH 3 × 8	
EYLET CN5R	079-000001	EYLET 2.3*7	

## 8-4. ACCESSORIES/PACKAGE LIST

For GENESIS II

Symbol No.	Parts No.	Description	Remarks
1	610-5571-01	ASSY CP M5 USA (CONTROL PAD)	
2	400-5135A	AC ADAPTOR AC120V/DC10V 0.85A	
2	400-5135A-01	AC ADAPTOR AC120V/DC10V 0.85A	
2	400-5135A-02	AC ADAPTOR AC120V/DC10V 0.85A	
2	400-5135A-03	AC ADAPTOR AC120V/DC10V 0.85A	
3	610-5472	RF UNIT GEN2 MDU-VA3431	
3	610-5472-01	RF UNIT GEN2 MDQT2A801A	
3	610-5472-02	RF UNIT GEN2 TOWA NTSC	
5	672-1208	OPERATION MANUAL GEN2 USA	
6	671-3379-01	BOX & PACK SET GEN2 USA 1630L	MK-1630
6	671-3379-02	BOX & PACK SET GEN2 USA 1614L	MK-1614
7	671-3373-01	MA CTN GEN2 USA 1630L	MK-1630
7	671-3373-02	MA CTN GEN2 USA 1614L	MK-1614
8	SGM-4216	POLY BAG 260 × 320 × 0.05 EXP 6	
9	SGM-4217	POLY BAG 200 × 300 × 0.05 EXP 6	
10	670-0483	GAME CATALOG GEN	
11	670-3264	BUSINESS REPLY MAIL GEN2 USA	
12	670-3265	CROSS SELL POSTER GNE2 USA	
13	670-3284	PARTS ORDER FORM GEN2 USA	

**NOTE:**  
ACCESSORY PROVIDED

MODEL No.	MK-1614	MK-1630
SONIC 2 CARTRIDGE	YES	NO

For MEGA DRIVE II

Symbol No.	Parts No.	Description	Remarks
1 1	610-5372-01 610-5376-01	ASSY CP M5 REV. EUR SE (CONTROL PAD) ASSY CP M5 REV. EUR EFA (CONTROL PAD)	
2	400-5211	AC ADAPTOR AC240V/DC9V 0.85A	AUSTRALIA, NEW ZEALAND
2 2	400-5208 400-5209	AC ADAPTOR AC240V/DC9V 0.85A AC ADAPTOR AC230V 50Hz/DC10V 0.85A	U. K Except U. K, AUSTRALIA AND NEW ZEALAND
3 3 3 3	610-5493 610-5473 610-5473-01 610-5473-02	RF UNIT MD2 PAL-B RF UNIT MD2 MDU-UD3631 RF UNIT MD2 MDQT4E801A RF UNIT MD2 TOWA PAL-G/I	NEW ZEALAND Except NEW ZEALAND, FRANCE
4	600-6273	RGB CABLE MD2 UNION (PERITEL CABLE)	FRANCE, SAUDI ARABIA
5	672-1209	OPERATION MANUAL MD2 MULTI	Except SAUDI ARABIA
5	672-1328	OPERATION MANUAL MD2 KSA	SAUDI ARABIA
6 6 6 6	671-3127-02 671-3127-04 671-3127-05 671-3127-06	BOX & PACK SET MD2 MULTI 1630 BOX & PACK SET MD2 MULTI 1685 BOX & PACK SET MD2 MULTI 1686 BOX & PACK SET MD2 MULTI 1695	MK-1630 MK-1685 MK-1686 MK-1695
7 7 7 7	671-3124-02 671-3124-04 671-3124-05 671-3124-06	MA CTN MD2 MULTI 1630 MA CTN MD2 MULTI 1685 MA CTN MD2 MULTI 1686 MA CTN MD2 MULTI 1695	MK-1630 MK-1685 MK-1686 MK-1695
8 9 10	SGM-4216 SGM-4217 670-0740	POLY BAG 260 × 320 × 0.05 EXP 6 POLY BAG 200 × 300 × 0.05 EXP 6 GAME CATALOG 16 MULTI	
11 11 11 11 11	670-3330 670-3331 670-3332 670-3381 670-3327	GUARANTEE CARD SOE MD2 FRG & ESP GUARANTEE CARD SOE MD2 FRA GUARANTEE CARD SOE MD2 GBR GUARANTEE CARD MD2 ITA GUARANTEE CARD OZISOFT MD2	GERMAN, SPAIN FRANCE U. K ITALY AUSTRALIA, NEW ZEALAND

NOTE:

ACCESSORY PROVIDED

MODEL No.	MK-1630	MK-1685	MK-1686	MK-1695
SONIC 2 CARTRIDGE	0	1	1	0
MEGA GENESIS 1 CARTRIDGE	0	0	1	0
CONTROL PAD	1	2	1	2

**SEGA**<sup>TM</sup>