SHARP

SERVICE MANUAL

CE-161

SHARP CORPORATION

CODE : 00ZCE161NEW/E

SERVICE MANUAL

MODE CE-161 FLAT LSI TYPE (PC-1500 Option)

CONTENTS

Insert this manual into the service manual "PC-1500 & Option"

1. FEATURES

The CE-161 is a RAM memory module having a total capacity of 16 K bytes (8 K bytes x 2 chips) and is backed up by a lithium battery so that it may treated as a ROM by simply setting the dip switch.

2. SPECIFICATIONS

Model:	CE-161
Type:	RAM module
Capacity:	16 K bytes
Backup power source:	1 DC 3 V Lithium cell CR2032
Battery life:	About 5 years (If installed in the PC-1500) About 2 years (If removed from the PC-1500) (When used at 25°C; Life varies with operation and environment.)
Operating temperature:	0°C to 40°C
Outside dimensions:	40.9 mm (W) x 48.2 mm (D) x 8.5 mm (H) 1-5/8" (W) x 1-29/32" (D) x 11/32" (H)
Weight:	12 g (0.03 lbs). (including cell)
Accessories:	Housing case, space cover, 3 cover labels, Lithium cell (built into the CE-161) and Instruction Manual

3. PRECAUTIONS

- When the CE-161 is connected to PC-1500, all the programs, data, and the reserved contents previously stored in the PC-1500 cannot be used. Therefore, if you need these, make sure to save them on tape before connecting the CE-161.
- When the CE-161 is connected to the PC-1500, make sure to execute the following operations.

([OFF]) [ON] [CL]
Designate PRO mode by using [MODE] key.
NEW 256 [ENTER]

The NEW 256 [ENTER] initializes the internal condition of the computer (Initial Setting).

- When the CE-161 is disconnected from the PC-1500, the program or data stored in the PC-1500 cannot be guaranteed. Therefore, when the CE-161 is reconnected to the PC-1500, the programs or data cannot be used.
- To protect the program in the CE-161 after removal of the Module from the PC-1500, retain the program contents by executing the procedure for exclusive readouts. Removal of the Module without this procedure will not protect the program contents. Note that only the program is retained after removal of the Module, not data.

4. NOTE

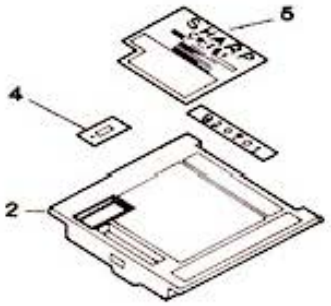
This unit requires different key operations and uses different instruction execution method as compared with the CE-159.

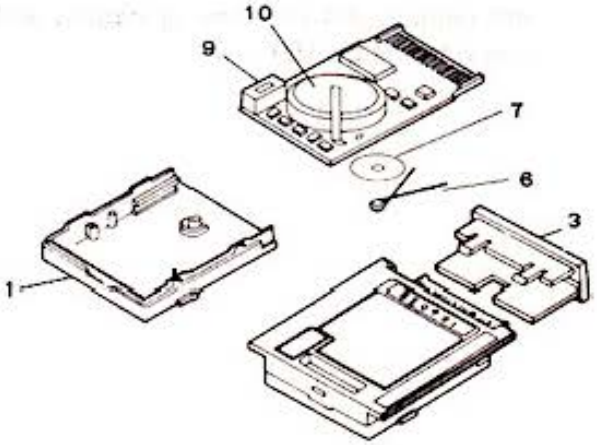
5. PARTS LIST & GUIDE

NO.	PARTS CODE	PRICE RANK	NEW MARK	PARTS RANK	DESCRIPTION
1	G C A B A 2 8 5 0 C C Z Z	AB		D	Cabinet bottom
2	G C A B B 2 8 5 1 C C Z Z	AC		D	Cabinet top
3	G C A B C 2 6 7 2 C C 0 2	AC		D	Cabinet slider
4	H D E C A 2 0 8 8 C C Z Z	AA		D	Switch DEC.
5	T L A B Z 1 8 2 3 C C Z Z	AC	N	D	Module label
6	M S P R C 1 2 0 2 C C Z Z	AC		C	Spring for cabinet slider
7	P Z E T L 1 4 6 2 C C Z Z	AA		C	Sheet
8	—				
9	Q S W – S 1 3 4 7 C C Z Z	AH		C	Dip SW
10	C B A T Z 6 4 4 1 C C Z Z	AM		B	Lithium battery (CR2032)
	G C A S P 1 0 9 1 C C Z Z	AE		D	Case bottom
	G C A S P 1 0 9 2 C C Z Z	AD		D	Case top
	G F T A U 1 2 8 1 C C Z Z	AC		D	Lid
	P P A C G 1 0 0 4 C C Z Z	AE		C	Cushion
	P S H E P 1 0 8 5 C C Z Z	AC		C	Sheet
	T L A B Z 1 6 9 0 C C Z Z	AA		C	Biss label
	T i N S M 3 9 5 5 C C Z Z	AU	N	D	Inst. book (E, F, G, i, S)
	S P A K A 7 3 0 7 C C Z Z	AC		D	Packing cushion
	S P A K C 8 1 6 9 C C Z Z	AF	N	D	Packing case
	T C A U H 1 2 0 4 C C Z Z	AC		D	Caution card
	T C A U K 1 1 9 2 C C Z Z	AC		D	Caution label
	D U N T K 8 5 8 0 C C Z Z	**	N	E	PWB unit
	R C – C Z 1 0 2 1 C C Z Z	AB		C	Capacitor 0.1μF
	R C – S Z 1 0 0 7 C C Z Z	AF		C	Capacitor 1μF
	R H – D Z 1 0 0 8 C C Z Z	AC		B	Diode DAN202
	V H D I S S 9 8 / / / – 1	AD		B	Diode
	V H i T C 4 0 H 1 3 8 F N	AQ		B	I.C.
	V R S – T P 2 B D 1 2 5 J	AA		C	Resistor 1.2Mohm
	V R S – T P 2 B D 3 3 5 K	AA		C	Resistor 3.3Mohm
	V H i H M 6 2 6 4 L F 1 5	BB		B	8KB RAM Lsi
	P T P E H 1 1 6 9 C C Z Z	AA		C	AD tape

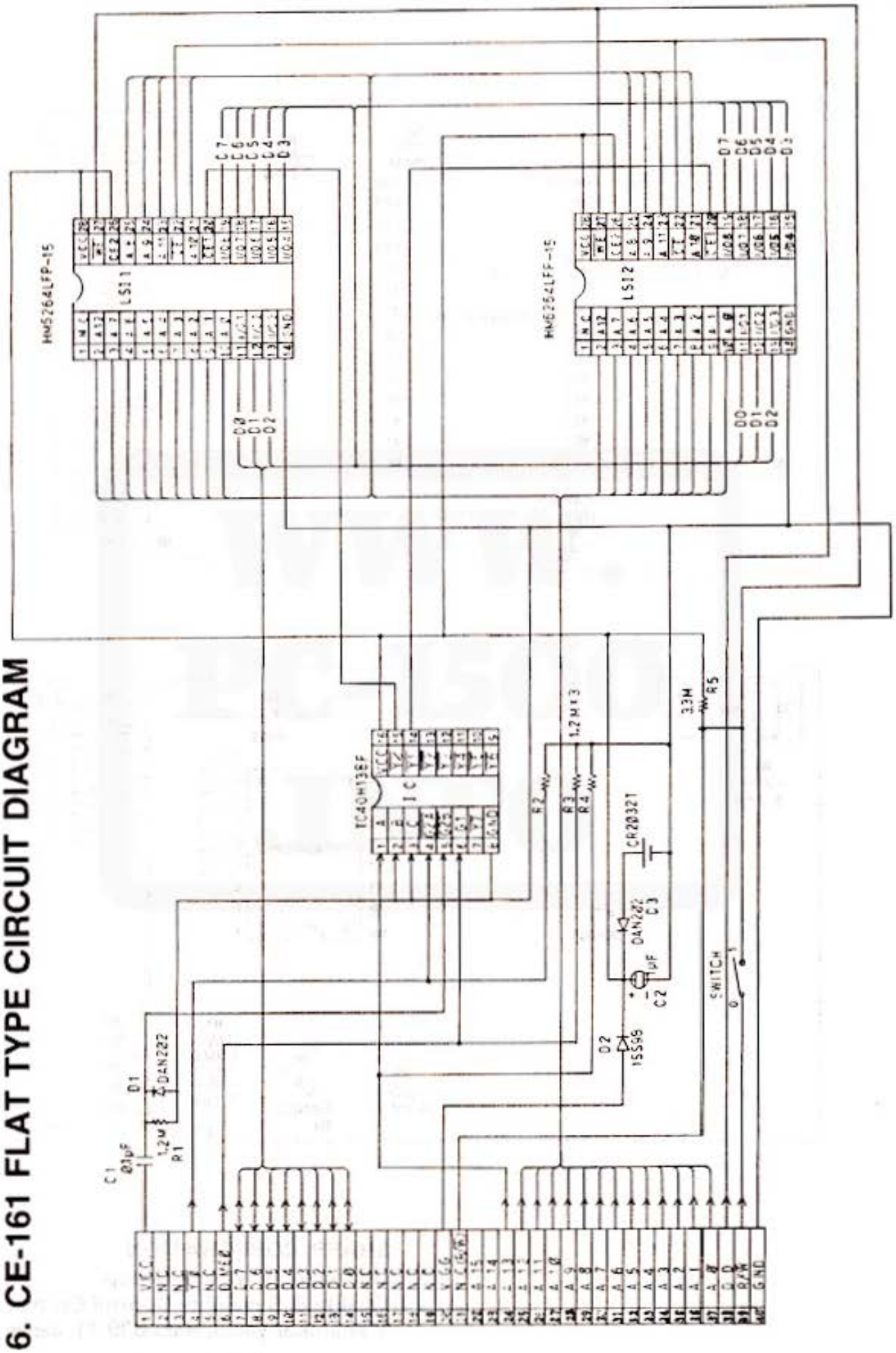
Service precautions

1. The terminals of the lithium battery are insulated and not soldered. Shipment in order to prevent damage to circuit components due to shorts caused by the aluminium foil which wraps the board for static prevention. (replacement PWB only).
   When the battery is used after a long period of storage, proper voltage may not be obtained from it due to normal discharge. In this case, a fresh battery has to be prepared separately and installed on the board before replacement of the board.
2. To replace parts on the board
   Avoid applying excessive heat to solder joint. This will prevent accidental damage to the PWB. Use a low temperature soldering iron.

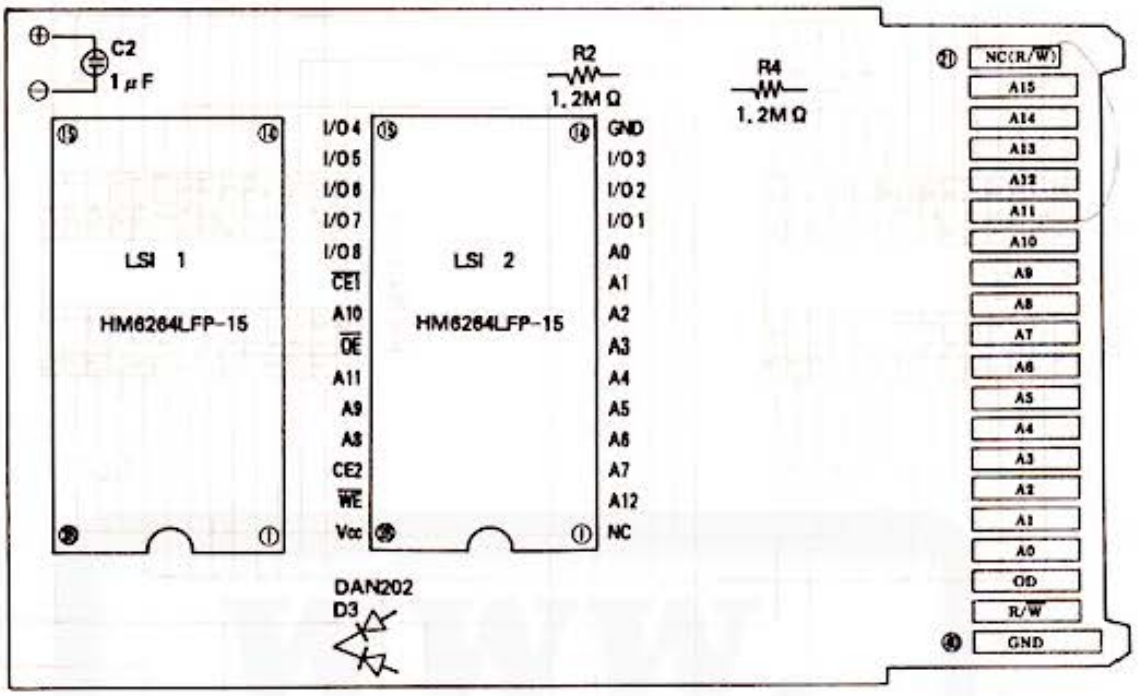


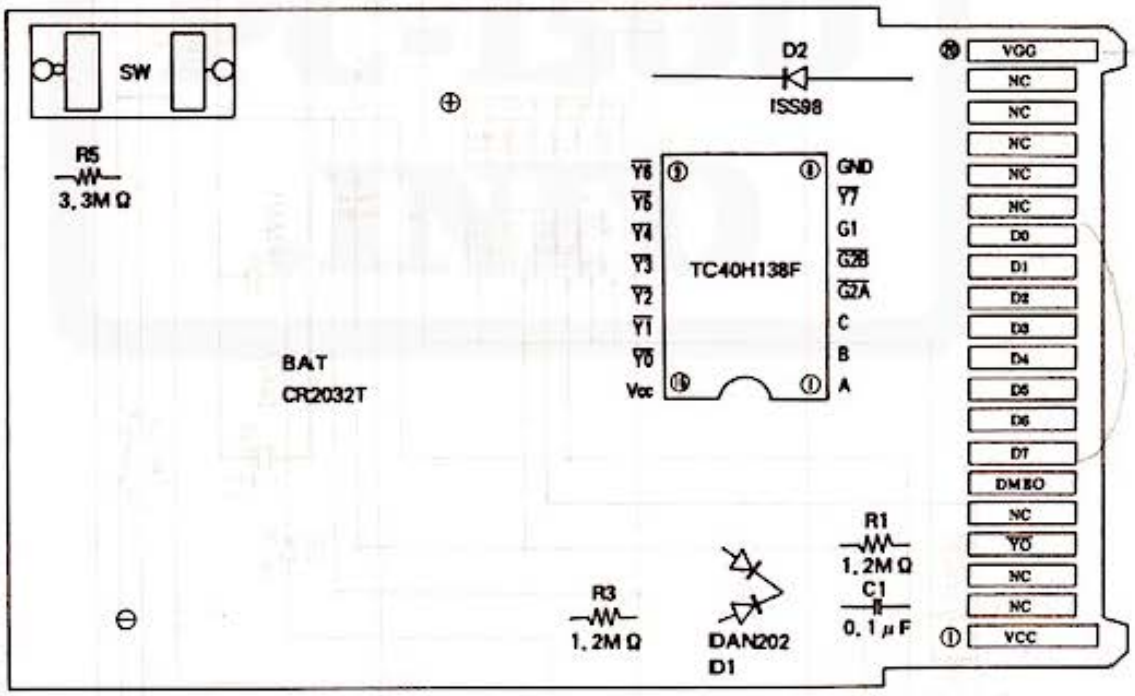


6. CE-161 FLAT TYPE CIRCUIT DIAGRAM



7. CE-161 FLAT TYPE PARTS & SIGNALS POSITION





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CODE : 0 0ECE161////E

SERVICE MANUAL

MODE CE-161

(PC-1500 Option)

CONTENTS

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1. FEATURES

The CE-161 is a RAM memory module having a total capacity of 16 K bytes (2 K bytes x 8 chips) and is backed up by a lithium battery so that it may treated as a ROM by simply setting the dip switch.

2. SPECIFICATIONS

Model:	CE-161
Type:	RAM module
Capacity:	16 K bytes
Backup power source:	1 DC 3 V Lithium cell CR2032
Battery life:	About 5 years (If installed in the PC-1500) About 1 year (If removed from the PC-1500) (When used at 25°C; Life varies with operation and environment.)
Operating temperature:	0°C to 40°C
Outside dimensions:	40.9 mm (W) x 48.2 mm (D) x 8.5 mm (H) 1-5/8" (W) x 1-29/32" (D) x 11/32" (H)
Weight:	12 g (0.03 lbs). (including cell)
Accessories:	Housing case, space cover, 3 cover labels, Lithium cell (built into the CE-161) and Instruction Manual

3. PRECAUTIONS

- When the CE-161 is connected to PC-1500, all the programs, data, and the reserved contents previously stored in the PC-1500 cannot be used. Therefore, if you need these, make sure to save them on tape before connecting the CE-161.
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4. NOTE

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5. PARTS LIST & GUIDE

NO.	PARTS CODE	PRICE RANK	NEW MARK	PARTS RANK	DESCRIPTION
1	GCABA2670CC01	A B		D	Cabinet bottom
2	GCABB2671CCZZ	A C		D	Cabinet top
3	GCABC2672CCZZ	A C		D	Cabinet slider
4	HDECA2088CCZZ	A A		D	Switch DEC.
5	TLABZ1823CCZZ	A C	N	D	Module label
6	MSPRC1202CCZZ	A C		C	Spring for cabinet slider
7	PZETL1462CCZZ	A A		C	Sheet
8	————				
9	QSW-S1347CCZZ	A H		C	Dip SW
10	CBATZ6441CCZZ	A M		B	Lithium battery (CR2032)
	GCASP1091CCZZ	A E		D	Case bottom
	GCASP1092CCZZ	A D		D	Case top
	GFTAU1281CCZZ	A C		D	Lid
	PPACG1004CCZZ	A E		C	Cushion
	PSHEP1085CCZZ	A C		C	Sheet
	TLABZ1690CCZZ	A A		C	Biss label
	TiNSM3955CCZZ	A U	N	D	Inst. book (E, F, G, I, S)
	SPAKA7307CCZZ	A C		D	Packing cushion
	SPAKC8169CCZZ	A F	N	D	Packing case
	TCAUH1204CCZZ	A C		D	Caution card
	TCAUK1192CCZZ	A C		D	Caution label
	DUNTK7484CCZZ	* *	N	E	PWB unit
	RC-CZ1021CCZZ	A B		C	Capacitor 0.1μF
	RC-SZ1007CCZZ	A F		C	Capacitor 1μF
	RH-DZ1008CCN1	A C		B	Diode DAN202
	VHD1SS98///-1	A D		B	Diode
	VHiTC40H138FN	A C		B	I.C.
	VRS-TP2BD125J	A A		C	Resistor 1.2Mohm
	VRS-TP2BD335K	A A		C	Resistor 3.3Mohm

Service precautions

1. The terminals of the lithium battery are insulated and not soldered. Shipment in order to prevent damage to circuit components due to shorts caused by the aluminium foil which wraps the board for static prevention. (replacement PWB only).
   When the battery is used after a long period of storage, proper voltage may not be obtained from it due to normal discharge. In this case, a fresh battery has to be prepared separately and installed on the board before replacement of the board.
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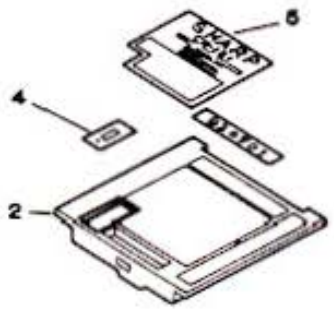
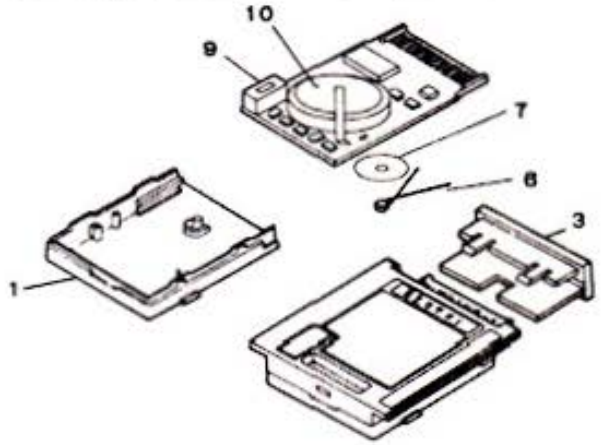
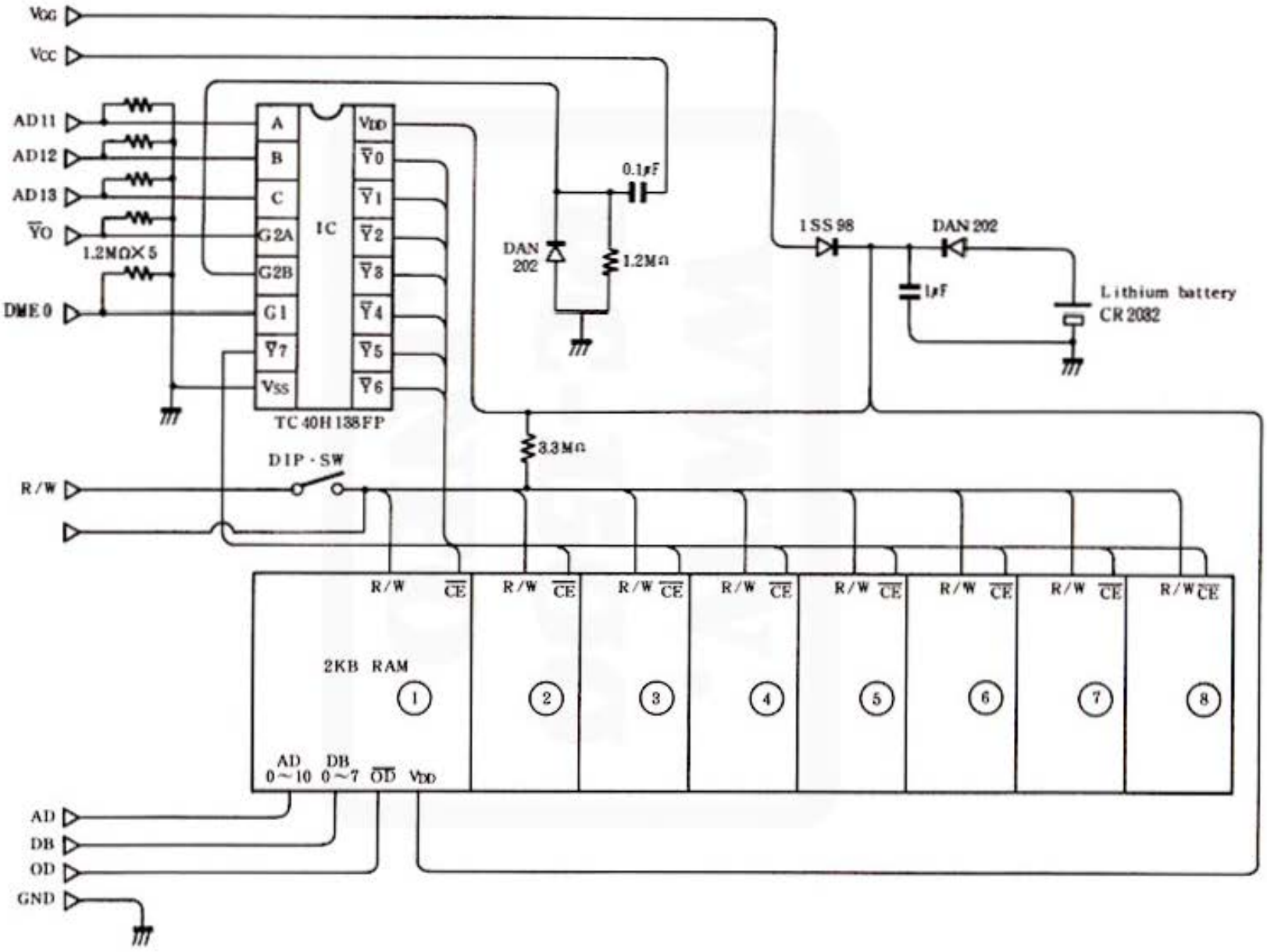
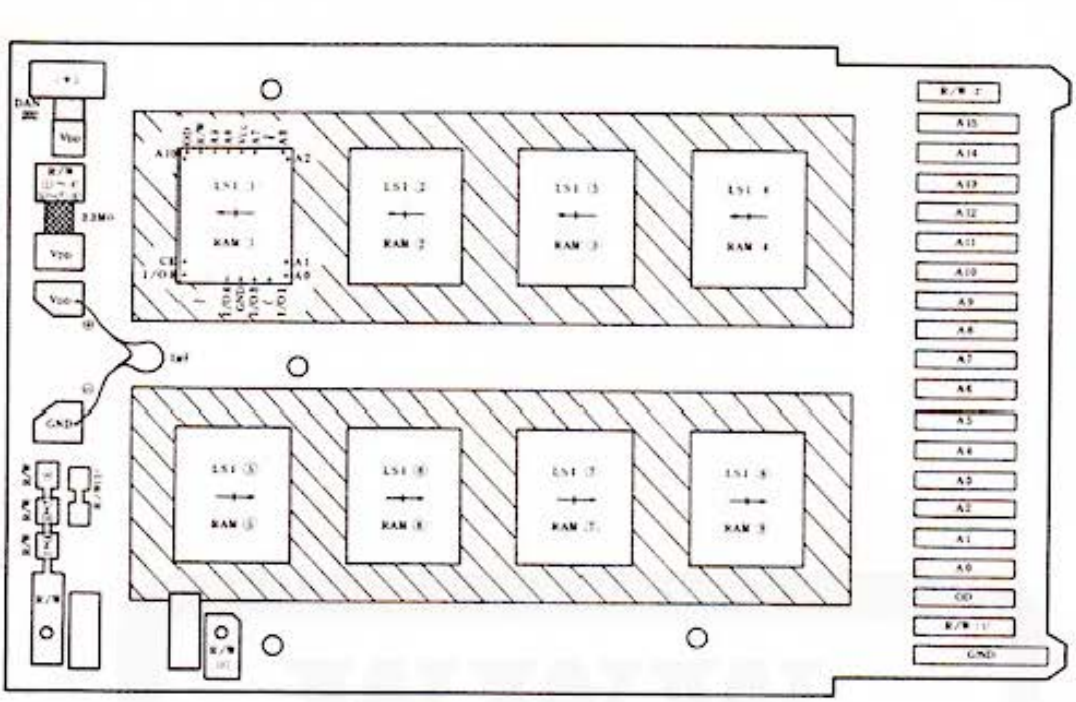


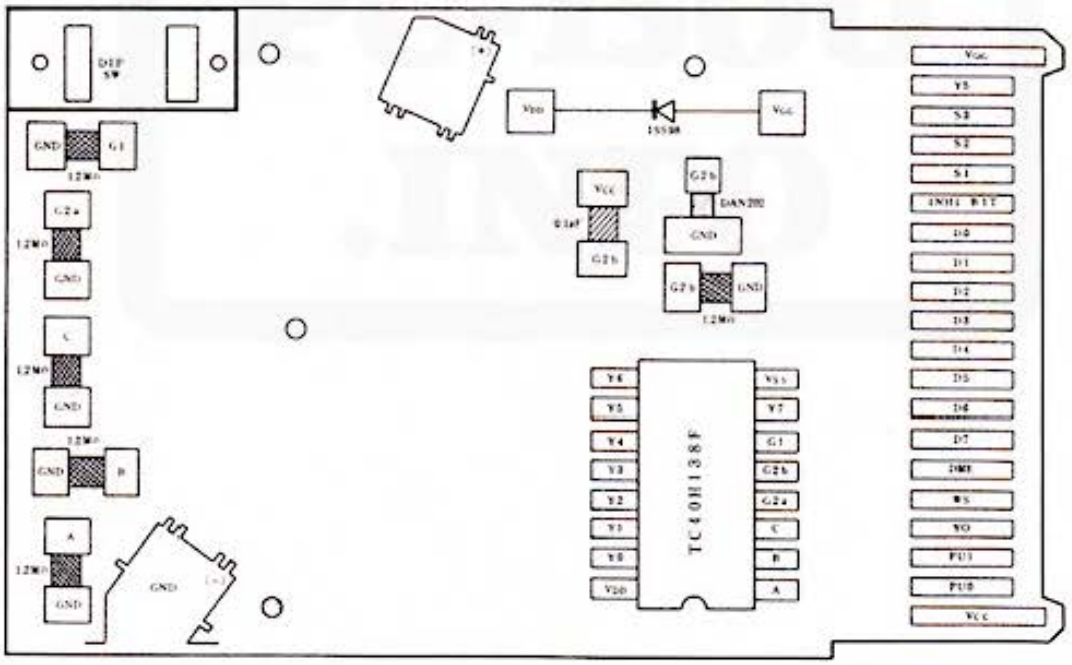


6. CE-161 CIRCUIT DIAGRAM



7. CE-161 PARTS & SIGNALS POSITION





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