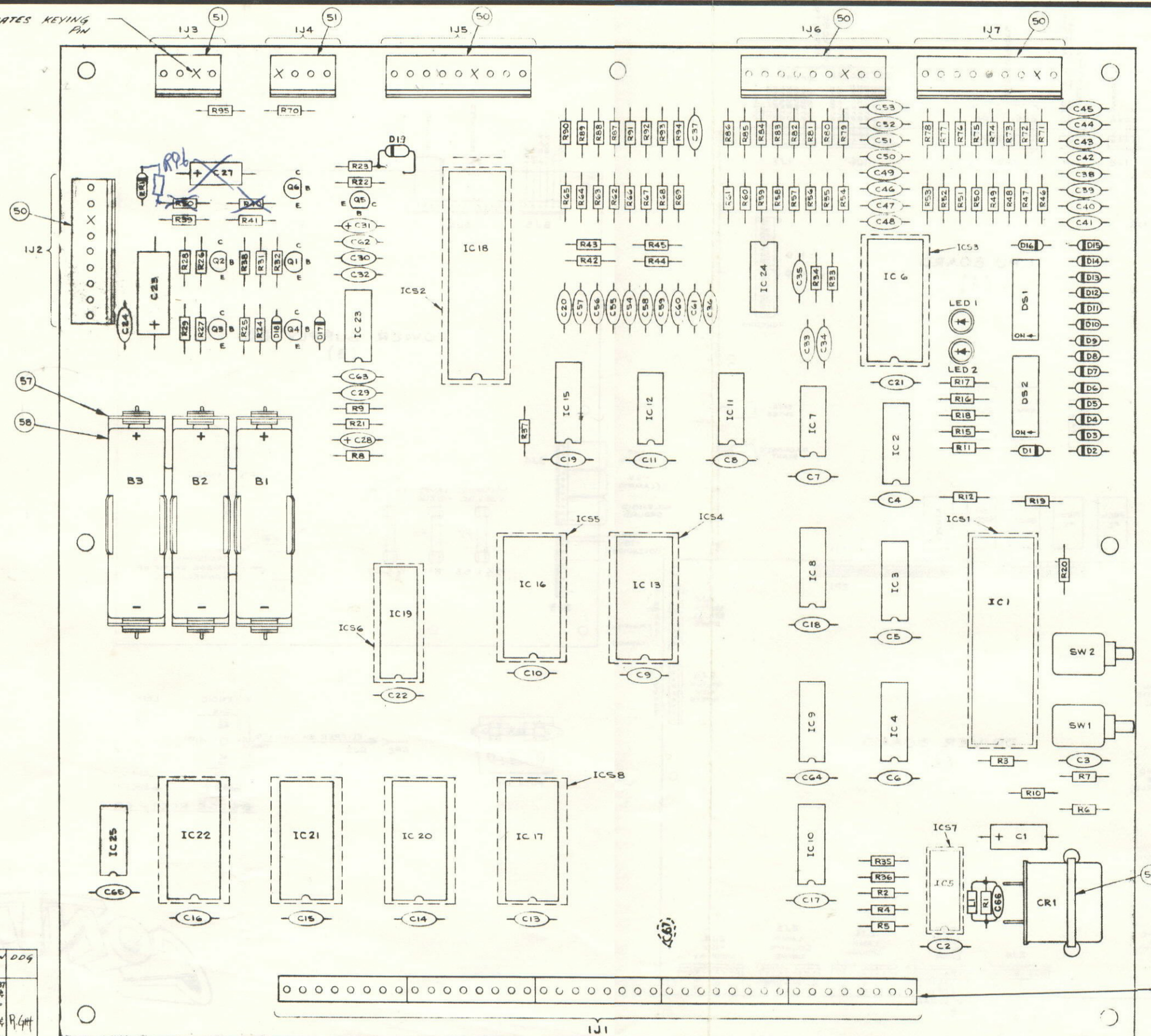


REVISION:

REVISION

BY

B	ADD IC1, IC5, SNOW KEYING PINS REMOVE C25, C26.	DDG
A	DELETED ITEM #1, PT. #5A-8987 ITEM #4 PT. #5A-8988 ADDED ITEMS #55, #56 #57, ITEM #15 WAS 7400 QUAD 2 INP. NOR ITEM #30 WAS CAP. TANT. J.MFD. 25 V. 10-25-77	R.G.H.



BILL OF MATERIAL

ITEM NO.	PART NO.	PART DESIGNATION	DESCRIPTION
1	5A-9136	LI	INDUCTOR, 15uH $\pm 10\%$
2	5A-8990	IC2, IC9, IC10	8T28 QUAD BUFFER/REC'VE.
3	5A-8989	IC3, IC4, IC8	8T97 HEX. TS BUFFER
4	5A-XXXX	IC21, IC22	FROM 512 X 8 7441/6341
5	5A-9010	IC6	74154 4 TO 16 DECODER
6	5A-9013	IC7	7404 HEX. INVERTER
7	5A-9011	IC11	7410 TRIPLE 3 INP NAND
8	5A-8973	IC12	7408 QUAD AND
9	5A-9003	IC13, IC16	MC6810 RAM
10	5A-9012	IC15	7442 BCD-DEC DECODER
11	5A-8972	IC18	MC6820 PIA
12	5A-9017	IC19	CMOS RAM 5101
13	5A-9002	IC23	MC3456/556 DUAL TIMER
14	5A-9073	IC24	7400 QUAD 2 INP. NAND
15	5A-	IC25	7402 QUAD 2 INP. NOR
16	5A-9018	ER1	1N5996 ZENER DIODE
17	5A-8919	D1 THRU D19	1N4148 DIODE, SILICON
18	5A-8938	Q1, Q2, Q3, Q6	2N4401 TRANSISTOR
19	5A-9016	Q4, Q5	2N4403 TRANSISTOR, PNP
20	5A-9025	DS1, DS2	8 STN DIP SWITCH
21	5A-9019	LED1, LED2	LED, RED
22	5A-9024	SW1, SW2	SWITCH, SPDT MOMENTARY
23	5A-9020	CR1	CRYSTAL, 3.58 MHZ
24	5A-9009	CI	CAP, TANT., 22 MFD. 10% 10V.
25	5A-8980	C2-C11, C13-C20, C29, C30, C33-C37, C63-C65	CAP., CERAMIC, .01 MFD. 50V.
26	5A-8986	C23	CAP, ELECT., 100 MFD. 10 V.
27	5A-8996	C24, C67	CAP., CERAMIC, .1 MFD. 50V.
28	5A-9023	C27	CAP, TANT., 3.3 MFD. 10V.
29	5A-9029	C28	CAP, TANT., .1 MFD. 10 V.
30	5A-9031	C31	CAP, TANT., 1 MFD. 25 V.
31	5A-9030	C32	CAP, CERAMIC, .047 MFD. 50V.
32	5A-9045	C38 THRU C62	CAP., CERAMIC, 470 PFD. 50V.
33	5A-8984	R1, R20, R24-R26, R28, R30, R38-R40, R71-R95	RES., FC, 1K 10% 1/4 W.
34	5A-9035	R2	RES., FC, 47K 10% 1/4 W.
35	5A-9040	R3, R4, R5	RES., FC, 33 OHM: 10% 1/4 W.
36	5A-8983	R6-R8, R10, R23	RES., FC, 3.3K 10% 1/4 W.
37	5A-9036	R11, R12	RES., FC, 100 OHM. 10% 1/4 W.
38	5A-8991	R15-R19, R33-R36, R42, R43, R46-R70	RES., FC, 4.7K 10% 1/4 W.
39	5A-9117	R21	RES., FC, 1.8K 2% 1/4 W.
40	5A-9034	R27, R29, R31, R41	RES., FC, 10K 5% 1/4 W.
41	5A-9032	R9	RES., FC, 12K 2% 1/4 W.
42	5A-9039	R32, R37	RES., FC, 10 OHM. 10% 1/4 W.
43	5A-9083	R44, R45	RES., FC, 470 OHM. 10% 1/4 W.
44	5A-	R22	RES., FC, 33K 5% 1/4 W.
45	5A-8985	IC51, IC52	40 PIN IC SOCKET
46	5A-9004	IC53, IC54, IC55	24 PIN IC SOCKET
47	5A-9005	IC56	22 PIN IC SOCKET
48	5A-9006	IC57	16 PIN IC SOCKET
49	5A-9026	5-REQ'D.	HEADER 09-64-1083
50	5A-9027	4-REQ'D.	HEADER 09-65-1091
51	5A-9028	2-REQ'D.	HEADER 09-65-1041
52	5A	1-REQ'D.	TIE WRAP
53	1B-2001-133-1		P.C. BOARD
54	5A-9004	IC58 (QTY:4)	24 PIN IC SOCKET
55	5A-9008	IC17	ROM 2K X 8 UPPER
56	5A-9007	IC20	ROM 2K X 8 LOWER
57	5A-9021	QTY. -1	BATTERY HOLDER #171
58	5A-9022	B1, B2, B3	BATTERY, ALKALINE, 1.5 V.
59	5A-8987	IC-1	MC6800 MPU
60	5A-8988	IC-5	MC6875 CLOCK CNP
61	5A-9137	C66	CAPACITOR, 120pF. $\pm 10\%$

C67 NOT PROVIDED ON ALL GAMES

TOLERANCES		WILLIAMS ELECTRONIC MFG. CORP.			
UNLESS OTHERWISE SPECIFIED		SUBSIDIARY OF THE SECURITY GROUP			
FRACTIONS ± 1/64		3401 N. CALIFORNIA		CHICAGO 18, ILL.	
DECIMALS ± .003		NAME		CORNELLIA	
HOLES + .002		C.P.U. ASSEMBLY			
- .003		MATERIAL		REAT TREATMENT	
ANGULAR ± 1/8"				FINISH	
QTY	DATE	APPR.	DELS		
36 GH	9-16-77		21	D-7990	

CPU Board Assembly Drawing

