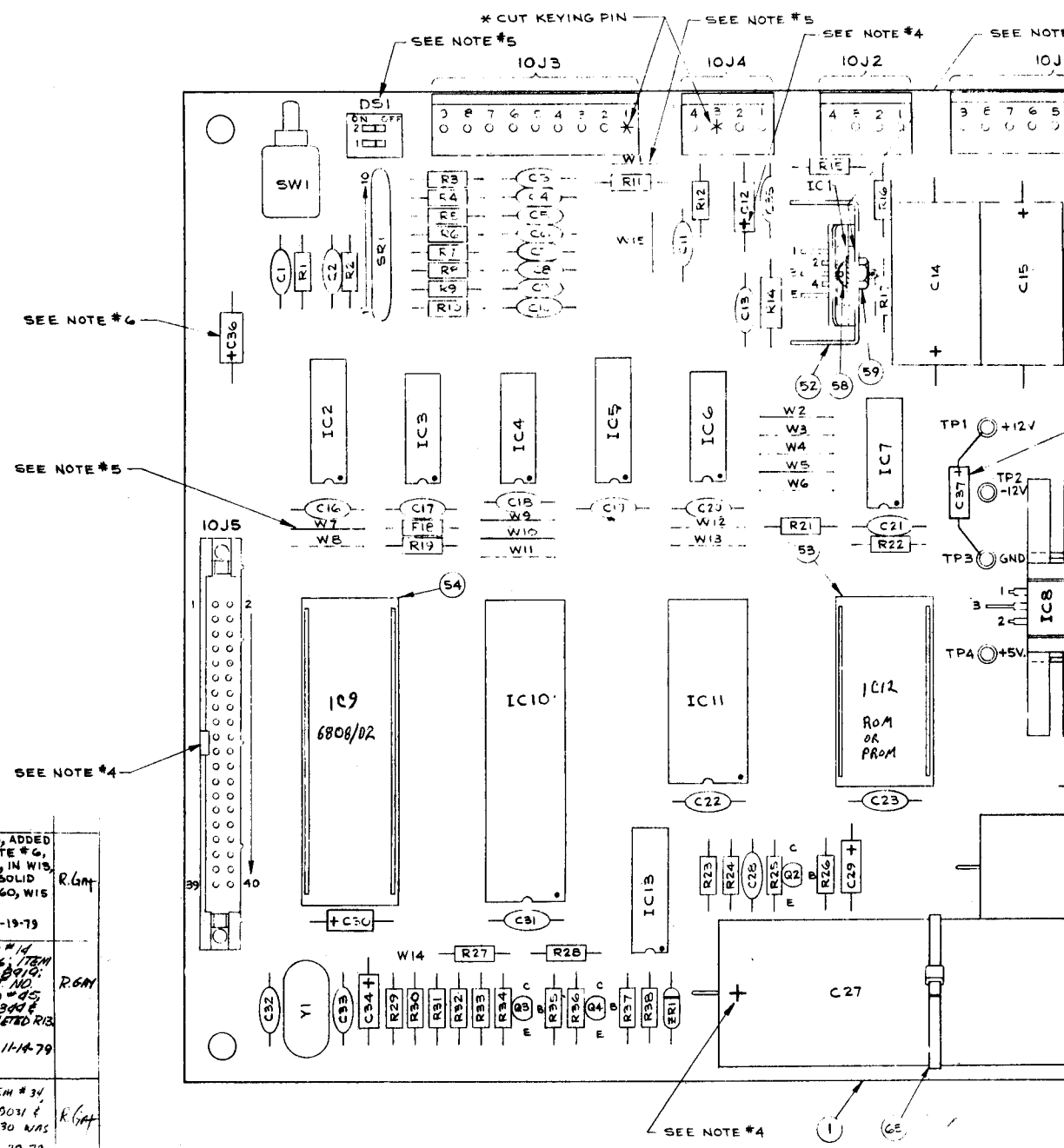


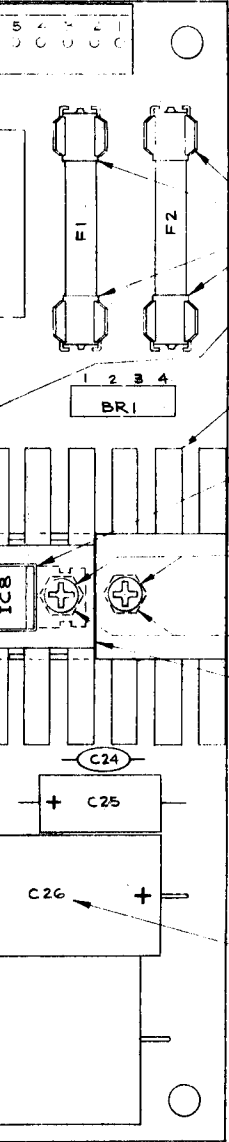
ITEM NO.	PART NO.	PART DESIGNATION	DESCRIPTION
58			6-32 x 3/8" BINDER
59			6-32 HEX NUT
60		W1, W2, W5, W7, W9, W10, W15	WIRE JUMPER 21
61	5A-9248	TP1 THRU TPA	TERMINAL # 15
62	5A-9363	R11	RESISTOR, FC, 5 1/2 1/4 WATT
64	5A-9562	SRI	RESISTOR, 4.7 10 PIN SIP
65	3A-7520-1		TIE WRAP



E	REVISED NOTES, ADDED ITEM #45 & NOTE #6, RELOCATED W15, IN W15, DASH LINE WAS SOLID LINE & ITEM #60, W15 WAS W1B E.C.O.	11-19-79	R.G.M.
D	DELETED ITEM #14, PT. NO. 26-9016, ITEM #16, PT. NO. 53-8910, ITEM #25, PT. NO. 5A-9314, ITEM #45, PT. NO. 5A-9340 & IN ITEM #21, DELETED R13, C14, WAS B E.C.O.	11-14-79	R.G.M.
C	ADDED C36, ITEM #34, PT. NO. WAS 5A-5031 & R17 WAS 1, & C30 WAS 01 MFD. E.C.O.	10-27-79	R.G.M.
B	REMOVED ITEM #62, ADDED W1 & R12, ITEM #14, 01K WAS 1, & C30 WAS 01 MFD. E.C.O.	10-6-79	R.G.M.
A	ITEM #11, A 10-2 SA 10, ITEM #62, ADDED W1, ITEM #62, HOLES	10-2-79	R.G.M.
REVISION LETTER	REVISION	BY	

DESCRIPTION	REQ'D. NO.	ITEM NO.	PART NO.	PART DESIGNATION	DESCRIPTION	REQ'D. NO.
SCREW HEAD SCREW	3	48	5A-6314	F1, F2	4 AMP SLOW BLOW FUSE	2
...	3	49	5A-9178		FUSEHOLDER	4
...	7	50	5A-9172		HEAT SINK THERMALLOY #6072B	1
...	1	51	5A-9173		HEAT SINK THERMALLOY #6071B	1
...	1	52	5A-9199		HEAT SINK THERMALLOY #6030	1
...	1	53	5A-9004		24 PIN SOCKET	1
...	1	54	5A-8985		40 PIN SOCKET	1
...	1	55	5A-9027	10J1, 10J3	9 PIN MALE CONNECTOR	2
...	1	56	5A-9028	10J2, 10J4	4 PIN MALE CONNECTOR	2
...	1	57	5A-9349	10J5	40 PIN RIBBON HEADER	1

BILL OF MATERIAL				
ITEM NO.	PART NO.	PART DESIGNATION	DESCRIPTION	REQ'D. NO.
1	1C-2001-146-3		BARE P.C. BOARD	1
2	5A-9156	IC1	TDA2002 V AUDIO AMPLIFIER	1
3	5A-9012	IC2	7442 BCD-DEC DECODER	1
4	5A-9073	IC3	7400 QUAD 2 INPUT NAND	1
5	5A-8973	IC4	7408 QUAD 2 INP. AND GATE	1
6	5A-9153	IC5	4050 BUFFER	1
7	5A-9154	IC6	4068 8 INPUT NAND GATE	1
8	5A-8971	IC7	14069 HEX INVERTER	1
9	5A-9157	IC8	7805 5 VOLT REG. W/T0220 CASE	1
10	5A-8972	IC10	6821 P.I.A.	1
11	5A-9003	IC11	6810 RAM	1
12	5A-9152	IC13	1408 D/A CONVERTER	1
13	5C-8938	Q2, Q3, Q4	2N4401 NPN TRANSISTOR	3
14				
15	5A-9018	ZR1	1N5996 6.8V. ZENER DIODE	1
16				
17	5A-9158 OR 5A-9357	BR1	MDA 200/3N253 BRIDGE RECTIFIER	1
18	5A-9020	Y1	3.58 MHZ CRYSTAL	1
19	5B-8991	R1, R18, R19, R21, P22, R27, R31, R31, R32	RESISTOR, FC, 4.7K OHM 5% 1/4 WATT	9
20	5B-9036	R2 THRU R10	RESISTOR, FC, 100 OHM 10% 1/4 WATT	9
21	5A-8984	R12, R15, R28, R36, R38	RESISTOR, FC, 1K OHM 10% 1/4 WATT	5
22	5A-9181	R14	RESISTOR, FC, 1 OHM 10% 1/2 WATT	1
23	5A-9161	R16	RESISTOR, FC, 2.2 OHM 10% 1/4 WATT	1
24	5A-9361	R17	RESISTOR, FC, 220 OHM 10% 1/2 WATT	1
25				
26	5B-8985	R23, R24, R26	RESISTOR, FC, 3.3K OHM 10% 1/4 WATT	3
27	5A-9179	R25	RESISTOR, FC, 3.3M OHM 10% 1/4 WATT	1
28	5A-9359	R29	RESISTOR, FC, 47K OHM 5% 1/4 WATT	1
29	5B-8817	R33, R35, R37	RESISTOR, FC, 10K OHM 10% 1/4 WATT	3
30	5B-9039	R34	RESISTOR, FC, 10 OHM 10% 1/4 WATT	1
31	5A-8980	C1, C16 THRU C25, C31	CAPACITOR, CERAMIC, .01 MFD. 50 V. ±20%	11
32	5A-9065	C2 THRU C10	CAPACITOR, CERAMIC, 470 PFD. 50 V. ±20%	9
33	5A-9345	C11	CAPACITOR, CERAMIC, .001 MFD. 20% 100 V.	1
34	5A-9345	C12, C30, C36	CAPACITOR, ELECTROLYTIC 1 MFD. 6.3 V. 10% ±50%	3
35	5A-8996	C13, C24, C35	CAPACITOR, CERAMIC, .1 MFD. 50 V. ±20%	3
36	5A-9165 OR 5A-9165-1	C14	CAPACITOR, ELECTROLYTIC, 800 MFD. 16 V. OR 1,000 MFD. 15 V. ±20%	1
37	5A-9164 OR 5A-9164-1	C15	CAPACITOR, ELECTROLYTIC, 500 MFD. 15 V. OR 470 MFD. 25 V. ±20%	1
38	5A-8986	C25	CAPACITOR, ELECTROLYTIC, 100 MFD. 10 V. ±20%	1
39	5A-8893	C26	CAPACITOR, ELECTROLYTIC, 1,000 MFD. 25 V. ±20%	1
40	5A-9046	C27	CAPACITOR, ELECTROLYTIC, 12,000 MFD. 16 V. ±20%	1
41	5A-9180	C28	CAPACITOR, CERAMIC, 47 PFD. 1K V. ±20%	1
42	5A-9343	C29	CAPACITOR, ELECTROLYTIC, 10 MFD. 25 V. LOW LEAK	1
43	5A-9169	C32, C33	CAPACITOR, CERAMIC DISC, 27 PFD. 1K V. ±10%	2
44	5A-9163	C34	CAPACITOR, TANTALUM, 2.2 MFD. 15 V. ±20%	1
45	5A-9031	C37	CAPACITOR, TANTALUM, 1 MFD. 25 V. ±20%	1
46	5A-9024	SW1	MOMENTARY SWITCH SPDT	1
47	5A-9330	DS1	2 STD. DIP SWITCH	1

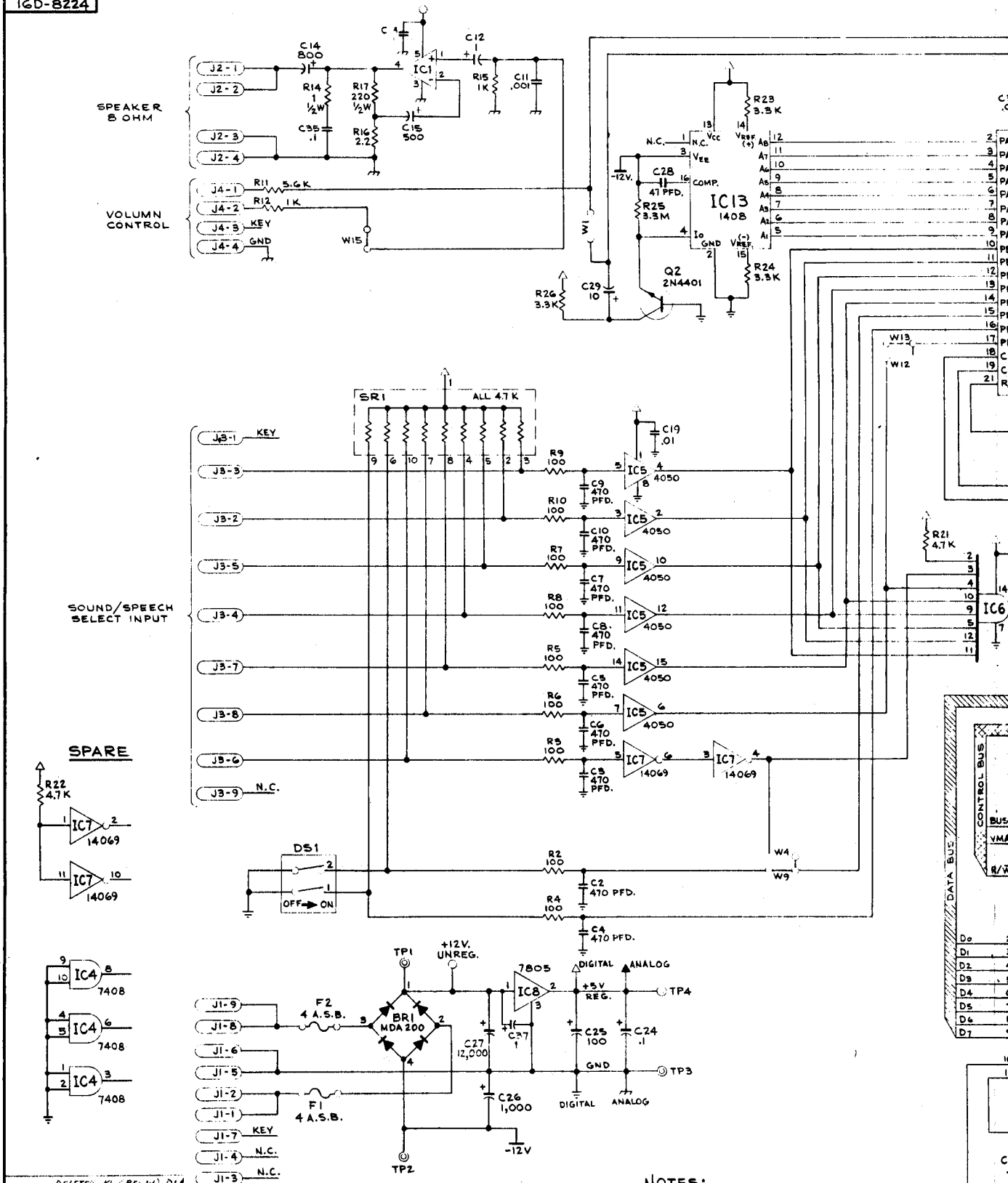


**NOTES:**

- 1. USE THERMAL COMPOUND BETWEEN ICs AND HEAT SINK.
- 2. CAUTION: AVOID STATIC DISCHARGE DAMAGE TO MOS LOGIC.
- 3. SYMBOLS SHOWN ON COMPONENTS ARE FOR REFERENCE ONLY. DO NOT SCREEN OR STAMP.
- 4. OBSERVE INDEX MARK OF ALL INTEGRATED CIRCUITS, DIODES D1, D2, AND ZR1.
- 5. CAPACITORS C12, C14, C15, C25, C27, C29, C27.
- 6. CONNECTORS 10J1, 10J2, 10J3, 10J3, 10J5.
- 7. POSITION OF TRANSISTORS Q1, Q2, Q3, Q4.
- 8. DS1 - SELECTS SOUNDS/NOTES
- 9. W1 - SELECTS SPEECH/NO SPEECH (W9/W1)
- 10. W1 - SPEECH MODULE STATUS
- 11. IN - SPEECH MODULE NOT ATTACHED
- 12. OUT - SPEECH MODULE ATTACHED
- 13. W14 - MPU INTERNAL RAM ENABLE
- 14. W7 & W8 - MEMORY MAP CONTROL
- 15. W12 & W13 - PB7 STATUS CONTROL (W13 NEVER USED)
- 16. W4 & W9 - PB5 STATUS CONTROL
- 17. SOLDERED ON TOP OF BOARD
- 18. INSTALL THIS: JUMPERS FOR FOLLOWING GAMES:  
 W15, W8, W12, W4, W1, W3, W6, W11 FOR:  
 WORLD CUP  
 DISCO FEVER  
 CONTACT  
 POKERNO  
 PHOENIX  
 ARISTOCRAT SHUFFLE  
 POMPILI SHUFFLE  
 KING TUT SHUFFLE  
 TAURUS SHUFFLE  
 SOUND ROM 1
- 19. W15, W8, W12, W4, W1, W2, W5, W10, FOR:  
 FLASH  
 STALLAR WARS  
 TRI ZONE  
 TIME WARP  
 SOUND ROM 1  
 5A-9198
- 20. W7, W15, W9, W1, (SEE NOTE #5) W2, W5, W10 FOR:  
 GORGAR  
 SOUND ROM 2 - JT-4960
- 21. IC12 SELECTION STRAPPING:  
 (2K x 8)      (1K x 4)      (512 x 8)  
 W2      W3      W3  
 W1 IN      W2 IN      W6 IN  
 W1      W3      W11

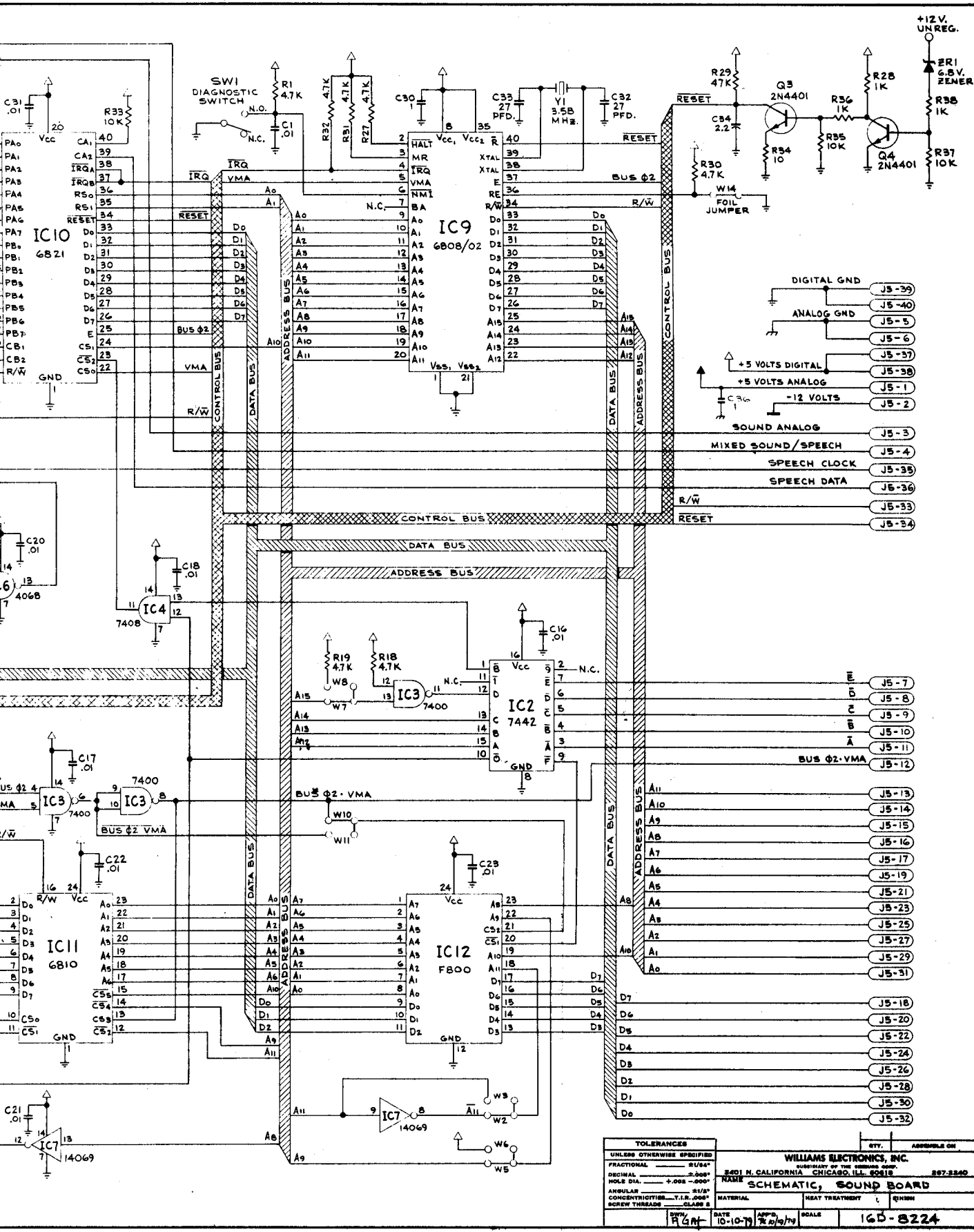
TOLERANCES UNLESS OTHERWISE SPECIFIED		QTY.	ASSEMBLE ON
FRACTIONAL	21/64"		
DECIMAL	±.005"		
HOLE DIA.	±.008 - .001"		
ANGULAR	±15°		
CONCENTRICITY	±.008"		
SCREW THREADS	CLASS 2		
WILLIAMS ELECTRONICS, INC. SUBSIDIARY OF THE REGGON GROUP 3801 N. CALIFORNIA CHICAGO, ILL. 60618 367-2240		NAME	
		SOUND BOARD SUB-ASSEM	
MATERIAL		HEAT TREATMENT	FINISH
DATE 9-23-79		APPR. 2/10/79	SCALE 2:1
		D-8225	

IGD-8224



C	DELETED R1 (RES.), D18, D2 (IN 1148), 51 (COMM), R19 (10 & R20 (12K), 10000, W15, R.G. 11-1-79			
E	ADDED R26, 4 C20 WAS, 51 MFD, 11-23-79			
A	10/23/79			
	C12, C14, C15, POLARITY REVERSE			
REVISION LETTER	REVISION	BY	REVISION LETTER	REVISION

- NOTES:**
1. ALL RESISTORS, 1/4 WATT UNLESS OTHERWISE NOTED.
  2. ALL CAPACITORS, MFD. UNLESS OTHERWISE NOTED.



TOLERANCES		QTY.	APPROX. ON
UNLESS OTHERWISE SPECIFIED			
FRACTIONAL	±0.004"		
DECIMAL	±0.008"		
HOLE DIA.	+0.008 -0.000"		
ANGULAR	±0.1°		
CONCENTRICITY	±0.004"		
SCREW THREADS	CLASS 2		
WILLIAMS ELECTRONICS, INC. DIVISION OF THE BIRDSONG GROUP 8401 N. CALIFORNIA CHICAGO, ILL. 60618 807-2840		NAME <b>SCHEMATIC, SOUND BOARD</b>	
MATERIAL	HEAT TREATMENT	Q/MSM	
DATE	SCALE	165-8224	

Sound Board Logic Diagram 17