

X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

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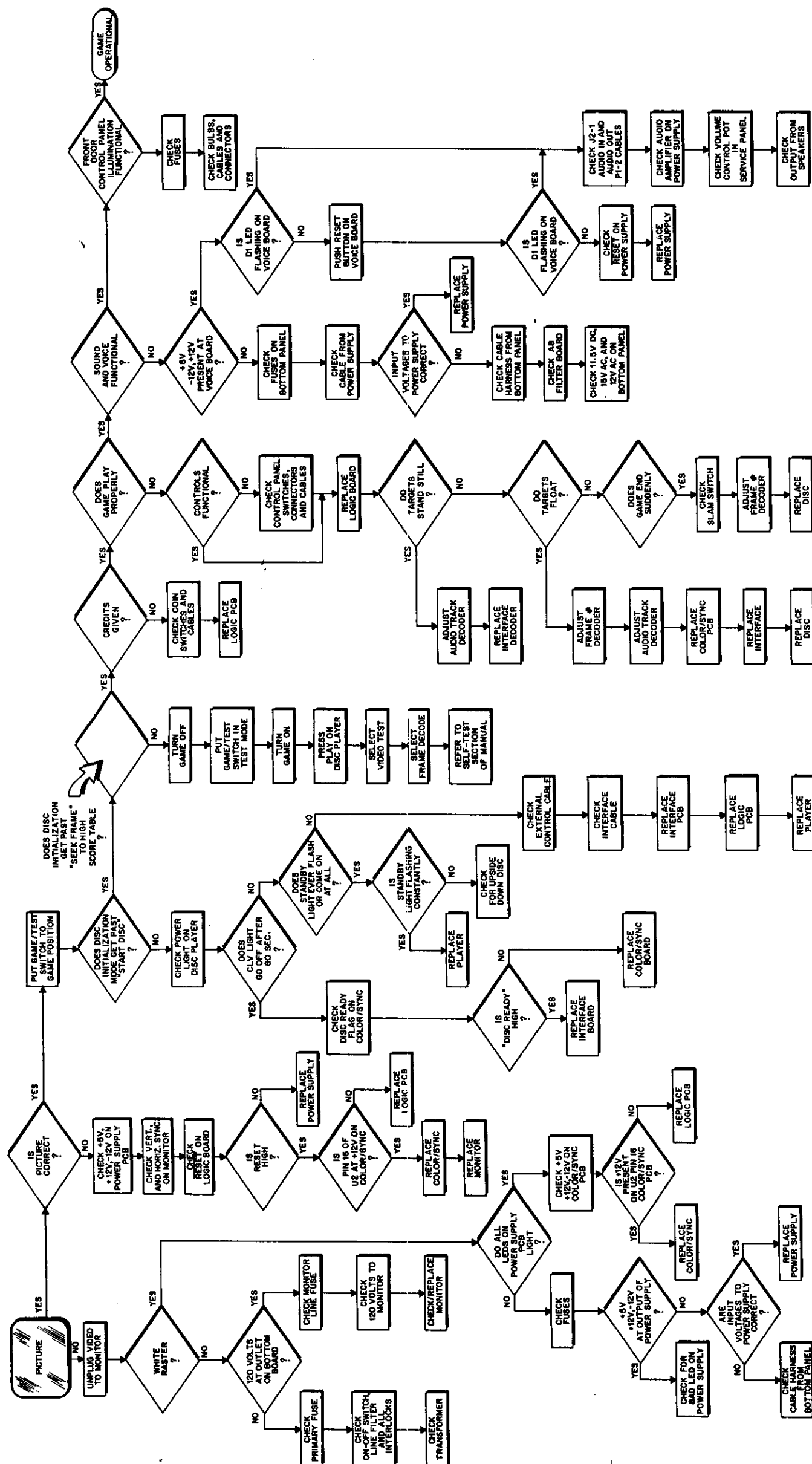
X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

LOGIC BOARD ASSY. (A1), PARTS LIST

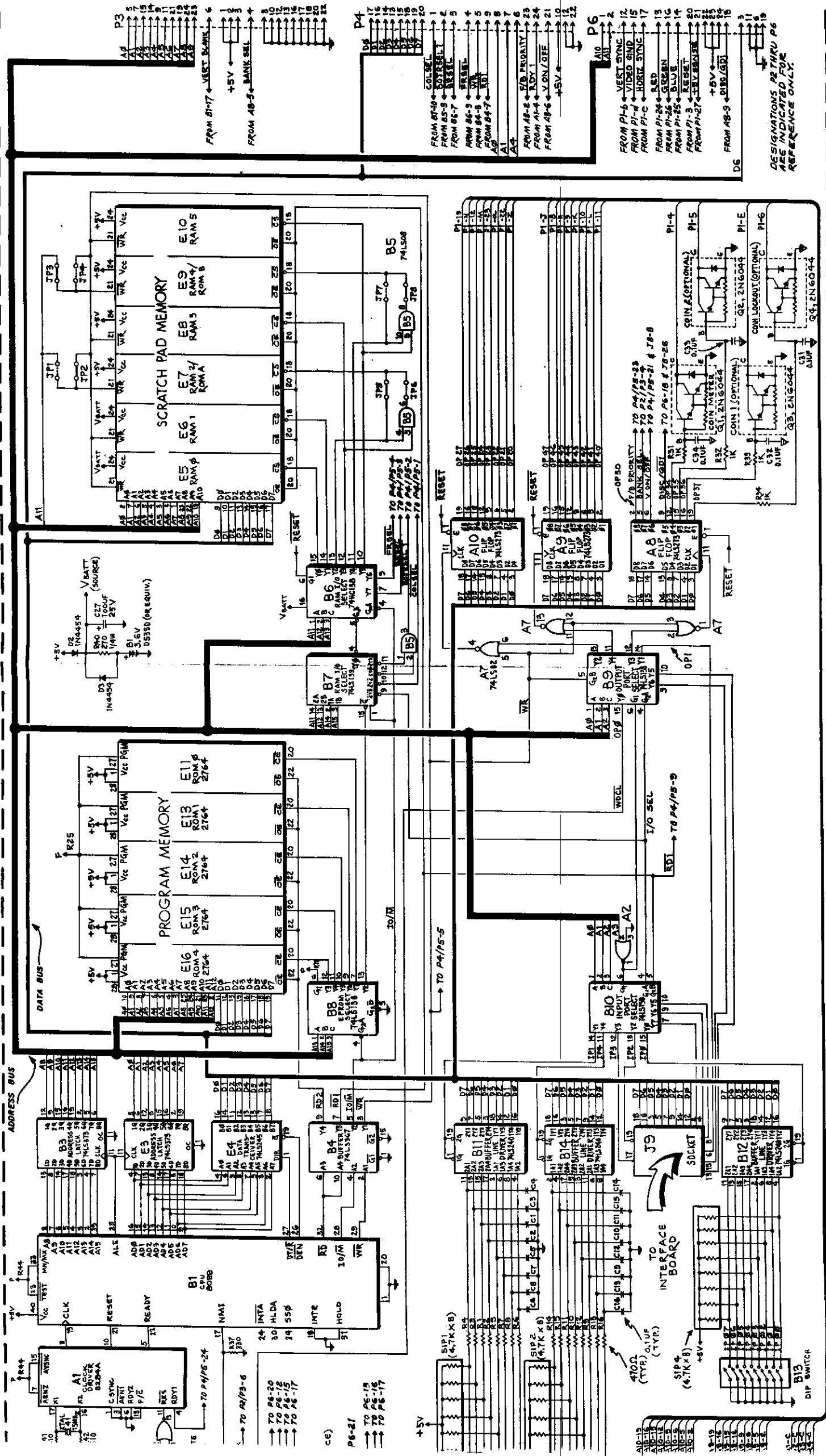
INTEGRATED CIRCUITS

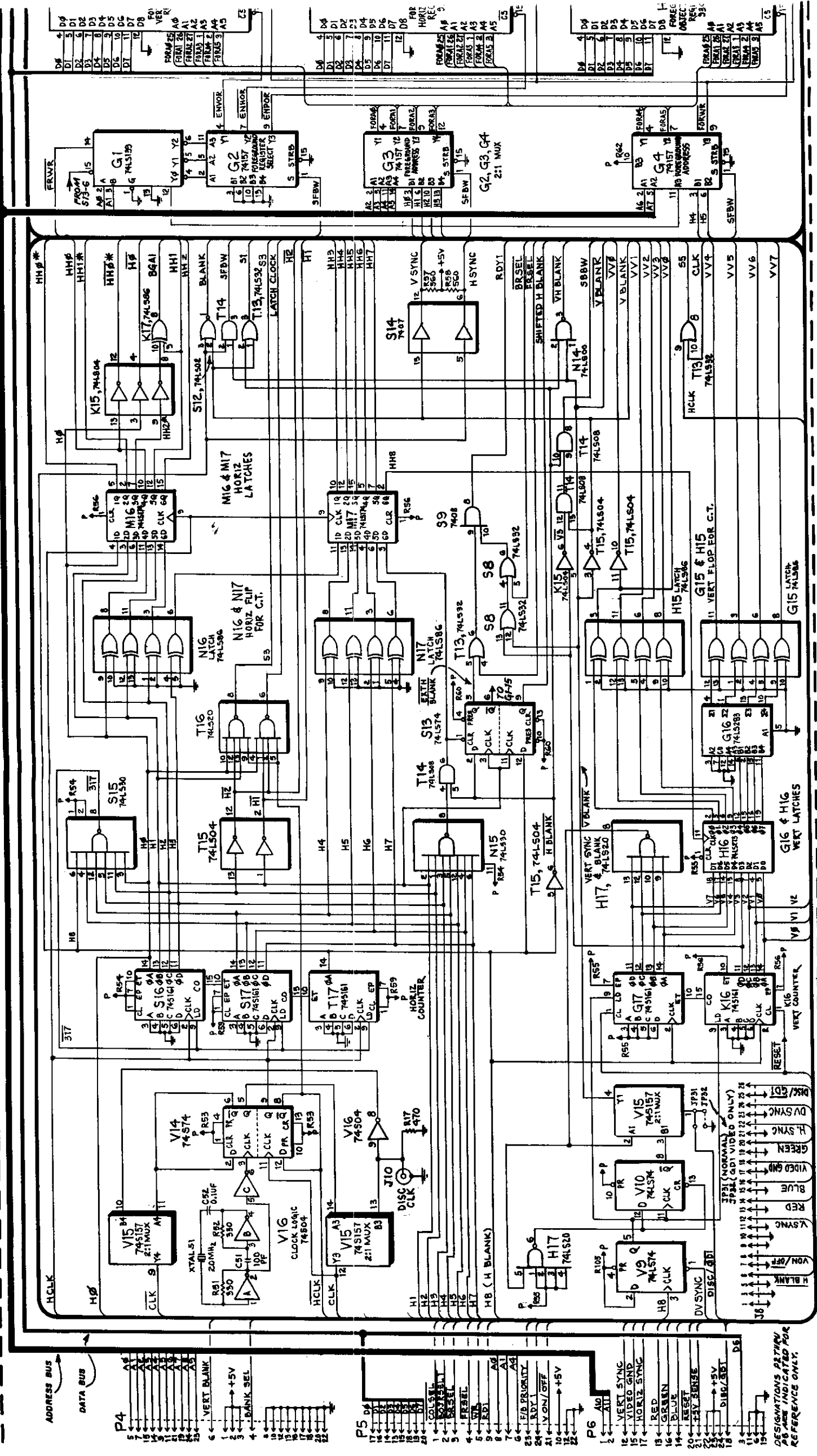
REFERENCE	DESCRIPTION	PART NO.	REFERENCE	DESCRIPTION	PART NO.
A1	Logic Board Assy.	MA-498	M7	74157 Quad 2-input multiplexer	XO-114
A2	8284 CLK Driver	XO-478	M8	74LS74 Dual D-type flip flop	XO-434
A3	74LS02 Quad 2-input "NOR" gate	XO-428	M9	74S157 Quad 2-input multiplexer	XO-124
A7	74161 Synchronous 4-bit counter	XO-192	M10	74LS245 Octal bus transceiver	XO-79
A8, A9, A10	74LS02 Quad 2-input "NOR" gate	XO-428	M11	74LS374 Octal D-type flip flop	XO-96
B1	74LS273 8-bit register	XO-94	M12	74LS157 Quad 2-input multiplexer	XO-390
B3	8088 CPU	XO-490	M13, M14, M15	7489 64-bit RAM	XO-88
B4	74LS373 Octal D-type flip flop	XO-445	M16, M17	74LS174 Hex D-type flip flop	XO-442
B5	74LS367 Hex 3-state buffer	XO-444	N1, N2, N3,	74S189 64-bit RAM	XO-89
B6	74LS08 Quad 2-input "AND" gate	XO-86	N4		
B7	74HC138 1 of 8 decoder	XO-190	N5, N6	74S161 Synchronous presettable binary counter	XO-488
B8, B9, B10	74LS139 Dual 1 of 4 decoder	XO-419	N7, N8, N9	74LS157 Quad 2-input multiplexer	XO-390
B11, B12, B14	74LS138 1 of 8 decoder	XO-437	N10		
E3	74LS240 Octal buffer/line driver	XO-91	N11	74LS260 Dual 5-input "NOR" gate	XO-93
E4	74LS373 Octal D-type flip flop	XO-445	N12	74LS298 Quad 2-port register	XO-118
E5 RAM0	74LS245 Octal bus transceiver	XO-79	N13	74LS157 Quad 2-input multiplexer	XO-390
E6 RAM1	HM6116LP-4 2K x 8 SRAM	XO-191	N14	74LS00 Quad 2-input "NAND" gate	XO-427
E7 RAM2	HM6166LP-4 2K x 8 SRAM	XO-191	N15	74LS30 8-input "NAND" gate	XO-432
E8 RAM3	HM6116P-4 2K x 8 SRAM	XO-195	N16, N17	74LS86 Quad 2-input "Exclusive-OR" gate	XO-435
E11 ROM0	2764-3 8K x 8 EPROM	XO-489	S1, S2, S3,	74L189 64-bit RAM	XO-89
E13 ROM1	2764-3 8K x 8 EPROM	XO-489	S4, S5, S6		
E14 ROM2	2764-3 8K x 8 EPROM	XO-489	S7	74LS04 Hex inverter	XO-418
G1	74LS139 Dual 1 of 4 decoder	XO-419	S8	74LS32 Quad 2-input "OR" gate	XO-433
G2, G3, G4	74157 Quad 2-input multiplexer	XO-114	S9	7408 Quad 2-input "AND" gate	XO-404
G5, G6, G7			S10, S11	93422 256 x 4 Bipolar RAM	XO-100
G8, G9, G10			S12	74LS02 Quad 2-input "NOR" gate	XO-428
G11	74LS374 Octal D-type flip flop	XO-96	S13	74LS74 Dual D-type flip flop	XO-434
G12	74LS244 Octal buffer/line driver	XO-117	S14	7407 Hex buffer/driver	XO-384
G13	74LS157 Quad 2-input multiplexer	XO-390	S15	74LS30 8-input "NAND" gate	XO-432
G15	74LS86 Quad 2-input "Exclusive-OR" gate	XO-435	S16, S17	74S161 Synchronous presettable binary counter	XO-488
G16	74LS283 4-bit binary full adder	XO-95	T1, T2, T3	74LS379 Quad D-type flip flop	XO-98
G17	74S161 Synchronous presettable binary counter	XO-488	T4 FGO	2764-3 8K x 8 EPROM	XO-489
H1, H2, H4	93419 64 x 9 bipolar RAM	XO-99	T5 FGI	2764-3 8K x 8 EPROM	XO-489
H5	74LS283 4-bit binary full adder	XO-95	T6 FG2	2764-3 8K x 8 EPROM	XO-489
H6	74LS30 8-input "NAND" gate	XO-432	T8 FG3	2764-3 8K x 8 EPROM	XO-489
H7	4801AN-3 1K x 8 RAM	XO-193	T9, T10, T11	74LS157 Quad 2-input multiplexer	XO-390
H8, H9	74LS245 Octal bus transceiver	XO-79	T12	74LS260 Dual 5-input "NOR" gate	XO-93
H10	4801AN-3 1K x 8 RAM	XO-193	T13	74LS32 Quad 2-input "OR" gate	XO-433
H12 BGO	2732A 4K x 8 EPROM	XO-485	T14	74LS08 Quad 2-input "AND" gate	XO-86
H13 BGI	2732A 4K x 8 EPROM	XO-485	T15	74LS04 Hex inverter	XO-418
H15	74LS86 Quad 2-input "Exclusive-OR" gate	XO-435	T16	74LS20 Dual 4-input "NAND" gate	XO-430
H16	74LS273 8-bit register	XO-94	T17	74S161 Synchronous presettable binary counter	XO-488
H17	74LS20 Dual 4-input "NAND" gate	XO-430	V4, V5, V6,	74LS166 8-bit shift register	XO-391
K5	74LS283 4-bit binary full adder	XO-95	V7		
K6	74LS32 Quad 2-input "OR" gate	XO-433	V9, V10	74LS74 Dual D-type flip flop	XO-434
K15	74LS04 Hex inverter	XO-418	V11	74LS20 Dual 4-input "NAND" gate	XO-430
K16	74S161 Synchronous presettable binary counter	XO-488	V12	74LS161 Synchronous presettable binary counter	XO-440
K17	74LS86 Quad 2-input "Exclusive-OR" gate	XO-435	V14	74S74 Dual D-type flip flop (T.I. only)	XO-87
M1, M2, M3	74LS157 Quad 2-input multiplexer	XO-390	V15	74S157 Quad 2-input multiplexer	XO-124
M4, M5			V16	74S04 Hex inverter	XO-400
M6	74LS161 Synchronous presettable binary counter	XO-440			

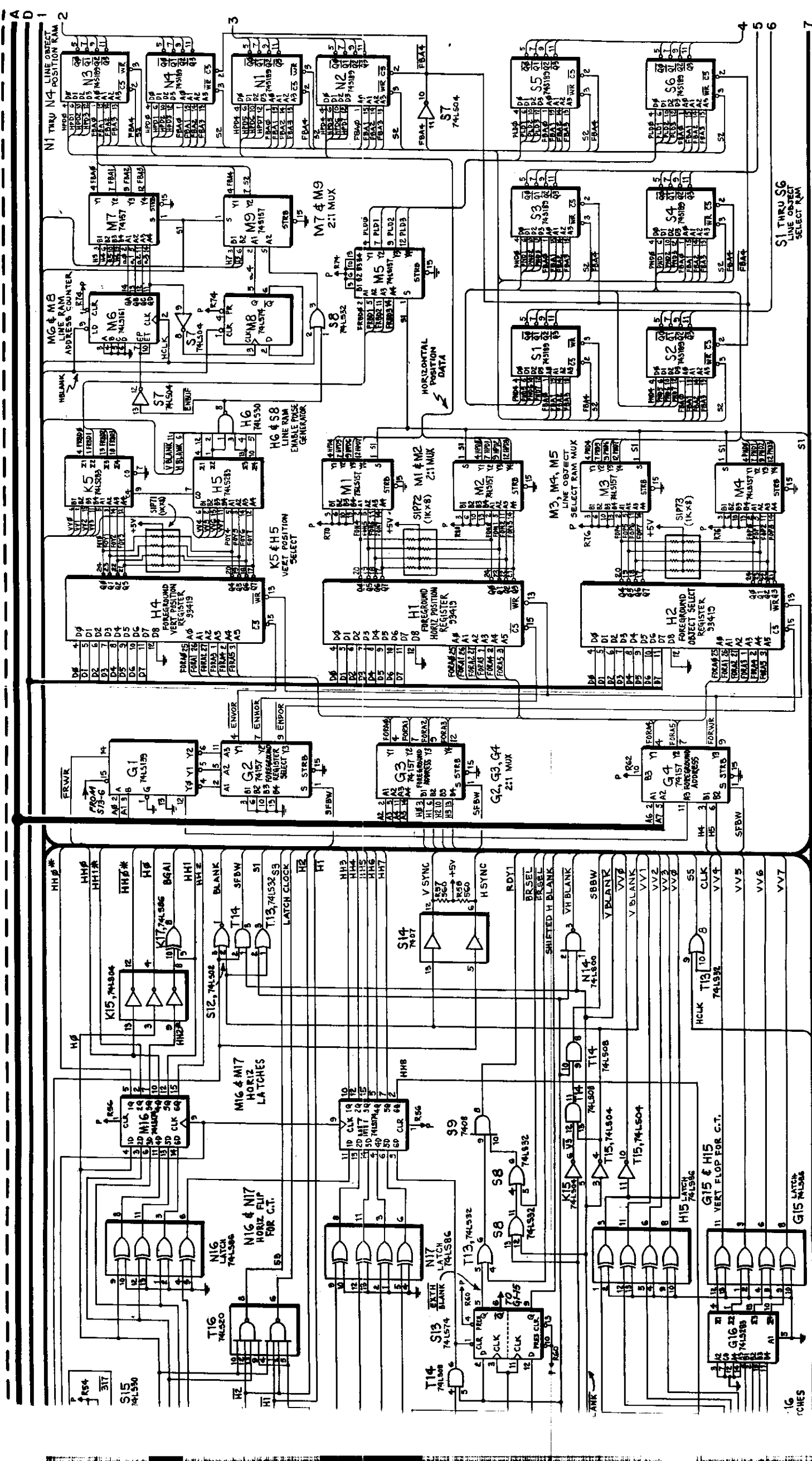
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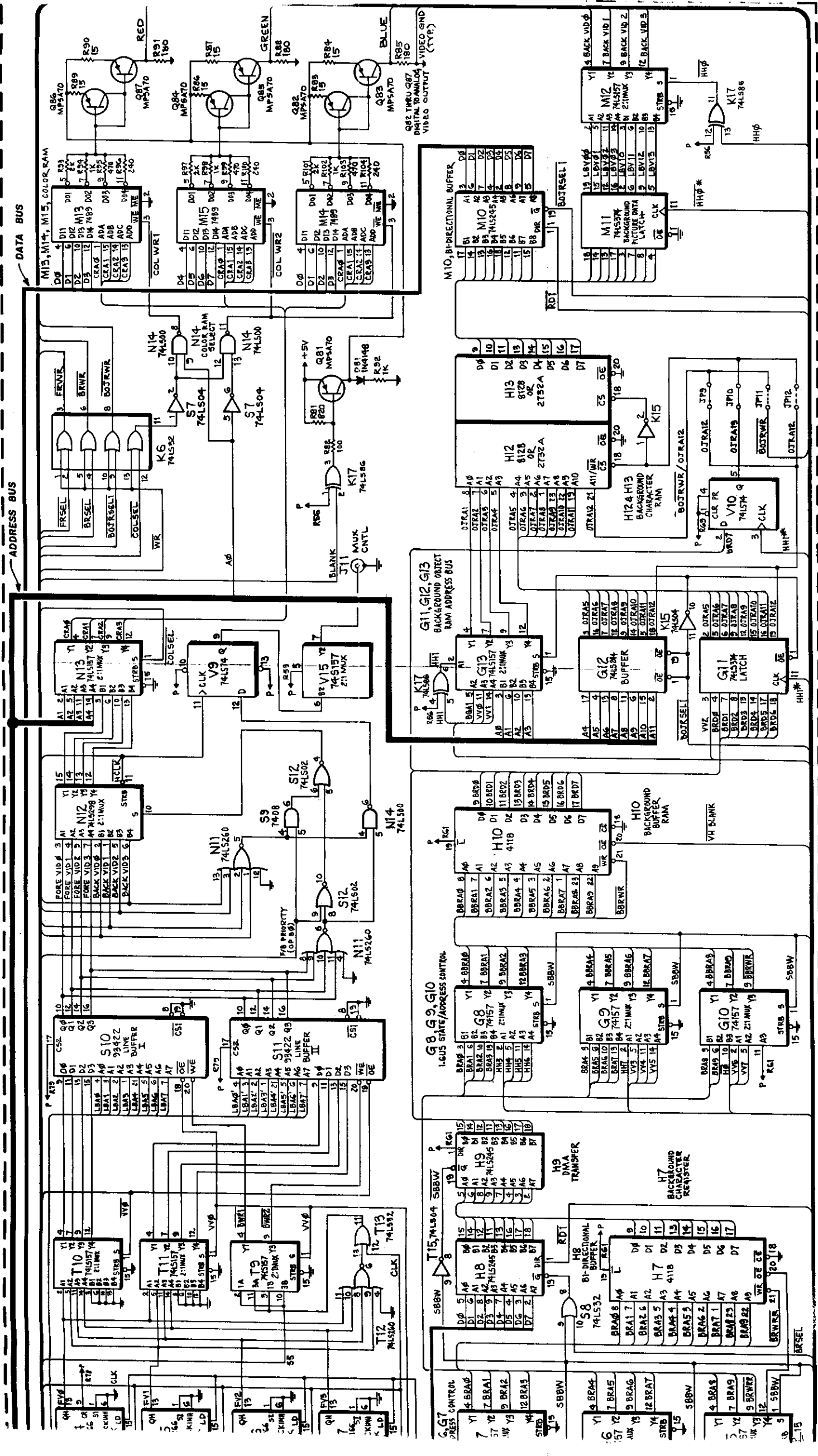
X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS





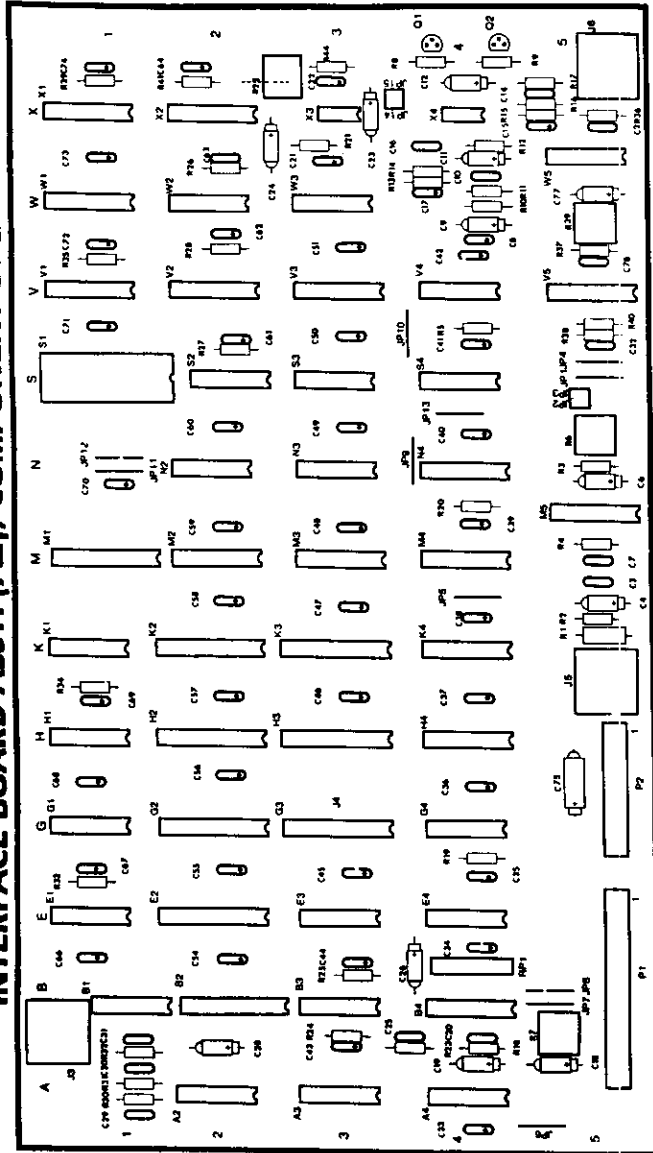


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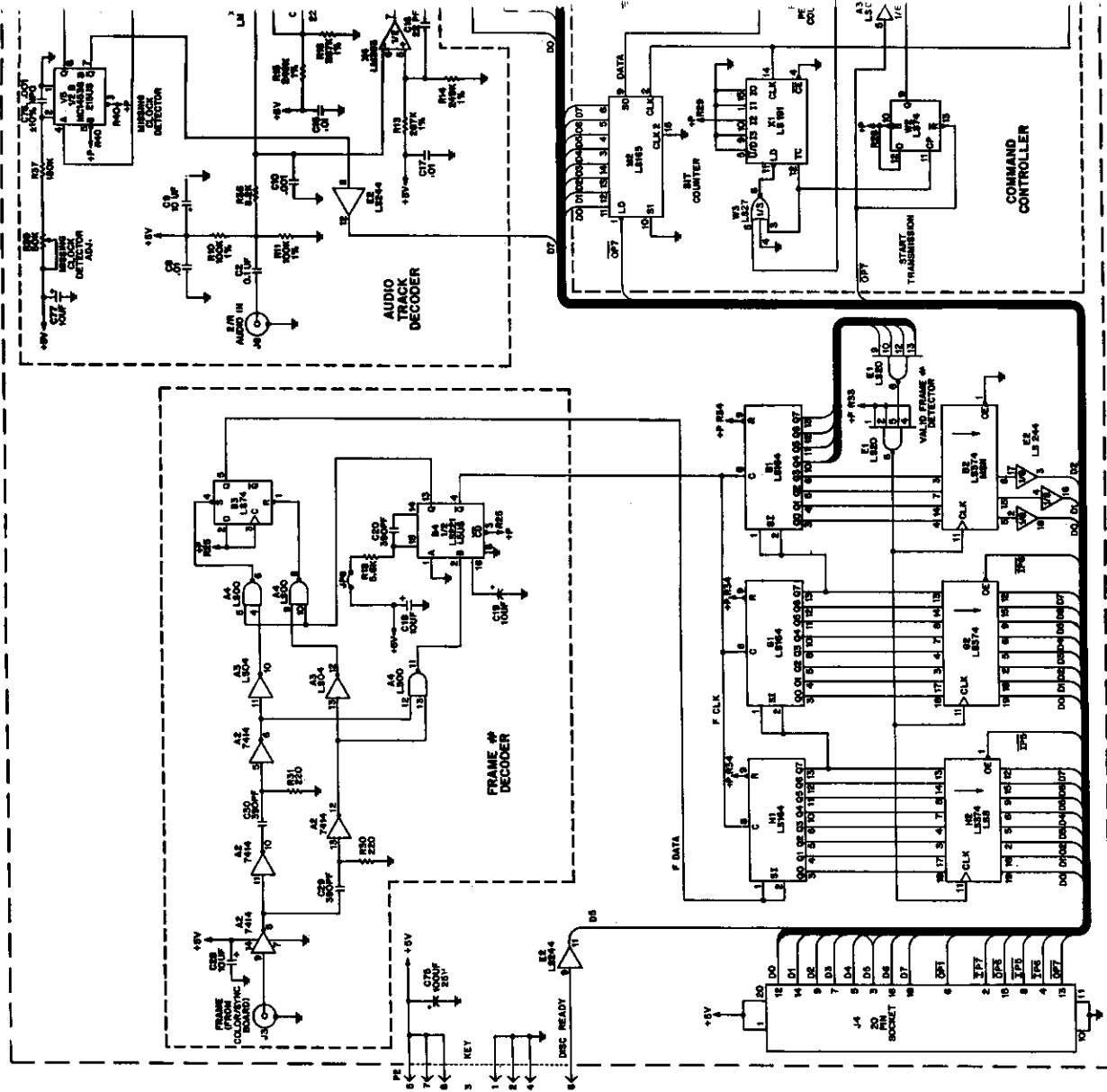
X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

INTERFACE BOARD ASSY. (A2). COMPONENT LOCATION



INTERFACE BOARD ASSY. (A2), PARTS LIST

REFERENCE	DESCRIPTION	PART NO.	REFERENCE	DESCRIPTION	PART NO.
	Interface Board Assy	NO-499		Resistor, 5.6K OHM, 5% W/V	NO-19
C2	Capacitor, 0.1UF, 50V, C-MAX	NO-320	R16	Resistor, 2.2K OHM, 5% W/V	NO-27
C3	Capacitor, 0.1UF, 50V, C-MAX	NO-320	R17	Resistor, 2.2K OHM, 5% W/V	NO-27
C4	Capacitor, 0.1UF, 50V, C-MAX	NO-320	R18	Potentiometer, 10K OHM, 10% W/V	NO-608
C5	Capacitor, 0.01UF, 50V, NPO	NO-757	R19	Resistor, 6.2K OHM, 5% W/V	NO-609
C6	C-MAX, 10%		R20	Resistor, 220 OHM, 5% W/V	NO-610
C7	Capacitor, 0.1UF, 50V, C-MAX	NO-320	R21	Resistor, 2.2K OHM, 5% W/V	NO-27
C8	Capacitor, 0.1UF, 50V, C-MAX	NO-320	R22	Resistor, 2.2K OHM, 5% W/V	NO-27
C9	Capacitor, 0.1UF, 50V, C-MAX	NO-320	R23	Resistor, 180K OHM, 5% W/V	NO-589
C10	Capacitor, 0.01UF, 50V, C-MAX	NO-695	R24	Resistor, 180K OHM, 5% W/V	NO-589
C11	Capacitor, 0.01UF, 50V, C-MAX	NO-695	R25	Resistor, 2.2K OHM, 5% W/V	NO-27
C12	Capacitor, 0.01UF, 50V, C-MAX	NO-695	R26	Resistor, 2.2K OHM, 5% W/V	NO-27
C13	Capacitor, 0.01UF, 50V, C-MAX	NO-695	R27	Potentiometer, 50K OHM, 10% W/V	NO-675
C14	Capacitor, 0.01UF, 50V, C-MAX	NO-695	R28	Resistor, 2.2K OHM, 5% W/V	NO-27
C15	Capacitor, 0.01UF, 50V, C-MAX	NO-695	R29	Resistor, 2.2K OHM, 5% W/V	NO-27
C16	Capacitor, 0.01UF, 50V, C-MAX	NO-695	R30	24 Pin DIP Socket	NO-397
C17	Capacitor, 0.01UF, 50V, C-MAX	NO-695	R31	74LS04 Hex inverter	NO-418
C18	Capacitor, 0.01UF, 50V, C-MAX	NO-695	A2	74LS04 Dual 2-input "NAND" gate	NO-427
C19	Capacitor, 0.01UF, 50V, C-MAX	NO-695	A3	74LS04 Dual 2-input "NAND" gate	NO-427
C20	Capacitor, 0.01UF, 50V, C-MAX	NO-695	A4	74LS04 8-bit SPO shift register	NO-441
C21	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B1	74LS174 Octal D-type flip flop	NO-442
C22	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B2	74LS174 Octal D-type flip flop	NO-442
C23	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B3	74LS174 Octal D-type flip flop	NO-442
C24	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B4	74LS174 Octal D-type flip flop	NO-442
C25	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B5	74LS174 Octal D-type flip flop	NO-442
C26	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B6	74LS174 Octal D-type flip flop	NO-442
C27	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B7	74LS174 Octal D-type flip flop	NO-442
C28	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B8	74LS174 Octal D-type flip flop	NO-442
C29	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B9	74LS174 Octal D-type flip flop	NO-442
C30	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B10	74LS174 Octal D-type flip flop	NO-442
C31	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B11	74LS174 Octal D-type flip flop	NO-442
C32	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B12	74LS174 Octal D-type flip flop	NO-442
C33	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B13	74LS174 Octal D-type flip flop	NO-442
C34	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B14	74LS174 Octal D-type flip flop	NO-442
C35	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B15	74LS174 Octal D-type flip flop	NO-442
C36	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B16	74LS174 Octal D-type flip flop	NO-442
C37	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B17	74LS174 Octal D-type flip flop	NO-442
C38	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B18	74LS174 Octal D-type flip flop	NO-442
C39	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B19	74LS174 Octal D-type flip flop	NO-442
C40	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B20	74LS174 Octal D-type flip flop	NO-442
C41	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B21	74LS174 Octal D-type flip flop	NO-442
C42	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B22	74LS174 Octal D-type flip flop	NO-442
C43	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B23	74LS174 Octal D-type flip flop	NO-442
C44	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B24	74LS174 Octal D-type flip flop	NO-442
C45	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B25	74LS174 Octal D-type flip flop	NO-442
C46	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B26	74LS174 Octal D-type flip flop	NO-442
C47	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B27	74LS174 Octal D-type flip flop	NO-442
C48	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B28	74LS174 Octal D-type flip flop	NO-442
C49	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B29	74LS174 Octal D-type flip flop	NO-442
C50	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B30	74LS174 Octal D-type flip flop	NO-442
C51	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B31	74LS174 Octal D-type flip flop	NO-442
C52	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B32	74LS174 Octal D-type flip flop	NO-442
C53	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B33	74LS174 Octal D-type flip flop	NO-442
C54	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B34	74LS174 Octal D-type flip flop	NO-442
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C58	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B38	74LS174 Octal D-type flip flop	NO-442
C59	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B39	74LS174 Octal D-type flip flop	NO-442
C60	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B40	74LS174 Octal D-type flip flop	NO-442
C61	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B41	74LS174 Octal D-type flip flop	NO-442
C62	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B42	74LS174 Octal D-type flip flop	NO-442
C63	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B43	74LS174 Octal D-type flip flop	NO-442
C64	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B44	74LS174 Octal D-type flip flop	NO-442
C65	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B45	74LS174 Octal D-type flip flop	NO-442
C66	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B46	74LS174 Octal D-type flip flop	NO-442
C67	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B47	74LS174 Octal D-type flip flop	NO-442
C68	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B48	74LS174 Octal D-type flip flop	NO-442
C69	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B49	74LS174 Octal D-type flip flop	NO-442
C70	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B50	74LS174 Octal D-type flip flop	NO-442
C71	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B51	74LS174 Octal D-type flip flop	NO-442
C72	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B52	74LS174 Octal D-type flip flop	NO-442
C73	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B53	74LS174 Octal D-type flip flop	NO-442
C74	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B54	74LS174 Octal D-type flip flop	NO-442
C75	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B55	74LS174 Octal D-type flip flop	NO-442
C76	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B56	74LS174 Octal D-type flip flop	NO-442
C77	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B57	74LS174 Octal D-type flip flop	NO-442
C78	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B58	74LS174 Octal D-type flip flop	NO-442
C79	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B59	74LS174 Octal D-type flip flop	NO-442
C80	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B60	74LS174 Octal D-type flip flop	NO-442
C81	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B61	74LS174 Octal D-type flip flop	NO-442
C82	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B62	74LS174 Octal D-type flip flop	NO-442
C83	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B63	74LS174 Octal D-type flip flop	NO-442
C84	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B64	74LS174 Octal D-type flip flop	NO-442
C85	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B65	74LS174 Octal D-type flip flop	NO-442
C86	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B66	74LS174 Octal D-type flip flop	NO-442
C87	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B67	74LS174 Octal D-type flip flop	NO-442
C88	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B68	74LS174 Octal D-type flip flop	NO-442
C89	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B69	74LS174 Octal D-type flip flop	NO-442
C90	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B70	74LS174 Octal D-type flip flop	NO-442
C91	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B71	74LS174 Octal D-type flip flop	NO-442
C92	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B72	74LS174 Octal D-type flip flop	NO-442
C93	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B73	74LS174 Octal D-type flip flop	NO-442
C94	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B74	74LS174 Octal D-type flip flop	NO-442
C95	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B75	74LS174 Octal D-type flip flop	NO-442
C96	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B76	74LS174 Octal D-type flip flop	NO-442
C97	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B77	74LS174 Octal D-type flip flop	NO-442
C98	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B78	74LS174 Octal D-type flip flop	NO-442
C99	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B79	74LS174 Octal D-type flip flop	NO-442
C100	Capacitor, 0.01UF, 50V, C-MAX	NO-695	B80	74LS174 Octal D-type flip flop	NO-442



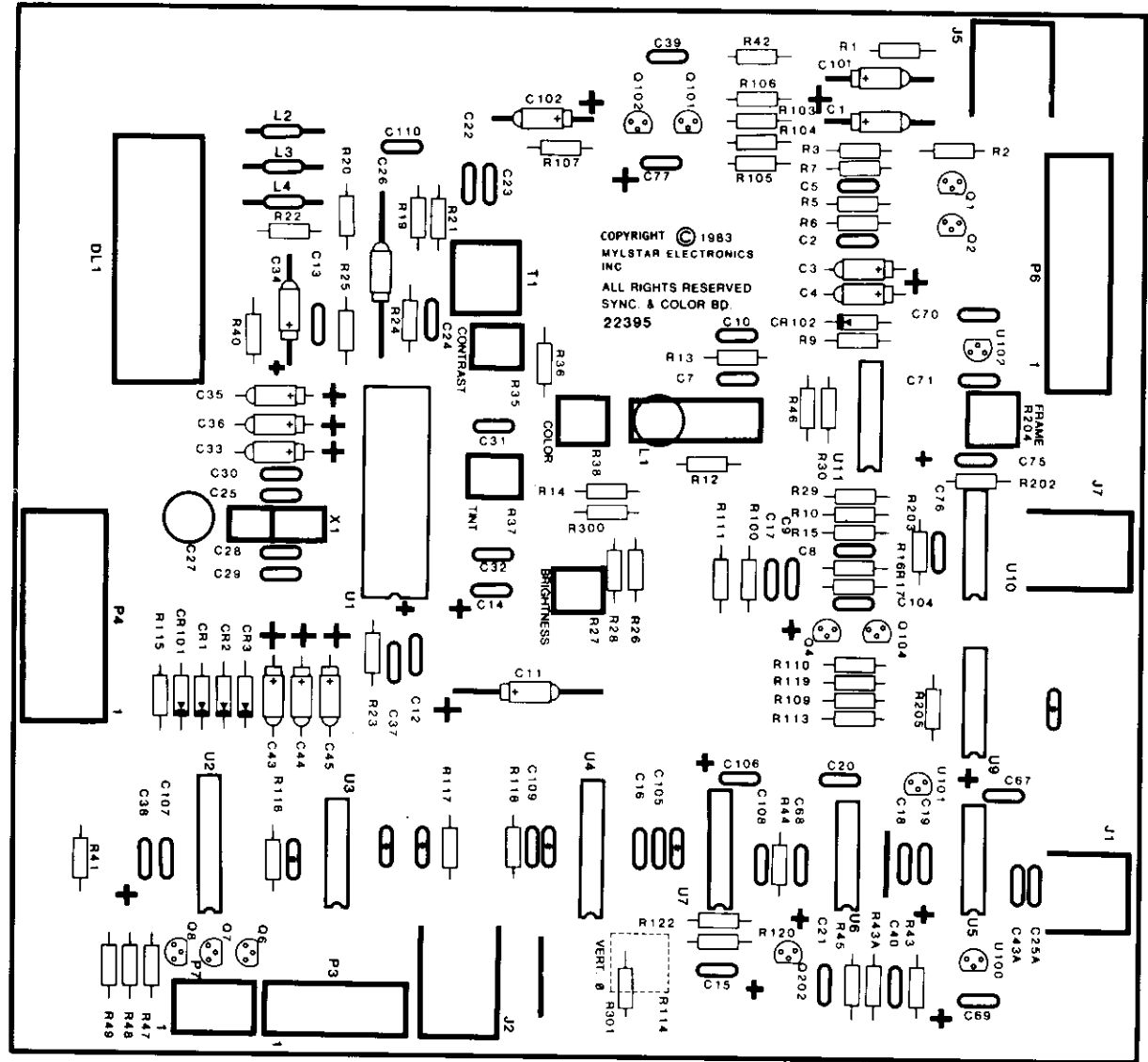


NOTES:

1. ALL CHIPS SHOULD BE BYPASSED WITH A .01 AXIAL CAP.
2. *P DENOTES ROUTING TO PULL-UP RESISTORS.

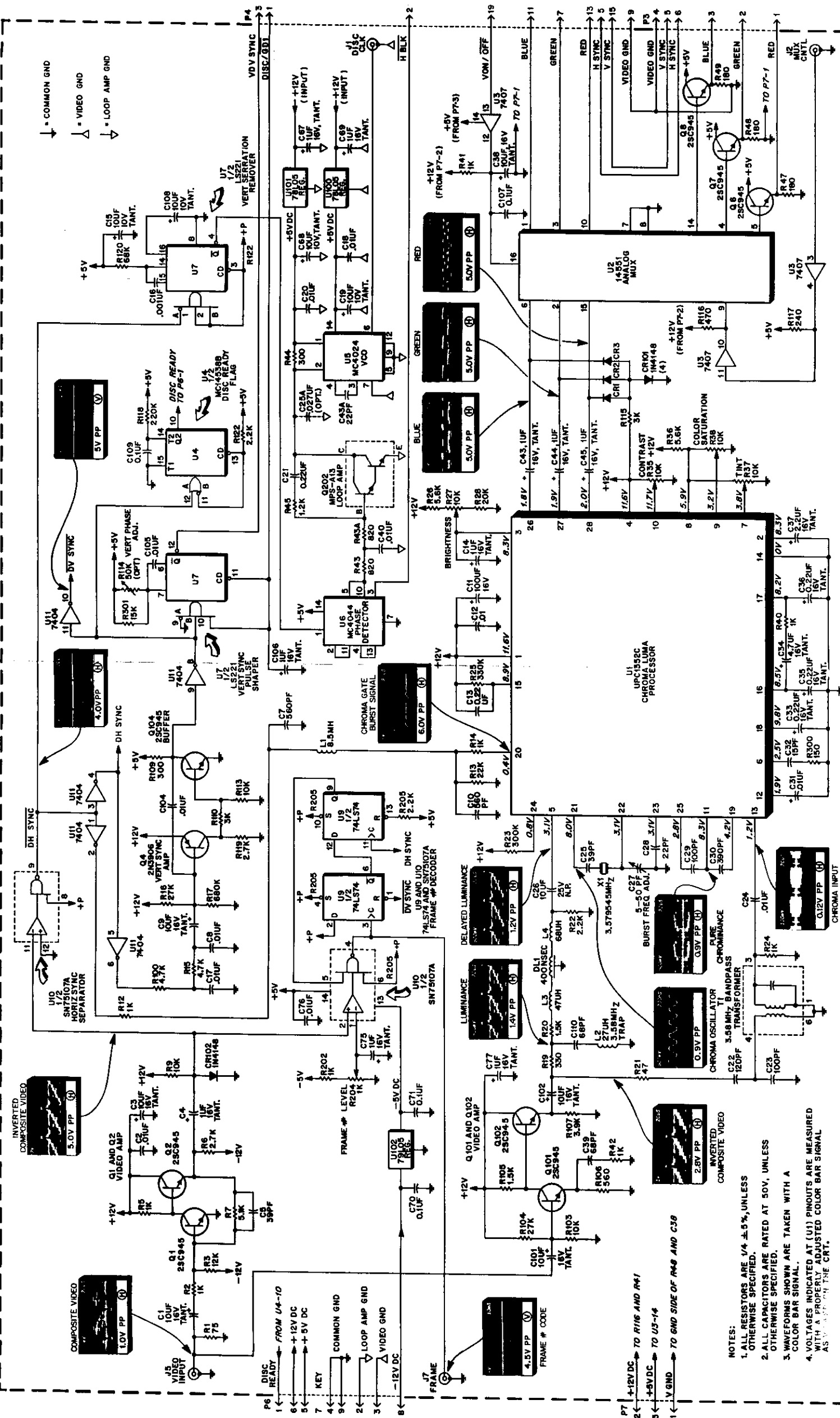
X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

COLOR/SYNC BOARD ASSY. (A18), COMPONENT LOCATION



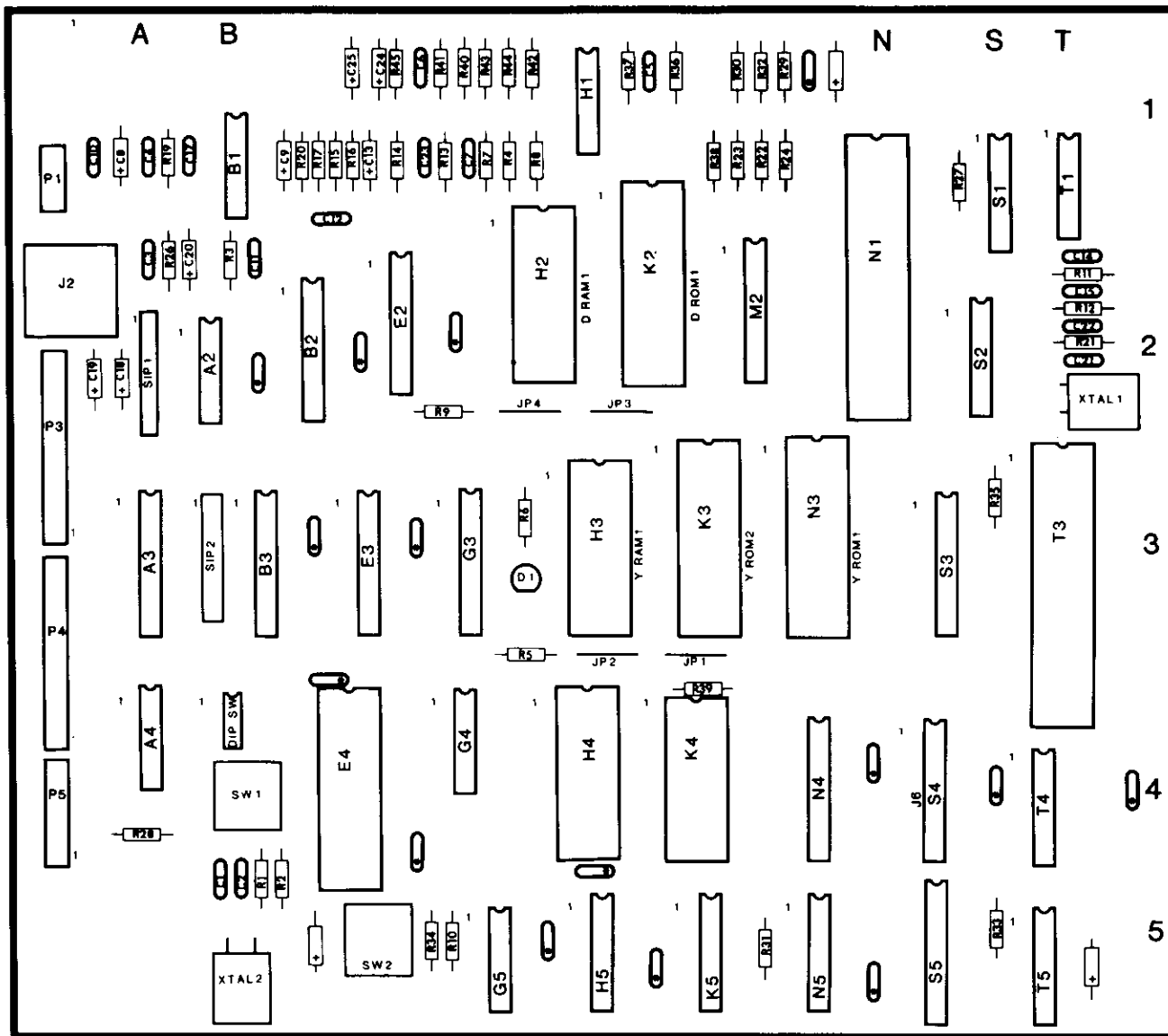
COLOR/SYNC BOARD ASSY. (A18), PARTS LIST

REFERENCE	DESCRIPTION	PART NO.	REFERENCE	DESCRIPTION	PART NO.	REFERENCE	DESCRIPTION	PART NO.
C1, C3, C9, C38, C101, C102	Color/Sync Board Assy.	MA-497	CR1, CR2, CR3, CR101, CR102	Diode, 1N4148	XO-261	R27, R35, R37, R38	Potentiometer, 10K OHM, 5% 1/4W	XO-674
C2, C8, C12, C17, C18, C20, C24, C31, C40, C76, C104, C105	Capacitor, .01UF, 50V AX-CR, +80%-20%	XO-229	DL1	Delay Line, 400NS	XO-654	R28	Resistor, 20K OHM, 5% 1/4W	XO-41
C4, C14, C43-C45, C67, C69, C75, C77, C106	Capacitor, 1UF, 16V TANT-AX, 20%	XO-753	J1, J2, J5, J7	Phono Jack, Right Angle	XO-618	R43, R43A, R44, R109	Resistor, 820 OHM, 5% 1/4W	XO-174
C5, C25	Capacitor, 39PF, 50V CM-AX	XO-334	L1	RF Choke, 8.5 MH	XO-659	R45	Resistor, 300 OHM, 5% 1/4W	XO-671
C7, C10	Capacitor, 560PF, 50V CM-AX, 10%	XO-681	L2	Inductor, 27UH, 10%	XO-658	R47, R48, R49	Resistor, 1.2K OHM, 5% 1/4W	XO-175
C11	Capacitor, 100UF, 16V ELEC-AX	XO-755	L3	Inductor, 47UH, 10%	XO-657	R106	Resistor, 180 OHM, 5% 1/4W	XO-24
C13, C21	Capacitor, .22UF, 50V CM-AX, 20%	XO-688	L4	Inductor, 68UH, 10%	XO-656	R107	Resistor, 560 OHM, 5% 1/4W	XO-36
C15, C19, C68, C108	Capacitor, 10UF, 10V TANT-AX, 10%	XO-209	P3	6 Pin Wafer Conn.	XO-373	R110, R115	Resistor, 3.9K OHM, 5% 1/4W	XO-39
C16	Capacitor, .001UF, 50V NPO CM-AX, 10%	XO-757	P4	Header Conn., 26 Pin	XO-651	R112, R116	Resistor, 3K OHM, 5% 1/4W	XO-23
C22	Capacitor, 120PF, 50V CM-AX, 10%	XO-682	P6	9 Pin Wafer Conn.	XO-375	R117	Resistor, 470 OHM, 5% 1/4W	XO-35
C23, C29	Capacitor, 100PF, 50V CM-AX, 10%	XO-680	P7	3 Pin Wafer Conn.	XO-703	R118	Resistor, 240 OHM, 5% 1/4W	XO-173
C26	Capacitor, 10UF, 25V AX-Non Polarized	XO-750	Q1, Q2, Q6, Q7, Q8, Q101, Q102, Q104	Transistor, 2SC945, NPN	XO-316	R120	Resistor, 220K OHM, 5% 1/4W	XO-594
C27	Capacitor, Trimmer, 5-50PF CM	XO-653	Q4	Transistor, 2N3906, PNP	XO-588	R120	Resistor, 68K OHM, 5% 1/4W	XO-189
C28, C43A	Capacitor, 22PF, 50V CM-AX, 10%	XO-683	Q202	Transistor, MPS-A13, NPN	XO-304	R204	Potentiometer, 1K OHM, 10% 1/4W	XO-756
C30	Capacitor, 390PF, 50V CM-AX, 10%	XO-684	R1	Resistor, 75 OHM, 5% 1/4W	XO-667	R300	Resistor, 150 OHM, 5% 1/4W	XO-574
C32	Capacitor, 15PF, 50V CM-AX, 10%	XO-685	R2, R5, R12, R14, R24, R41, R42, R202	Resistor, 1K OHM, 5% 1/4W	XO-5	R301	Resistor, 15K OHM, 5% 1/4W	XO-22
C33, C35, C36	Capacitor, 22UF, 16V TANT-AX, 20%	XO-752	R3	Resistor, 12K OHM, 5% 1/4W	XO-9	T1	Transformer, 3.58 MHz Bandpass	XO-655
C34	Capacitor, 4.7UF, 16V TANT-AX	XO-754	R6, R119	Resistor, 2.7K OHM, 5% 1/4W	XO-6	U1	UPC1352C Chrominance and Luminance processor	XO-650
C37	Capacitor, 2.2UF, 16V TANT-AX, 20%	XO-751	R7	Resistor, 5.1K OHM, 5% 1/4W	XO-40	U2	MC14551 Quad 2-input multiplexor	XO-660
C39, C110	Capacitor, 68PF, 50V CM-AX, 10%	XO-636	R9, R103, R113	Resistor, 10K OHM, 5% 1/4W	XO-18	U3	7407 Hex buffer/driver	XO-384
C70, C71, C107, C109	Capacitor, 0.1UF, 50V CM-Bypass	XO-558	R13	Resistor, 22K OHM, 5% 1/4W	XO-42	U4	MC14538B Monostable multivibrator	XO-564
			R15, R100	Resistor, 4.7K OHM, 5% 1/4W	XO-7	U5	MC4024 Dual voltage controlled multivibrator	XO-446
			R16, R104	Resistor, 27K OHM, 5% 1/4W	XO-11	U6	MC4044 Phase-frequency detector	XO-447
			R17	Resistor, 680K OHM, 5% 1/4W	XO-669	U7	74LS221 Dual Monostable multivibrator	XO-666
			R19	Resistor, 330 OHM, 5% 1/4W	XO-34	U9	74LS74 Dual D-type flip flop	XO-434
			R20, R105	Resistor, 15K OHM, 5% 1/4W	XO-20	U10	75107A Dual line receivers/drivers	XO-664
			R21	Resistor, 47 OHM, 5% 1/4W	XO-50	U11	7404 Hex inverter	XO-402
			R22, R122, R205	Resistor, 2.2K OHM, 5% 1/4W	XO-27	U100, U101	78L05 Positive 5VDC regulator	XO-662
			R23	Resistor, 300K OHM, 5% 1/4W	XO-670	U102	79L05 Negative 5VDC regulator	XO-661
			R25	Resistor, 330K OHM, 5% 1/4W	XO-47	X1	Crystal, 3.579 MHz	XO-456
			R26, R36	Resistor, 5.6K OHM, 5% 1/4W	XO-19		28 Pin DIP Socket	XO-536



X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

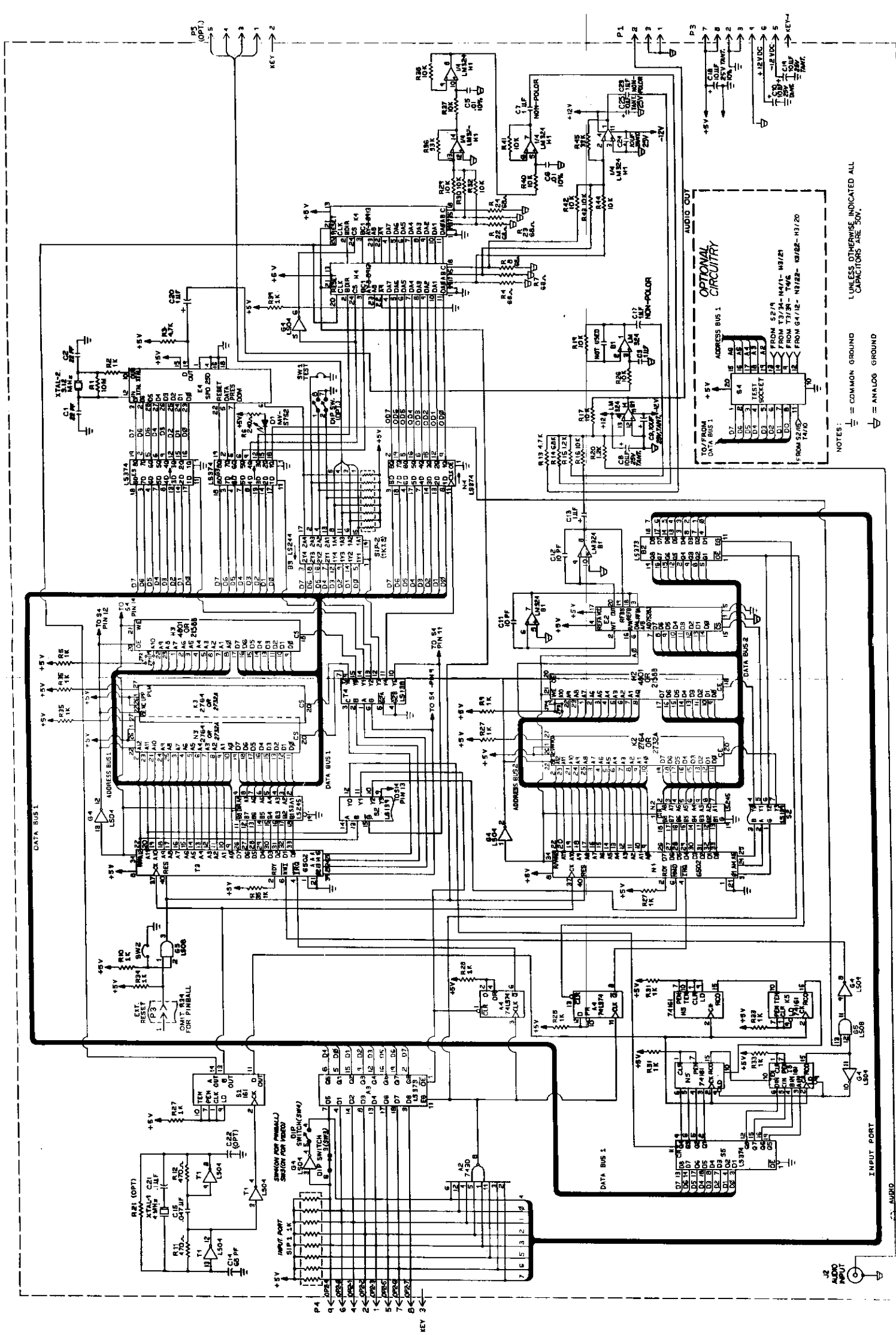
SOUND BOARD (A6) COMPONENT LOCATION



SOUND BOARD (A6) PARTS LIST

REFERENCE	DESCRIPTION	PART NO.	REFERENCE	DESCRIPTION	PART NO.
C1, C2	Sound Board Assy.	MA-495	R6	Resistor, 240 OHM, 5% 1/4W	XO-173
	Capacitor, 22PF, 50V MONO	XO-633	R11, R12	Resistor, 470 OHM, 5% 1/4W	XO-35
C3, C21	Capacitor, 0.1UF, 50V MONO	XO-637	R14	Resistor, 6.8K OHM, 5% 1/4W	XO-8
C5, C6	Capacitor, 0.1UF, 50V MONO	XO-747	R15, R20	Resistor, 1.2K OHM, 5% 1/4W	XO-175
	AX-GL, 10%		R16, R17, R19,	Resistor, 10K OHM, 5% 1/4W	XO-18
C7, C17, C23	Capacitor, 1UF, 50V CM-RD	XO-294	R26, R29, R30,		
	Non-Polarized		R32, R37, R38,		
C8, C9, C10	Capacitor, 10UF, 25V	XO-127	R40-R44		
C18, C19, C24,	TANT-AX, 10%		R36, R45	Resistor, 33K OHM, 5% 1/4W	XO-43
C25			SIP1, SIP2	Resistor Pack, Sip, 1K OHM, 9 Pin	XO-493
C11	Capacitor, 10PF, 50V AX-CM,	XO-635	SW1, SW2	Switch, Push Button, N.O.	XO-365
	+80%-20%		XTAL1	Crystal, 4.0 MHz	XO-366
C13, C20	Capacitor, 1UF, 50V TANT-AX	XO-217	XTAL2	Crystal, 3.12 MHz	XO-639
C14	Capacitor, 68PF, 50V MONO	XO-636		24 Pin DIP Socket	XO-529
	AX-CM, 10%			28 Pin DIP Socket	XO-536
C15	Capacitor, 0.47UF, 50V MONO	XO-638		40 Pin DIP Socket	XO-530
	AX-CM, 20%		A2	7430 8-input "NAND" gate	XO-643
ALL UNMARKED	0.1UF, 50V CM-AX	XO-230	A3, B2	74LS373 Octal D-type flip flop	XO-445
CAPACITORS			A4	74LS74 Dual D-type flip flop	XO-434
ALL UNMARKED	10UF, 25V TANT-AX, 10%	XO-127	B1, H1	LM324 Quad op-amp	XO-644
POLARIZED			B3	74LS244 Octal buffer/	XO-117
CAPACITORS				line driver	
D1	Diode, MV5752	XO-270	E2	AD7528J DAC	XO-674
DIP SW	DIP Switch, 4 Position, 8 Pin	XO-640	E3, G3, N4, S5	74LS374 Octal D-type flip flop	XO-96
J2	Phone Jack	XO-744	E4	SPD250 Speech generator	XO-645
P1	3 Pin Wafer Conn.	XO-703	G4, T1	74LS04 Hex inverter	XO-418
P3, P4	9 Pin Wafer Conn.	XO-375	G5	74LS08 Quad 2-input "AND" gate	XO-86
R1	Resistor, 10M OHM, 5% 1/4W	XO-73	H2, H3	4801 1K x 8 SRAM	XO-193
R2, R5, R9,	Resistor, 1K OHM, 5% 1/4W	XO-5	H4, K4	AY-3-8913 Sound generator	XO-646
R10, R27, R28, R31,			H5, K5, N5,	74161 Synchronous presettable	XO-192
R33-R35, R39,			S1, T5	binary counter	
R3, R13	Resistor, 4.7K OHM, 5% 1/4W	XO-7	K2, K3, N3	2732A 4K x 8 EPROM	XO-485
R4, R7, R8,	Resistor, 68 OHM, 5% 1/4W	XO-74H	N1, T3	R6502-13 CPU	XO-360
R22-R24			N2, S3	74LS245 Octal bus transceiver	XO-79
			S2	74LS139 Dual 1 of 4 decoder	XO-419
			T4	74LS138 1 of 8 decoder/	XO-437
				demultiplexer	

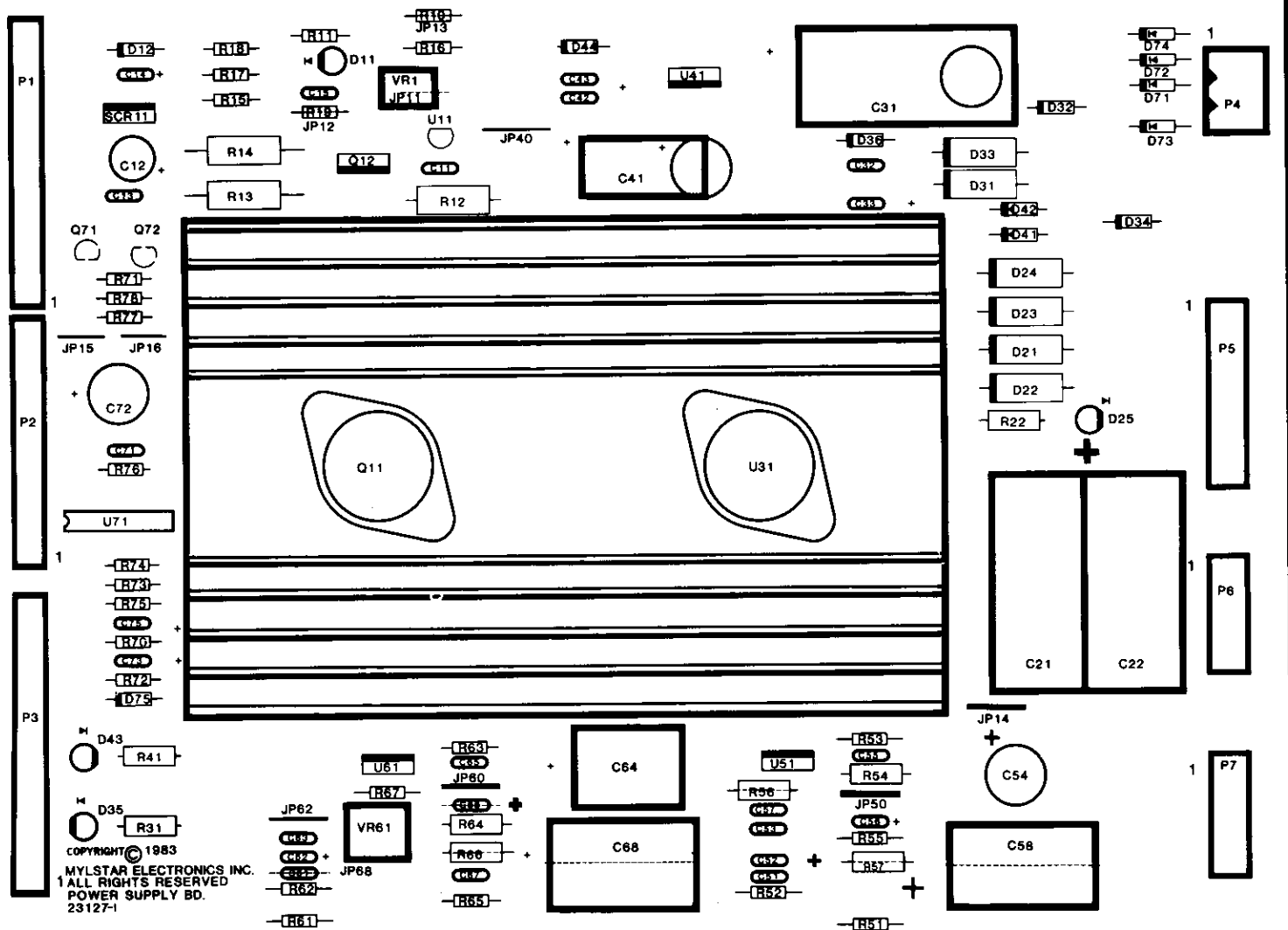
X- WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS



SOUND BOARD ASSY. (A6), SCHEMATIC DIAGRAM

X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

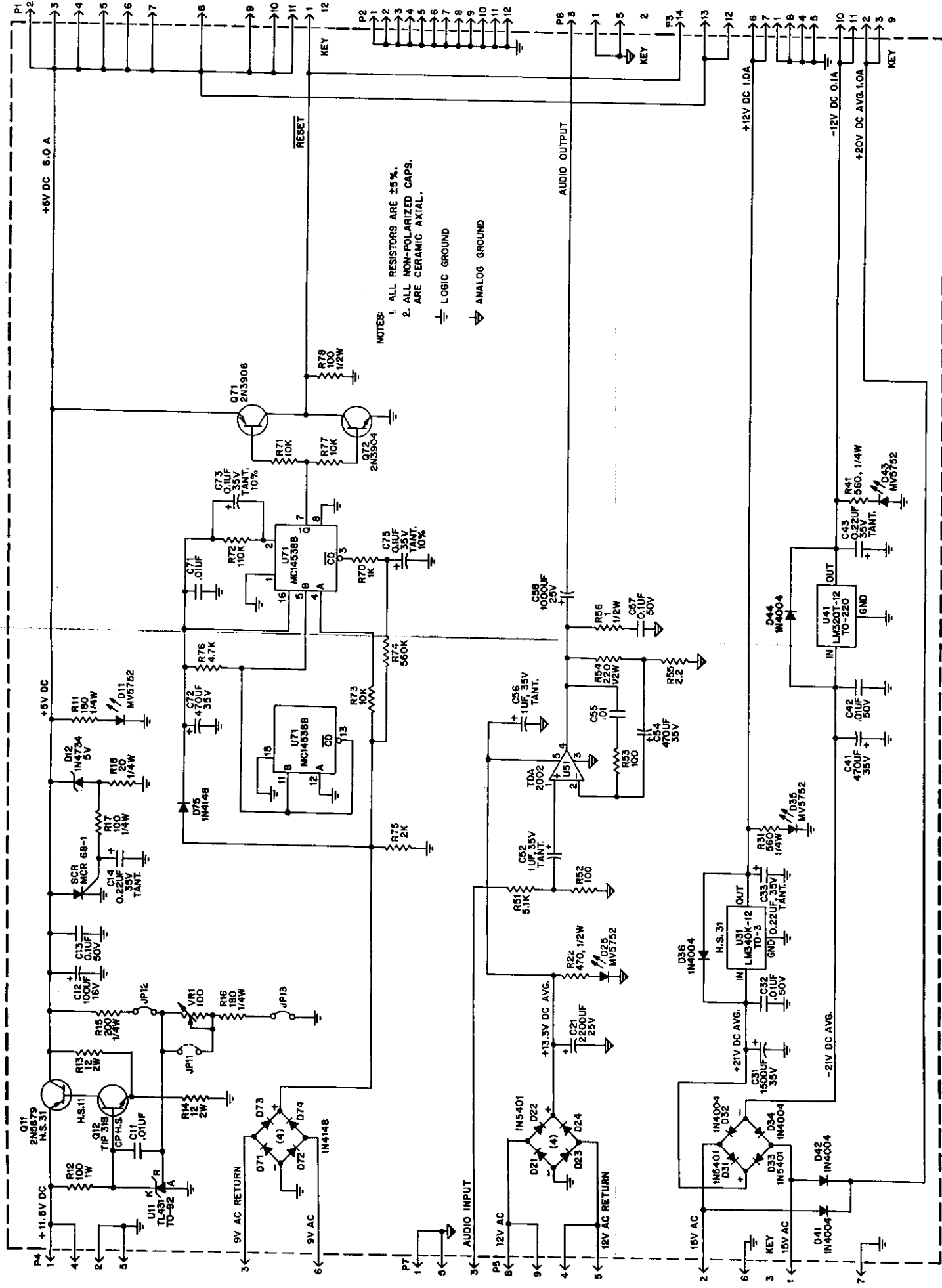
POWER SUPPLY ASSY. (A3), COMPONENT LOCATION



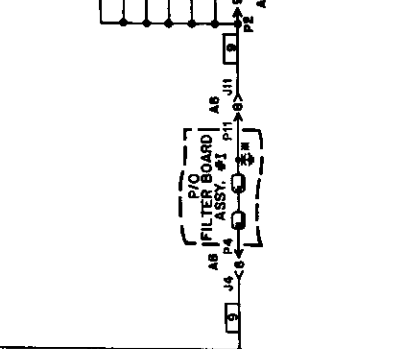
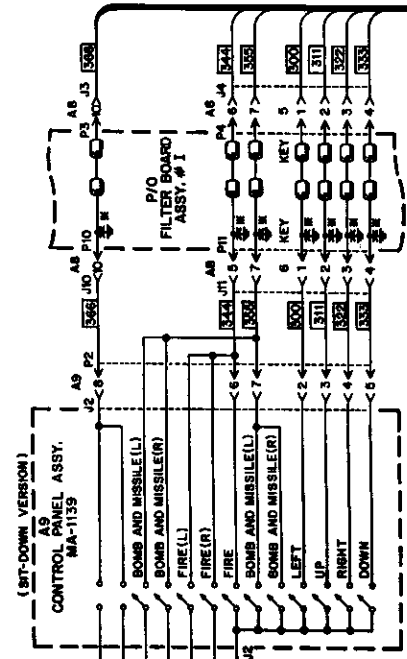
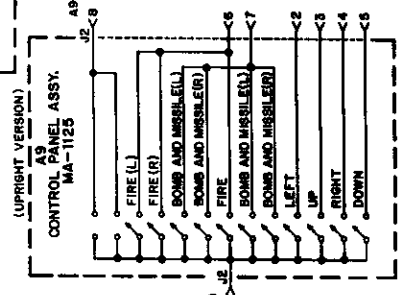
POWER SUPPLY ASSY. (A3), PARTS LIST

REFERENCE	DESCRIPTION	PART NO.	REFERENCE	DESCRIPTION	PART NO.
C11, C32, C42, C55, C71	Power Supply Assembly	MA-479	R12	Resistor, 100 OHM, 5%, 1W	XO-137
C12	Capacitor, .01UF, 50V	XO-229	R13, R14	Resistor, 12 OHM, 5%, 3W	XO-138
C13, C57	Capacitor, 100UF, 16V	XO-235	R15	Resistor, 200 OHM, 5%, 1/4W	XO-143
C14, C33, C43	Capacitor, .22UF, 35V	XO-558	R17, R52, R53	Resistor, 100 OHM, 5%, 1/4W	XO-28
C21	Capacitor, 2200UF, 25V	XO-346	R18	Resistor, 20 OHM, 5%, 1/4W	XO-29
C31	Capacitor, 1500UF, 35V	XO-616	R22	Resistor, 470 OHM, 5%, 1/2W	XO-55
C41, C54, C72	Capacitor, 470UF, 35V	XO-284	R31, R41	Resistor, 560 OHM, 5%, 1/4W	XO-36
C52, C56	Capacitor, 1UF, 35V	XO-715	R51	Resistor, 51.1K OHM, 5%, 1/4W	XO-40
C58	Capacitor, 1000UF, 25V	XO-218	R54	Resistor, 220 OHM, 5%, 1/2W	XO-185
C73, C75	Capacitor, .1UF, 35V	XO-614	R55	Resistor, 2.2 OHM, 5%, 1/4W	XO-595
D11, D25, D35, D43	Diode, Light Emitting MV-5752	XO-270	R56	Resistor, 1 OHM, 5%, 1/2W	XO-593
D12	Diode, Zener, 5.6V, 1N4734A	XO-255	R70	Resistor, 1K OHM, 5%, 1/4W	XO-5
D21-D24, D31, D33	Diode, 1N5401	XO-263	R71, R73, R77	Resistor, 10K OHM, 5%, 1/4W	XO-18
D32, D34, D36, D41, D42, D44	Diode, 1N4004	XO-254	R72	Resistor, 110K OHM, 5%, 1/4W	XO-591
D71-D75	Diode, 1N4148	XO-261	R74	Resistor, 560K OHM, 5%, 1/4W	XO-704
Q11	Transistor, PNP, 2N5879	XO-323	R75	Resistor, 2K OHM, 5%, 1/4W	XO-14
Q12	Transistor, TIP31B	XO-641	R76	Resistor, 4.7K OHM, 5%, 1/4W	XO-7
Q71	Transistor, PNP, 2N3906	XO-588	R78	Resistor, 100 OHM, 5%, 1/2W	XO-52
Q72	Transistor, NPN, 2N3904	XO-549	SCR68-1	Silicon Controlled Rectifier	XO-131
R11, R16	Resistor, 180 OHM, 5%, 1/4W	XO-24	U11	Voltage Regulator, Zener TL431	XO-272
			U31	Voltage Regulator, -12V, LM340K	XO-628
			U41	Voltage Regulator, -12V, LM320T	XO-613
			U51	Audio Amplifier, LM200T	XO-550
			U71	IC, CMOS	XO-564
			VR1	Potentiometer, 100 OHM	XO-134

X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS



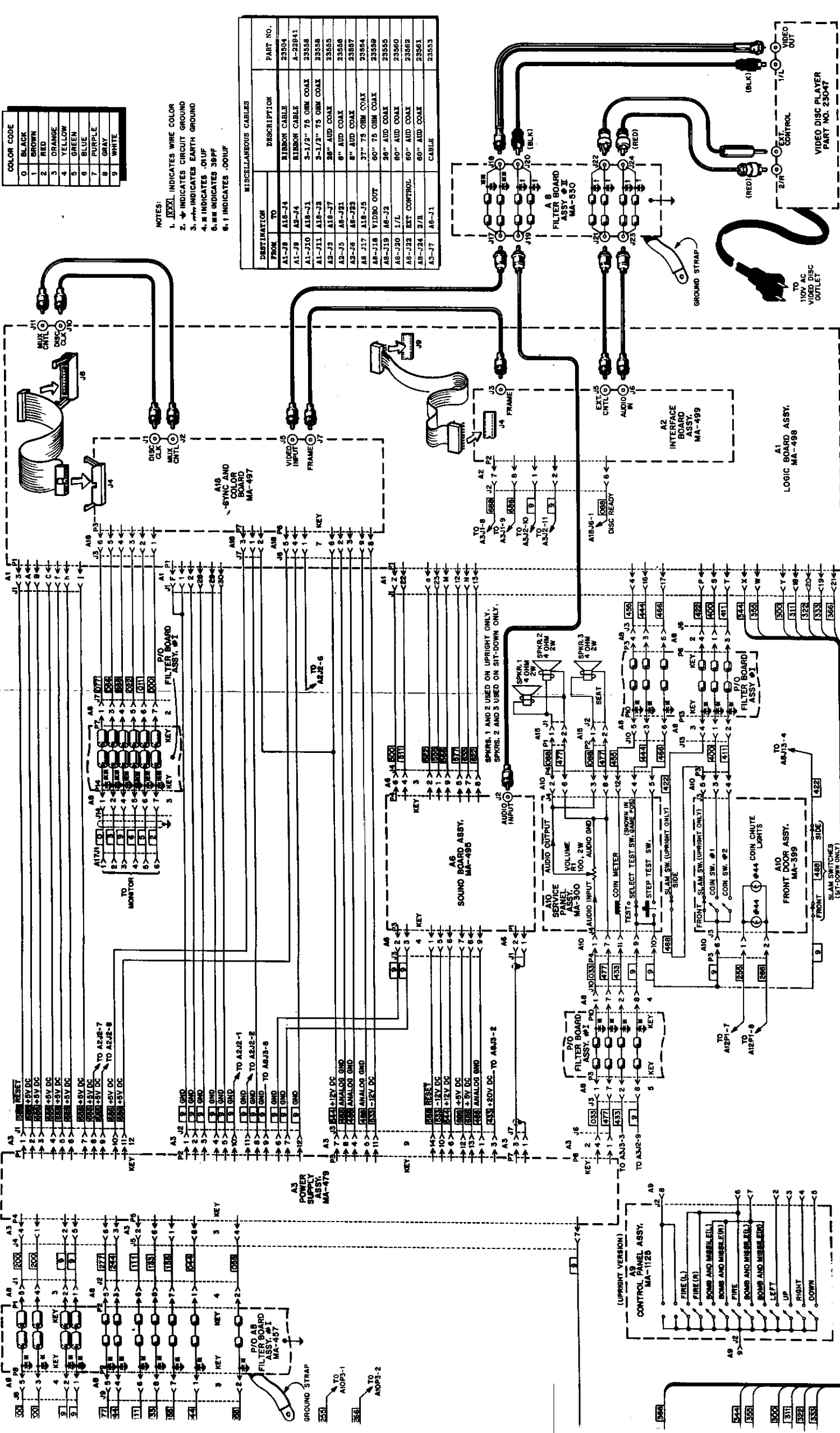
POWER SUPPLY ASSY. (A3), SCHEMATIC DIAGRAM



COLOR CODE	
0	BLACK
1	BROWN
2	RED
3	ORANGE
4	YELLOW
5	GREEN
6	BLUE
7	PURPLE
8	GRAY
9	WHITE

NOTES:

1. XXX INDICATES WIRE COLOR
2. Φ INDICATES CIRCUIT GROUND
3. *etc* INDICATES EARTH GROUND
4. π INDICATES .01UF
5. $\pi\pi$ INDICATES .39PF
6. π INDICATES .001UF

[illegible]

XI. PARTS INFORMATION

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(UPRIGHT VERSION),

(SIT-DOWN VERSION)

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XI. PARTS INFORMATION

SPEAKER/MARQUEE ASSY., ILLUMINATION ASSY.

ITEM	DESCRIPTION	PART NO.	
		UPRIGHT	SIT-DOWN
1.	Illumination Assembly	MA-554	N/A
2.	Starter	EL-69	N/A
3.	Ballast (60 Hz)	EL-70	N/A
4.	Lamp, Fluorescent	LA-4	N/A
5.	Cable Assembly (Illumination)	MA-563	N/A
6.	Cable Assembly (Speaker)	MA-318	N/A
7.	Speaker	EL-83	N/A
8.	Speaker Grill	B-20931	N/A
9.	Illumination Trim	D-23067	N/A
10.	Marquee, Lexan	23656	N/A

CONTROL PANEL ASSY.

ITEM	DESCRIPTION	PART NO.	
		UPRIGHT	SIT-DOWN
1.	Control Panel Assembly	MA-1125	MA-531
2.	Control Pod Assembly	N/A	MA-1139
3.	Lexan Overlay	A-23650	A-23488
4.	Joystick	23566	23566
5.	Control Panel Hinge	23621	23486
6.	Button, Orange	N/A	A-23502
7.	Button, Yellow	N/A	A-23510
8.	Button	A-21970	N/A
9.	Button, Holder & Switch	A-21971	A-23503
10.	Button Nuts	A-21972	A-21972
11.	Cable Assembly	MA-560	MA-555

SERVICE PANEL ASSY.

ITEM	DESCRIPTION	PART NO.	
		UPRIGHT	SIT-DOWN
1.	Service Panel Assembly	MA-550	MA-300
2.	Coin Meter	EL-84	EL-84
3.	Volume Control	XO-199	XO-199
4.	Switch (Push Button)	EL-57	EL-57
5.	Switch (Toggle)	A-23506	EL-85
6.	Cable Assembly	MA-559	MA-539

BOTTOM PANEL ASSY.

ITEM	DESCRIPTION	PART NO.	
		UPRIGHT	SIT-DOWN
1.	Bottom Panel Assembly	MA-534	MA-534
2.	Transformer	D-23149	D-23149
3.	Capacitor, 50,000 UF, 25V	XO-342	XO-342
4.	Resistor, 200 OHM, 5%, 2W	XO-142	XO-142
5.	Bridge Rectifier	EL-42	EL-42
6.	Fuse, 1½ AMP, SLO-BLO	EL-34	EL-34
7.	Fuse, 2 AMP, SLO-BLO	EL-7	EL-7
8.	Fuse, 12 AMP	FSI-83	FSI-83
9.	Fuse, 4 AMP, SLO-BLO	EL-33	EL-33
10.	Fuse, 1 AMP, SLO-BLO	EL-6	EL-6
11.	Fuse, ¾ AMP, SLO-BLO	EL-37	EL-37
12.	Service Outlet	A-18133	A-18133
13.	Line Filter	EL-50	EL-50
14.	Cable Assembly (Primary)	MA-557	MA-538
15.	Cable Assembly (Secondary)	MA-537	MA-537

XI. PARTS INFORMATION

CABINET PARTS (INTERIOR)

ITEM	DESCRIPTION	PART NO.	
		UPRIGHT	SIT-DOWN
1.	Back Door	23633	23372
2.	Interconnect Cable	MA-561	MA-543
3.	Cable Assembly, Master Electronics	MA-558	MA-544
4.	Master Electronics Board	MA-1127	MA-1159
5.	Bottom Panel Assembly	MA-534	MA-534
6.	Sound/Speech Board Assembly	MA-495	MA-495
7.	Power Supply Assembly	MA-479	MA-479
8.	Logic Board Assembly	MA-498	MA-498
9.	Color/Sync Board Assembly	MA-497	MA-497
10.	Interface Board Assembly	MA-499	MA-499
11.	Filter Board I Assembly	MA-457	MA-457
12.	Filter Board II Assembly	MA-530	MA-530
13.	Shield, Top	23619	23495
14.	Shield, Bottom	23620	23494
15.	Clamp Bracket, Shield	23634	23493
16.	Cable Assembly, High Voltage	MA-556	MA-547
17.	Cable Assembly, Monitor	A-22620	A-22620
18.	Cable Assembly, Front Door	MA-540	MA-540
19.	Cable Assembly, Fan	MA-562	MA-562
20.	Line Cord	B-23365	B-23365
21.	Cover Plate, Line Cord	A-21955	A-21955
22.	Video Disc Player	23047	23047
23.	Video Disc	23507	23507
24.	Video Disc Carton (Mailer)	23663	23663
25.	Video Disc Clamp	23688	23552
26.	Filter Assembly	23516	23516
27.	Rear Door Lock	MH-0	MH-0
28.	Anchor Plate, Lock	MH-1	MH-1
29.	Fan	B-23490	B-23490
30.	Plastic Grill	B-23307	B-23307
31.	Latch (3)	A-21969	A-21969
32.	Latch Plate (3)	A-23234	A-23234

CABINET PARTS (EXTERIOR)

ITEM	DESCRIPTION	PART NO.	
		UPRIGHT	SIT-DOWN
1.	Inside Left Decal	23658	23542
2.	Inside Right Decal	23659	23543
3.	Inside Rear Decal	23660	N/A
4.	Top Cabinet Decal	23695	23421
5.	Lexan Overlay (Screen)	23696	N/A
6.	Left Side Decal	23698	N/A
7.	Right Side Decal	23697	N/A
8.	Front Cabinet Decal	N/A	23698
9.	Upper Front Cabinet Decal	N/A	23693
10.	Top Glass	A-22464	A-23381
11.	CRT Frame	A-23657	A-23489
12.	Monitor Filter Glass	C-22849	23382
13.	Monitor Mask	D-22463	D-23513
14.	Monitor Lens	N/A	C-23305
15.	Monitor	C-21981	C-21981
16.	Window	N/A	C-23383
17.	Marquee	23656	N/A
18.	Speaker	EL-83	EL-83
19.	Speaker Grill	B-20931	B-20931
20.	Floor Mat	N/A	A-23411
21.	Interlock Switch	EL-66	EL-66
22.	Cover, Interlock Switch	A-21888	A-21888
23.	Leg Adjuster	MH-21	MH-22
24.	Caster	N/A	A-23487
25.	On-Off Switch	EL-102	EL-102
26.	Switch Plate	A-22396	A-22397
27.	Vent Channel (6)	23471	21754

FILTER BOARD I

REFERENCE	DESCRIPTION	PART NO.
	Filter Board #1 Assy.	MA-457
A8P1	6 Pin Wafer Conn.	XO-373
A8P2	9 Pin Wafer Conn.	XO-375
A8P3	10 Pin Wafer Conn.	XO-336
A8P4	8 Pin Wafer Conn.	XO-339
A8P5	7 Pin Wafer Conn.	XO-335
A8P6	4 Pin Wafer Conn.	XO-369
A8P7	7 Pin Wafer Conn.	XO-335
A8P8	6 Pin Wafer Conn.	XO-373
A8P9	9 Pin Wafer Conn.	XO-375
A8P10	10 Pin Wafer Conn.	XO-336
A8P11	8 Pin Wafer Conn.	XO-339
A8P12	7 Pin Wafer Conn.	XO-335
A8P13	4 Pin Wafer Conn.	XO-369
A8P14	7 Pin Wafer Conn.	XO-335
	Capacitor, .01UF, 50V CM-AX, +80%-20% (38 each)	XO-229
	Capacitor, 39PF, 50V CM-AX (6 each)	XO-334
	Ferrite Bead (22 each)	XO-337
	Ferrite Bead (66 each)	XO-338

FILTER BOARD II

REFERENCE	DESCRIPTION	PART NO.
	RF Filter Assembly	MA-530
	Capacitor, 39PF, 50V, CM-AX	XO-334
	Capacitor, .001UF, 50V, CM-AX	XO-695
	Ferrite Bead	XO-338
J17-J24	Jack, Phono	XO-744

NOTE: FILTER BOARDS ARE THE SAME IN BOTH VERSIONS.