

X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

TABLE OF CONTENTS

| | PAGE |
|---|--------|
| LOGIC BOARD ASSY. (A1) | |
| COMPONENT LOCATION AND PARTS LIST | 26, 29 |
| SCHEMATIC DIAGRAM (SHEET 1 OF 3) | 30 |
| SCHEMATIC DIAGRAM (SHEET 2 OF 3) | 32 |
| SCHEMATIC DIAGRAM (SHEET 3 OF 3) | 35 |
| INTERFACE BOARD ASSY. (A2) | |
| COMPONENT LOCATION AND PARTS LIST | 38 |
| SCHEMATIC DIAGRAM | 39 |
| COLOR/SYNC BOARD ASSY. (A18) | |
| COMPONENT LOCATION AND PARTS LIST | 41 |
| SCHEMATIC DIAGRAM | 42 |
| SOUND BOARD ASSY. (A6) | |
| COMPONENT LOCATION AND PARTS LIST | 44 |
| SCHEMATIC DIAGRAM | 45 |
| POWER SUPPLY ASSY. (A3) | |
| COMPONENT LOCATION AND PARTS LIST | 47 |
| SCHEMATIC DIAGRAM | 48 |
| PRIMARY POWER/FILTER BOARDS/ INTERCONNECTION DIAGRAM | 50 |

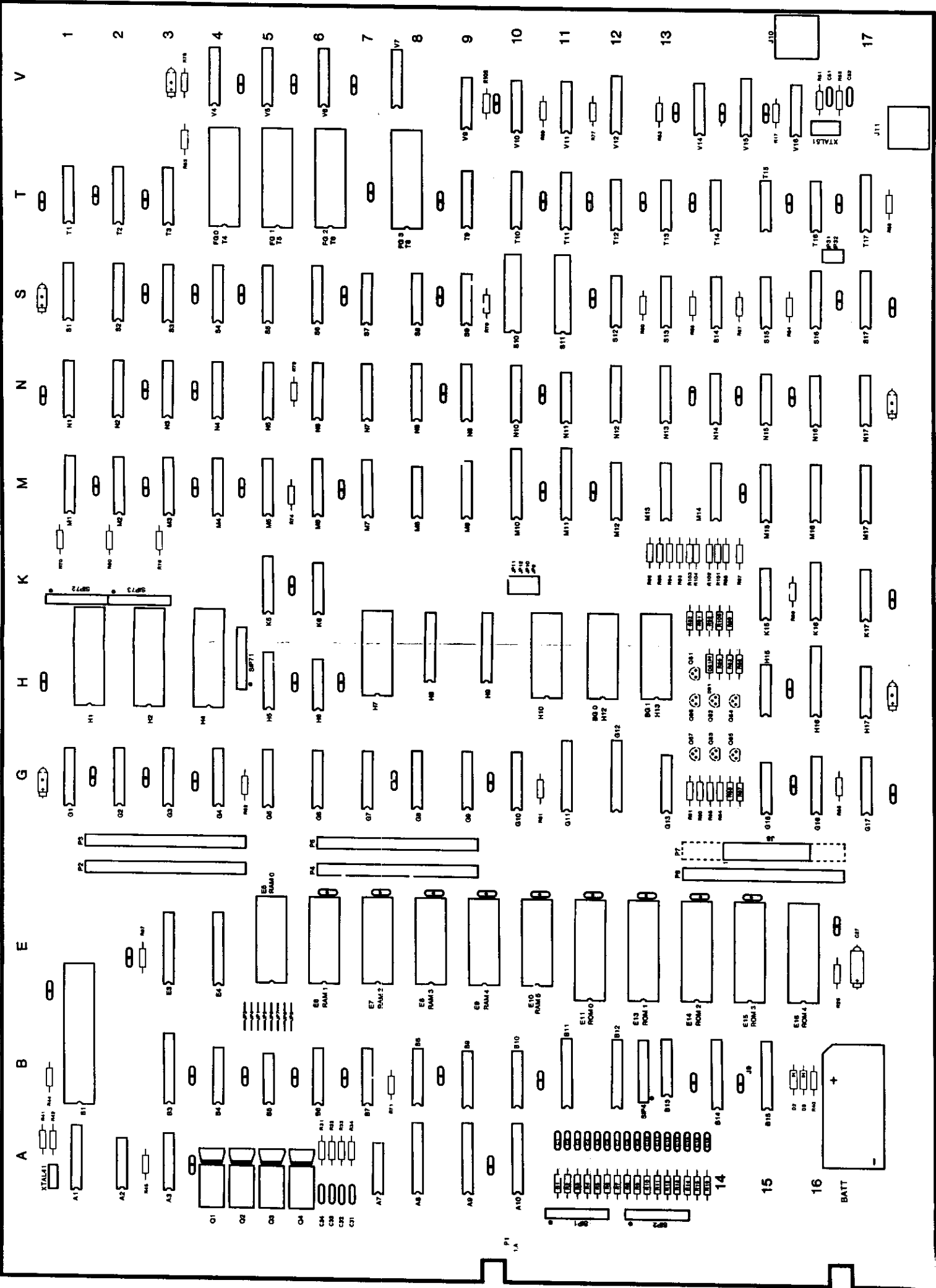
X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

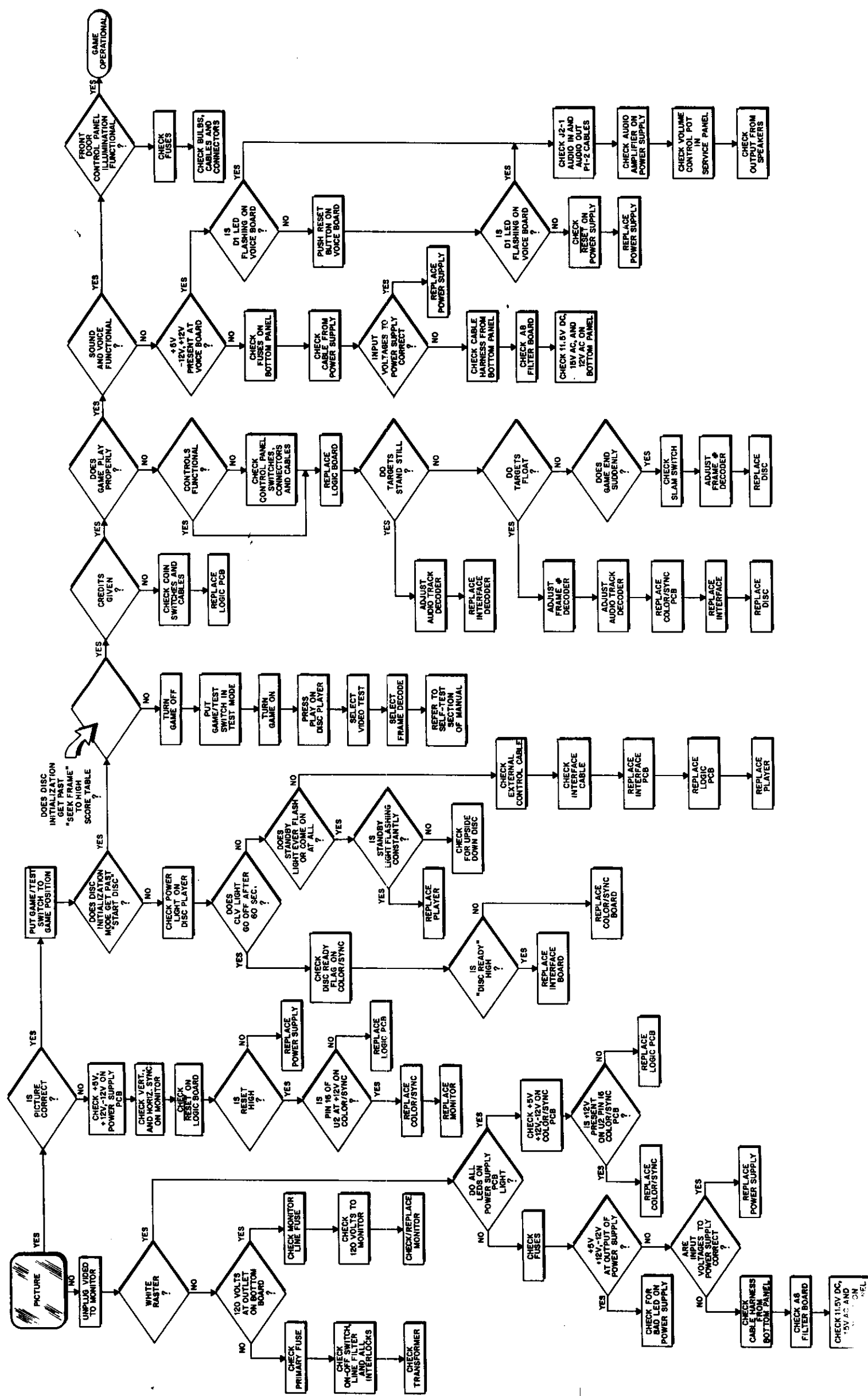
LOGIC BOARD ASSY. (A1), PARTS LIST

INTEGRATED CIRCUITS

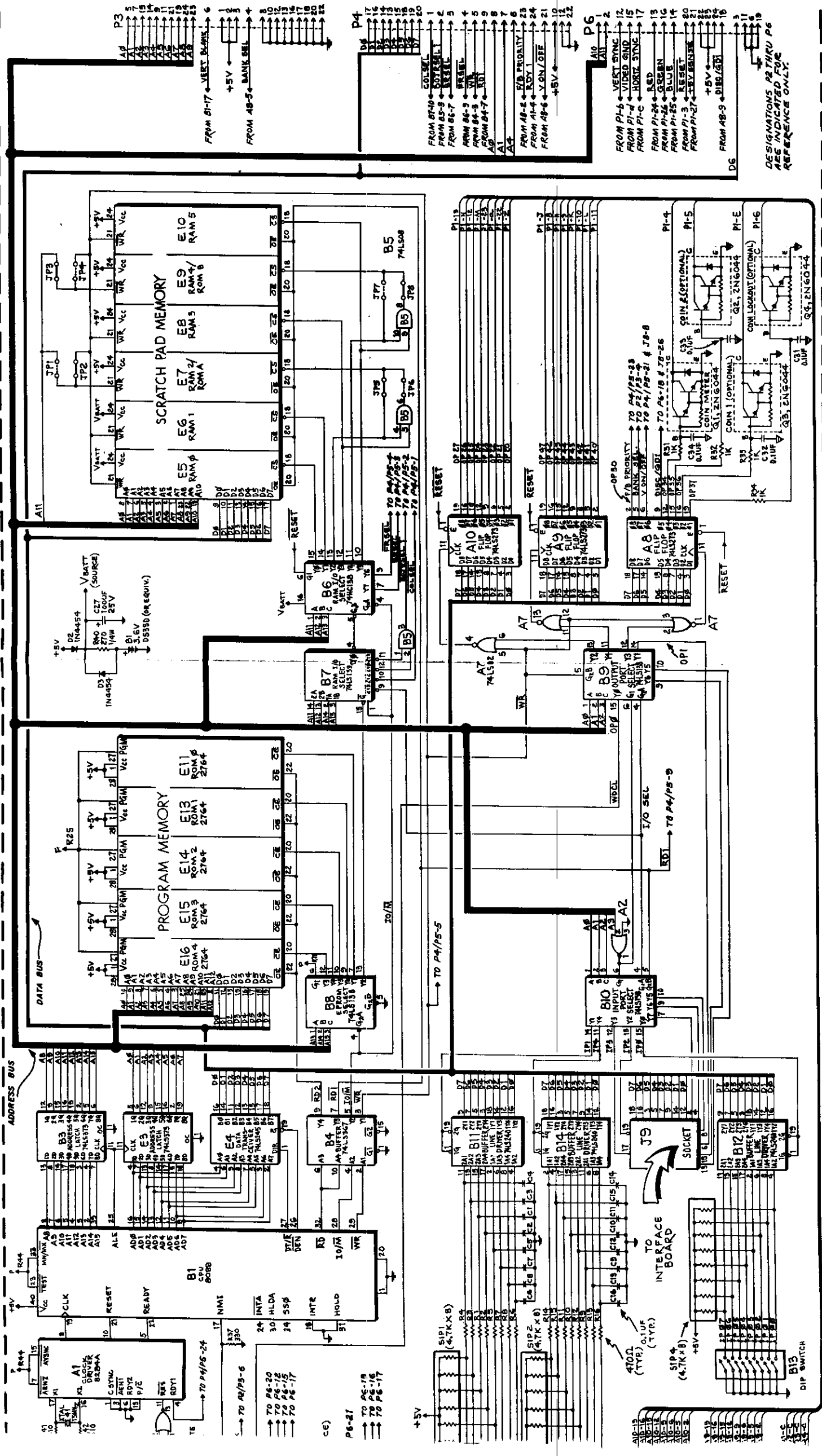
| REFERENCE | DESCRIPTION | PART NO. | REFERENCE | DESCRIPTION | PART NO. |
|---------------|--|----------|---------------|--|----------|
| | Logic Board Assy. | MA-498 | | | |
| A1 | 8284 CLK Driver | XO-478 | M7 | 74157 Quad 2-input multiplexer | XO-114 |
| A2 | 74LS02 Quad 2-input "NOR" gate | XO-428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

**X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS
LOGIC BOARD ASSY. (A1), COMPONENT LOCATION**



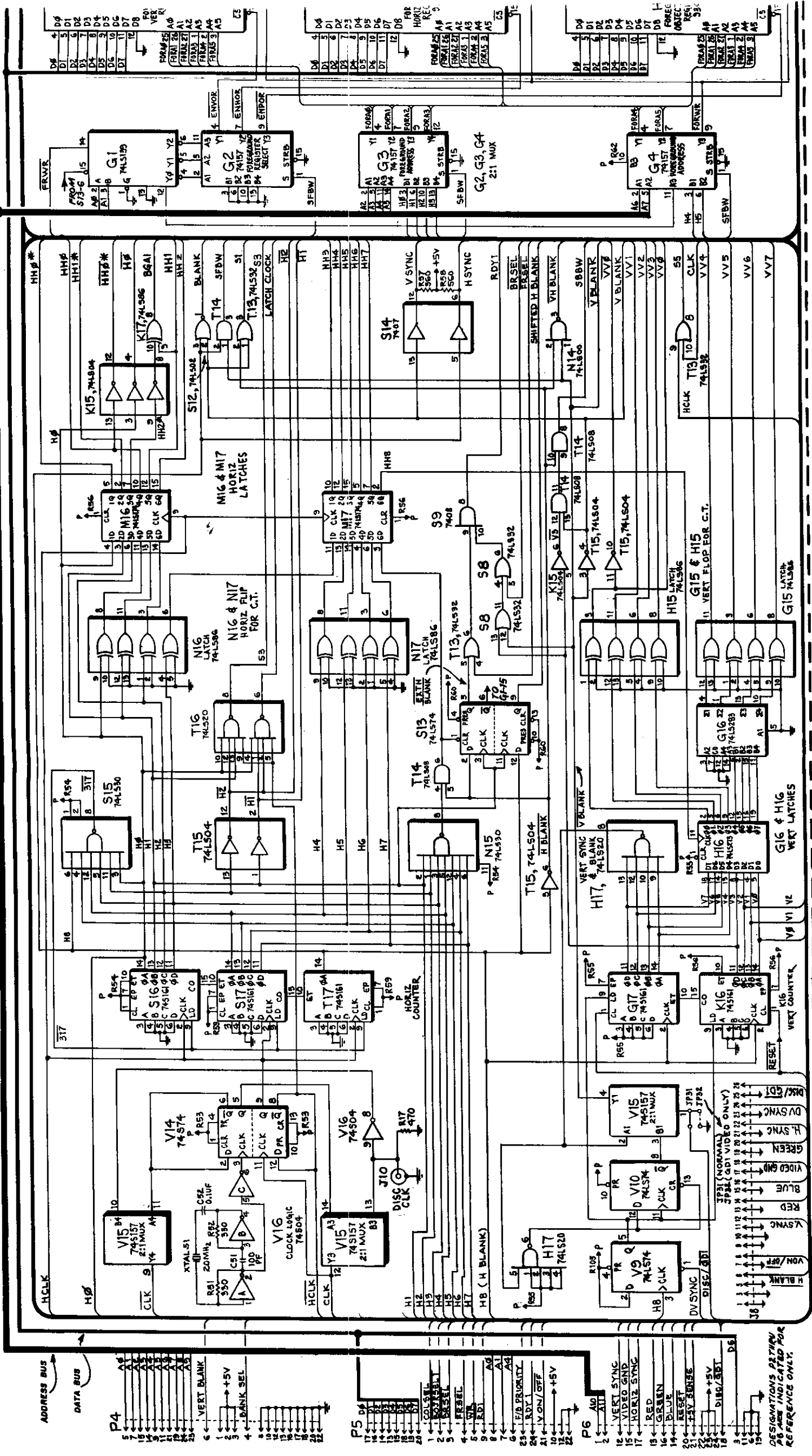


X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

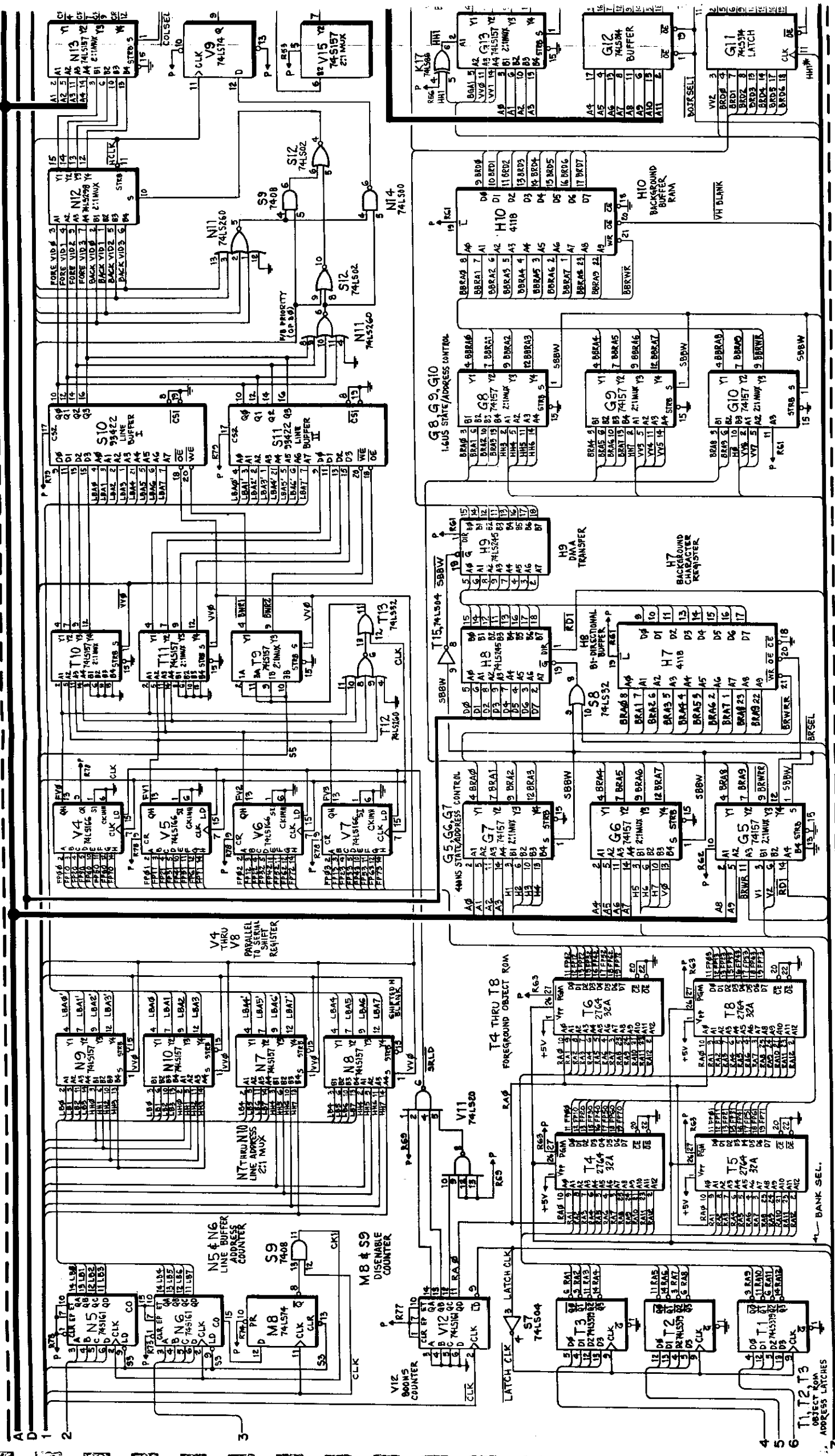


LOGIC BOARD ASSY. (A1), SCHEMATIC DIAGRAM, SHEET 1 OF 3

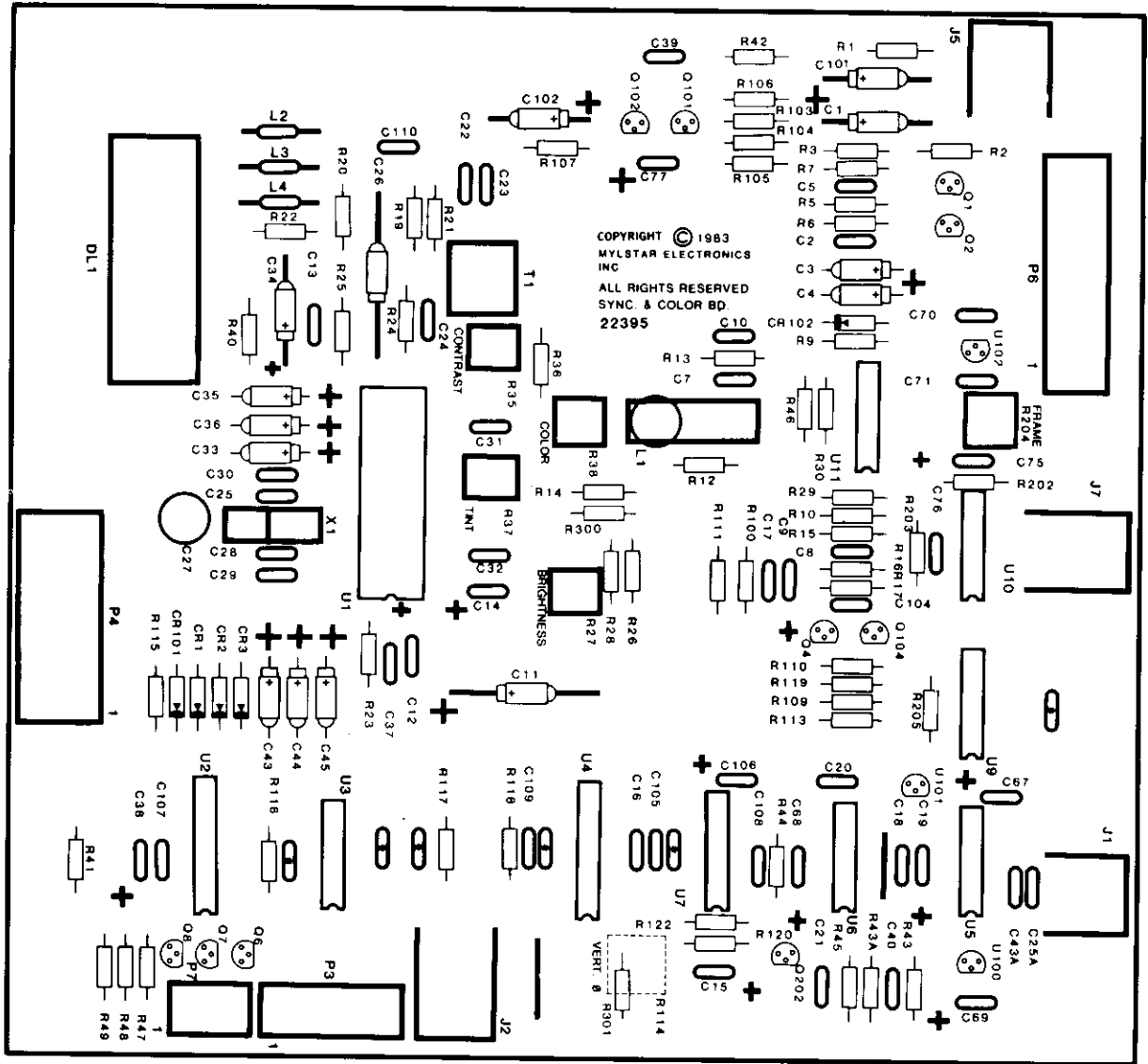
X. WIRING AND SCHEMATIC DIAGRAMS, PART 15 LISTS



X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS



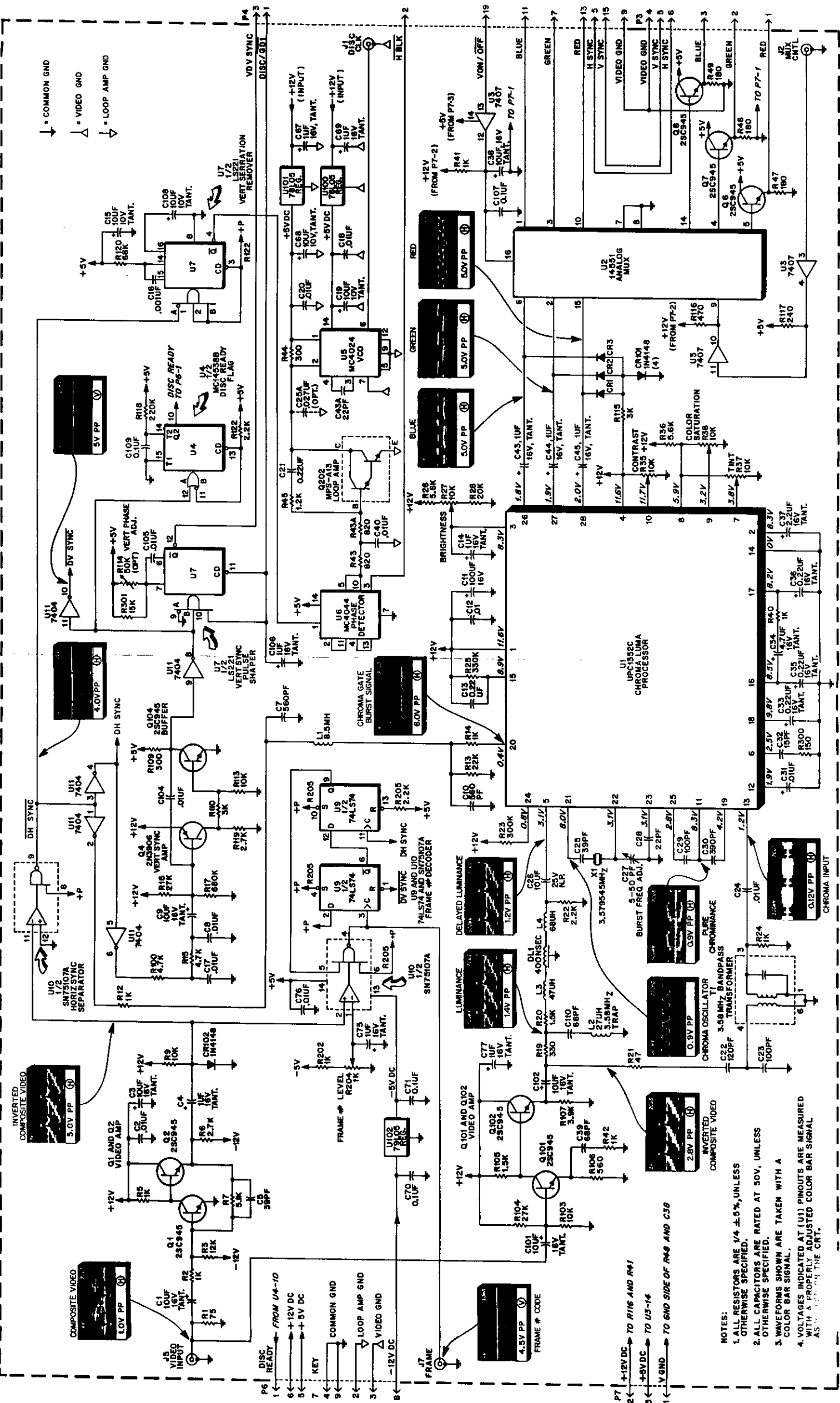
X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS COLOR/SYNC BOARD ASSY. (A18), COMPONENT LOCATION



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. Capacitor, 10UF, 16V TANT-AX | MA-497 XO-749 | CR1, CR2, CR3, CR101, CR102 | Diode, 1N4148 | XO-261 | R27, R35, R37, R38 | Potentiometer, 10K OHM, 5% 1/4W | XO-674 |
| C2, CB, 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 | Phono Jack, Right Angle | XO-618 | R43, R43A, R44, R109 | Resistor, 820 OHM, 5% 1/4W Resistor, 300 OHM, 5% 1/4W | XO-174 XO-671 |
| C5, C25 | Capacitor, 39PF, 50V CM-AX | XO-334 | J5, J7 | | | R45 | Resistor, 1.2K OHM, 5% 1/4W | XO-175 |
| C7, C10 | Capacitor, 560PF, 50V CM-AX, 10% | XO-681 | L1 | RF Choke, 8.5 MH | XO-659 | R47, R48, R49 | Resistor, 180 OHM, 5% 1/4W | XO-24 |
| C11 | Capacitor, 100UF, 16V ELEC-AX | XO-755 | L2 | Inductor, 27UH, 10% | XO-658 | R106 | Resistor, 560 OHM, 5% 1/4W | XO-36 |
| C13, C21 | Capacitor, .22UF, 50V CM-AX, 20% | XO-688 | L3 | Inductor, 47UH, 10% | XO-657 | R107 | Resistor, 3.9K OHM, 5% 1/4W | XO-39 |
| C15, C19, C68, C108 | Capacitor, 10UF, 10V TANT-AX, 10% | XO-209 | L4 | Inductor, 68UH, 10% | XO-656 | R110, R115 | Resistor, 3K OHM, 5% 1/4W | XO-23 |
| C16 | Capacitor, .001UF, 50V NPO CM-AX, 10% | XO-757 | P3 | 6 Pin Wafer Conn. | XO-373 | R112, R116 | Resistor, 470 OHM, 5% 1/4W | XO-35 |
| C22 | Capacitor, 120PF, 50V CM-AX, 10% | XO-682 | P4 | Header Conn., 26 Pin | XO-651 | R117 | Resistor, 240 OHM, 5% 1/4W | XO-173 |
| C23, C29 | Capacitor, 100PF, 50V CM-AX, 10% | XO-680 | P6 | 9 Pin Wafer Conn. | XO-375 | R118 | Resistor, 220K OHM, 5% 1/4W | XO-594 |
| C26 | Capacitor, 10UF, 25V AX-Non Polarized | XO-750 | P7 | 3 Pin Wafer Conn. | XO-703 | R120 | Resistor, 68K OHM, 5% 1/4W | XO-189 |
| C27 | Capacitor, Trimmer, 5-50PF CM | XO-653 | Q1, Q2, Q6, Q7, Q8, Q101, Q102, Q104 | Transistor, 2SC945, NPN | XO-316 | R204 | Potentiometer, 1K OHM, 10% 1/4W | XO-756 |
| C28, C43A | Capacitor, 22PF, 50V CM-AX, 10% | XO-683 | Q4 | Transistor, 2N3906, PNP | XO-588 | R300 | Resistor, 150 OHM, 5% 1/4W | XO-574 |
| C30 | Capacitor, 390PF, 50V CM-AX, 10% | XO-684 | Q202 | Transistor, MPS-A13, NPN | XO-304 | R301 | Resistor, 15K OHM, 5% 1/4W | XO-22 |
| C32 | Capacitor, 15PF, 50V CM-AX, 10% | XO-685 | R1 | Resistor, 75 OHM, 5% 1/4W | XO-667 | T1 | Transformer, 3.58 MHz Bandpass | XO-655 |
| C33, C35, C36 | Capacitor, 22UF, 16V TANT-AX, 20% | XO-752 | R2, R5, R12, R14, R24, R41, R42, R202 | Resistor, 1K OHM, 5% 1/4W | XO-5 | U1 | UPCI352C Chrominance and Luminance processor | XO-650 |
| C34 | Capacitor, 4.7UF, 16V TANT-AX | XO-754 | R3 | Resistor, 12K OHM, 5% 1/4W | XO-9 | U2 | MC14551 Quad 2-input multiplexor | XO-660 |
| C37 | Capacitor, 2.2UF, 16V TANT-AX, 20% | XO-751 | R6, R119 | Resistor, 2.7K OHM, 5% 1/4W | XO-6 | U3 | 7407 Hex buffer/driver | XO-384 |
| C39, C110 | Capacitor, 68PF, 50V CM-AX, 10% | XO-636 | R7 | Resistor, 5.1K OHM, 5% 1/4W | XO-40 | U4 | MC14538B Monostable multivibrator | XO-564 |
| C70, C71, C107, C109 | Capacitor, 0.1UF, 50V CM-Bypass | XO-558 | R9, R103, R113 | Resistor, 10K OHM, 5% 1/4W | XO-18 | U5 | MC4024 Dual voltage controlled multivibrator | XO-446 |
| | | | R13 | Resistor, 22K OHM, 5% 1/4W | XO-42 | U6 | MC4044 Phase-frequency detector | XO-447 |
| | | | R15, R100 | Resistor, 4.7K OHM, 5% 1/4W | XO-7 | U7 | 74LS221 Dual Monostable multivibrator | XO-666 |
| | | | R16, R104 | Resistor, 27K OHM, 5% 1/4W | XO-11 | U9 | 74LS74 Dual D-type flip flop | XO-434 |
| | | | R17 | Resistor, 680K OHM, 5% 1/4W | XO-669 | U10 | 75107A Dual line receivers/drivers | XO-664 |
| | | | R19 | Resistor, 330 OHM, 5% 1/4W | XO-34 | U11 | 7404 Hex inverter | XO-402 |
| | | | R20, R105 | Resistor, 15K OHM, 5% 1/4W | XO-20 | U100, U101 | 78L05 Positive 5VDC regulator | XO-662 |
| | | | R21 | Resistor, 4.7 OHM, 5% 1/4W | XO-27 | XI | 79L05 Negative 5VDC regulator | XO-661 |
| | | | R22, R122, R205 | Resistor, 2.2K OHM, 5% 1/4W | XO-47 | | Crystal, 3.579 MHz | XO-456 |
| | | | R23 | Resistor, 300K OHM, 5% 1/4W | XO-19 | | 28 Pin DIP Socket | XO-536 |
| | | | R25 | Resistor, 330K OHM, 5% 1/4W | | | | |
| | | | R26, R36 | Resistor, 5.6K OHM, 5% 1/4W | | | | |

X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS



COLOR/SYNC BOARD ASSY. (A18), SCHEMATIC DIAGRAM

INVERTED COMPOSITE VIDEO 5.0V PP (U)

COMPOSITE VIDEO 1.0V PP (U)

COMPOSITE VIDEO 2.8V PP (U)

COMPOSITE VIDEO 0.2V PP (U)

FROM U4-10
 +12V DC
 +5V DC
 COMMON GND
 LOOP AMP GND
 VIDEO GND
 -12V DC

FROM U4-10
 +12V DC
 +5V DC
 COMMON GND
 LOOP AMP GND
 VIDEO GND
 -12V DC

FROM U4-10
 +12V DC
 +5V DC
 COMMON GND
 LOOP AMP GND
 VIDEO GND
 -12V DC

FROM U4-10
 +12V DC
 +5V DC
 COMMON GND
 LOOP AMP GND
 VIDEO GND
 -12V DC

FROM U4-10
 +12V DC
 +5V DC
 COMMON GND
 LOOP AMP GND
 VIDEO GND
 -12V DC

- NOTES:
1. ALL RESISTORS ARE 1/4 ±.5%, UNLESS OTHERWISE SPECIFIED.
 2. ALL CAPACITORS ARE RATED AT 50V, UNLESS OTHERWISE SPECIFIED.
 3. WAVEFORMS SHOWN ARE TAKEN WITH A COLOR BAR SIGNAL.
 4. VOLTAGES INDICATED AT (U1) PINS ARE MEASURED AS VIEWED FROM THE CRT.

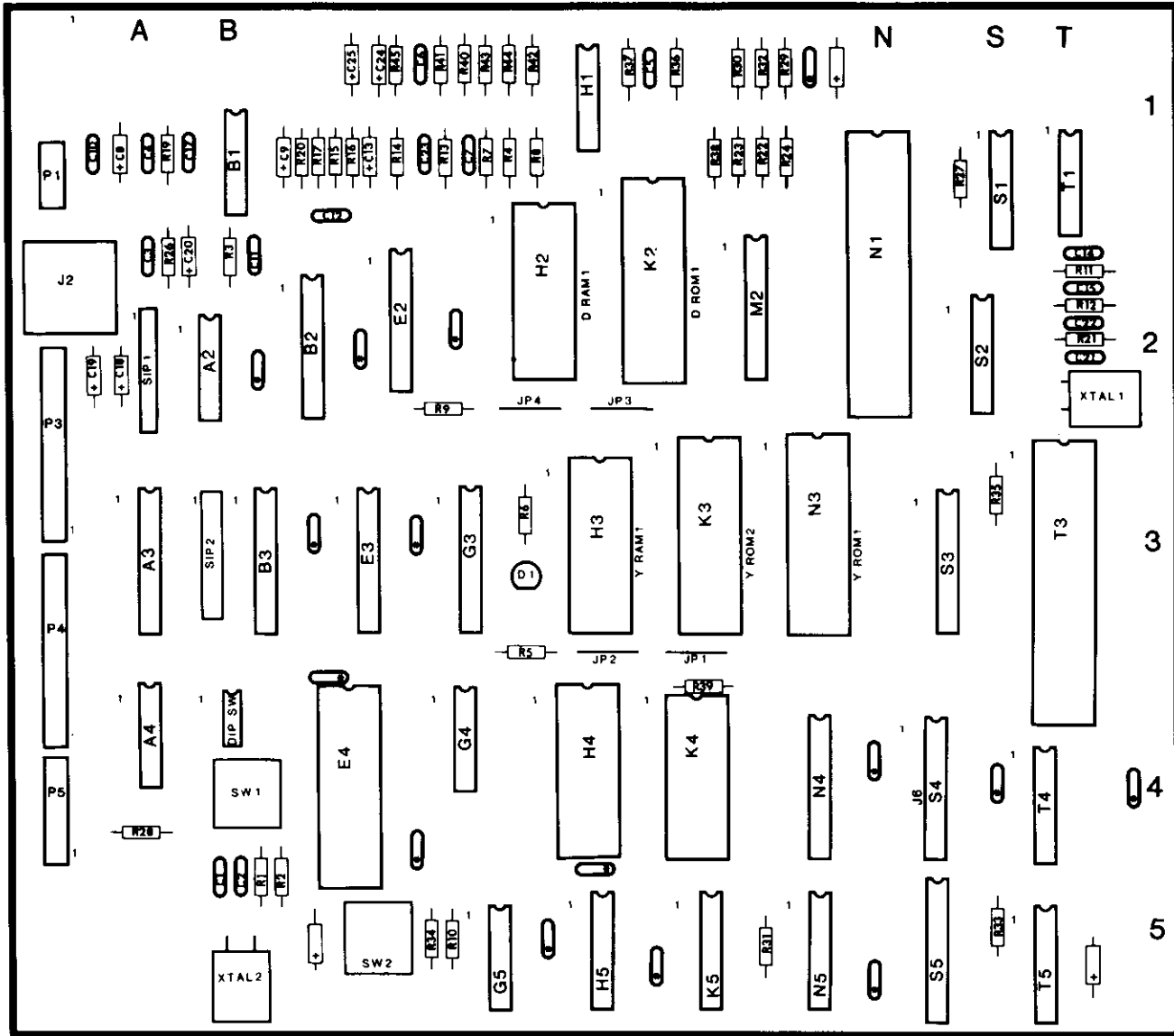
PT 2 ← +12V DC TO R116 AND R41
 3 ← +8V DC TO U5-14
 1 ← V GND TO GND SIDE OF R49 AND C39

INVERTED COMPOSITE VIDEO 2.8V PP (U)

COMPOSITE VIDEO 0.2V PP (U)

X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

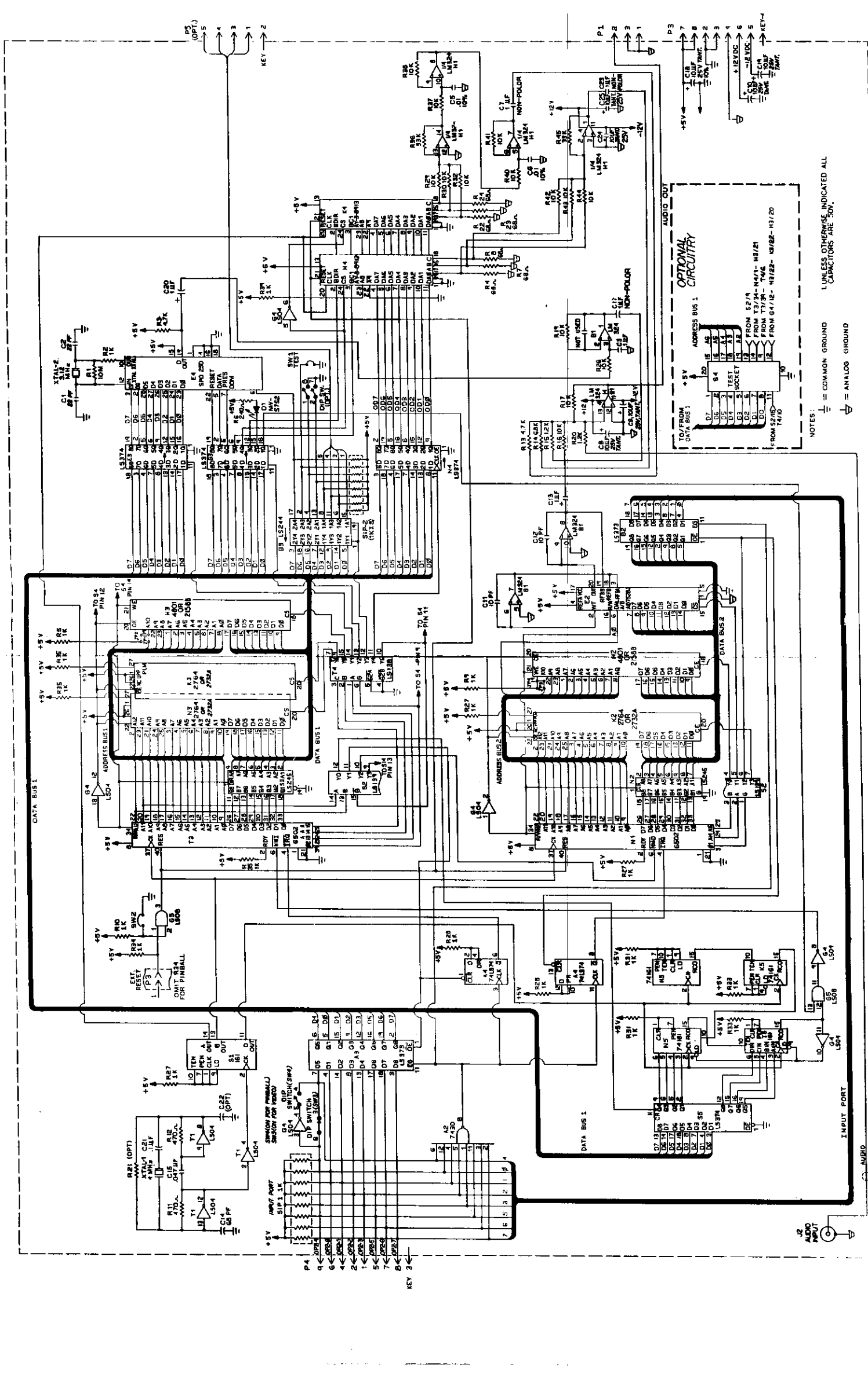
SOUND BOARD (A6) COMPONENT LOCATION



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 AX-CM, 10% | XO-633 | R11, R12 | Resistor, 470 OHM, 5% 1/4W | XO-35 |
| C3, C21 | Capacitor, 0.1UF, 50V MONO AX-GL | XO-637 | R14 | Resistor, 6.8K OHM, 5% 1/4W | XO-8 |
| C5, C6 | Capacitor, 01UF, 50V MONO AX-GL, 10% | XO-747 | R15, R20 | Resistor, 1.2K OHM, 5% 1/4W | XO-175 |
| C7, C17, C23 | Capacitor, 1UF, 50V CM-RD Non-Polarized | XO-294 | R16, R17, R19, R26, R29, R30, R32, R37, R38, R40-R44 | Resistor, 10K OHM, 5% 1/4W | XO-18 |
| C8, C9, C10, C18, C19, C24, C25 | Capacitor, 10UF, 25V TANT-AX, 10% | XO-127 | R36, R45 | Resistor, 33K OHM, 5% 1/4W | XO-43 |
| C11 | Capacitor, 10PF, 50V AX-CM, +80%-20% | XO-635 | SIP1, SIP2 | Resistor Pack, Sip, 1K OHM, 9 Pin | XO-493 |
| C13, C20 | Capacitor, 1UF, 50V TANT-AX | XO-217 | SW1, SW2 | Switch, Push Button, N.O. | XO-365 |
| C14 | Capacitor, 68PF, 50V MONO AX-CM, 10% | XO-636 | XTAL1 | Crystal, 4.0 MHz | XO-366 |
| C15 | Capacitor, 047UF, 50V MONO AX-CM, 20% | XO-638 | XTAL2 | Crystal, 3.12 MHz | XO-639 |
| ALL UNMARKED CAPACITORS | 0.1UF, 50V CM-AX | XO-230 | | 24 Pin DIP Socket | XO-529 |
| ALL UNMARKED POLARIZED CAPACITORS | 10UF, 25V TANT-AX, 10% | XO-127 | | 28 Pin DIP Socket | XO-536 |
| D1 | Diode, MV5752 | XO-270 | | 40 Pin DIP Socket | XO-530 |
| DIP SW | DIP Switch, 4 Position, 8 Pin | XO-640 | A2 | 7430 8-input "NAND" gate | XO-643 |
| J2 | Phone Jack | XO-744 | A3, B2 | 74LS373 Octal D-type flip flop | XO-445 |
| P1 | 3 Pin Wafer Conn. | XO-703 | A4 | 74LS74 Dual D-type flip flop | XO-434 |
| P3, P4 | 9 Pin Wafer Conn. | XO-375 | B1, H1 | LM324 Quad op-amp | XO-644 |
| R1 | Resistor, 10M OHM, 5% 1/4W | XO-73 | B3 | 74LS244 Octal buffer/line driver | XO-117 |
| R2, R5, R9, R10, R27, R28, R31, R33-R35, R39, R3, R13 | Resistor, 1K OHM, 5% 1/4W | XO-5 | E2 | AD7528J DAC | XO-674 |
| R4, R7, R8, R22-R24 | Resistor, 68 OHM, 5% 1/4W | XO-748 | E3, G3, N4, S5 | 74LS374 Octal D-type flip flop | XO-96 |
| | | | E4 | SPD250 Speech generator | XO-645 |
| | | | G4, T1 | 74LS04 Hex inverter | XO-418 |
| | | | G5 | 74LS08 Quad 2-input "AND" gate | XO-86 |
| | | | H2, H3 | 4801 1K x 8 SRAM | XO-193 |
| | | | H4, K4 | AY-3-8913 Sound generator | XO-646 |
| | | | H5, K5, N5, S1, T5 | 74161 Synchronous presetable binary counter | XO-192 |
| | | | K2, K3, N3 | 2732A 4K x 8 EPROM | XO-485 |
| | | | N1, T3 | R6502-13 CPU | XO-360 |
| | | | N2, S3 | 74LS245 Octal bus transceiver | XO-79 |
| | | | S2 | 74LS139 Dual 1 of 4 decoder | XO-419 |
| | | | T4 | 74LS138 1 of 8 decoder/demultiplexer | XO-437 |

X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

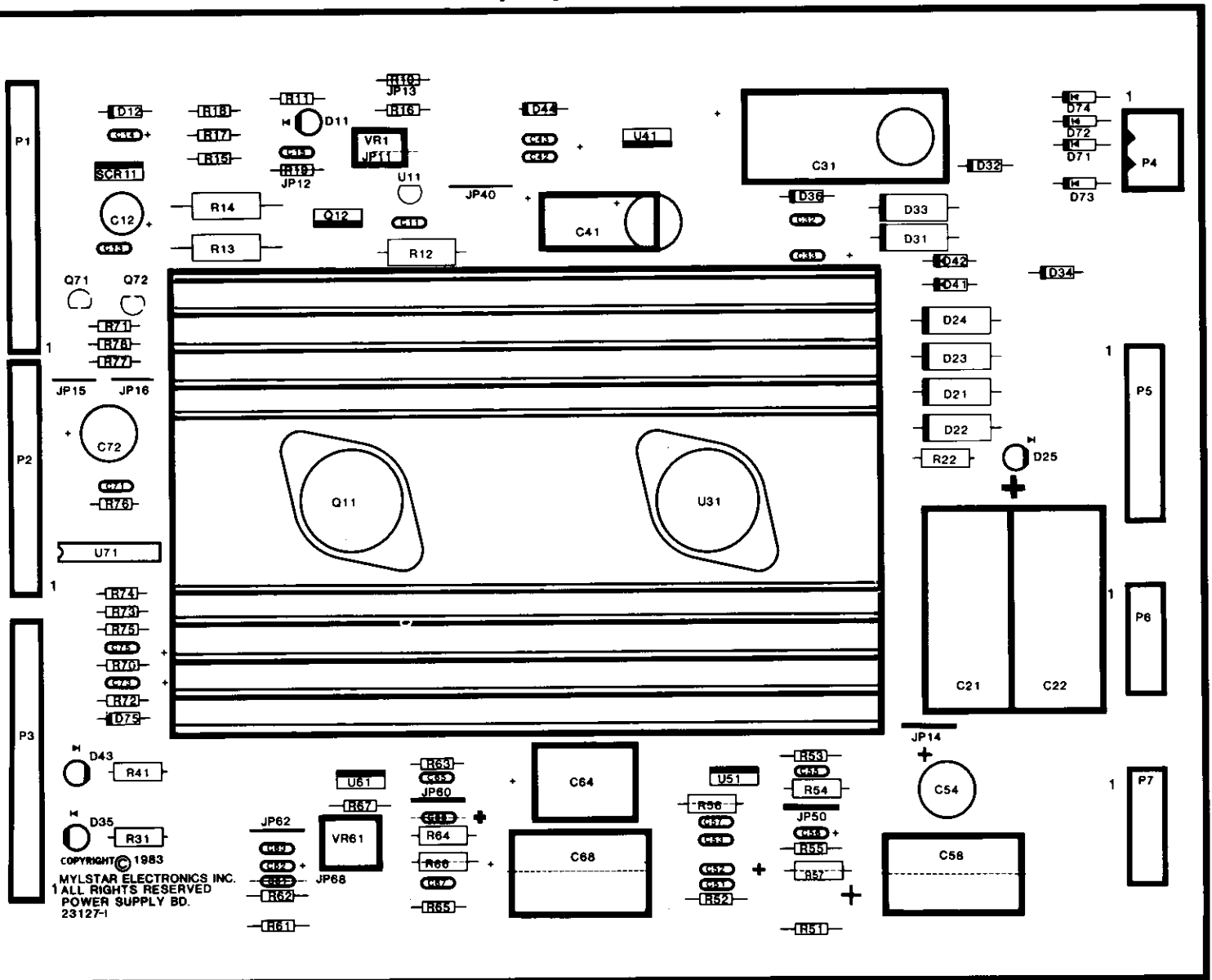


NOTES:
 ⊕ = COMMON GROUND
 ⊕ = ANALOG GROUND
 ⊕ = UNLESS OTHERWISE INDICATED ALL CAPACITORS ARE .50V.

SOUND BOARD ASSY. (A6), SCHEMATIC DIAGRAM

X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS

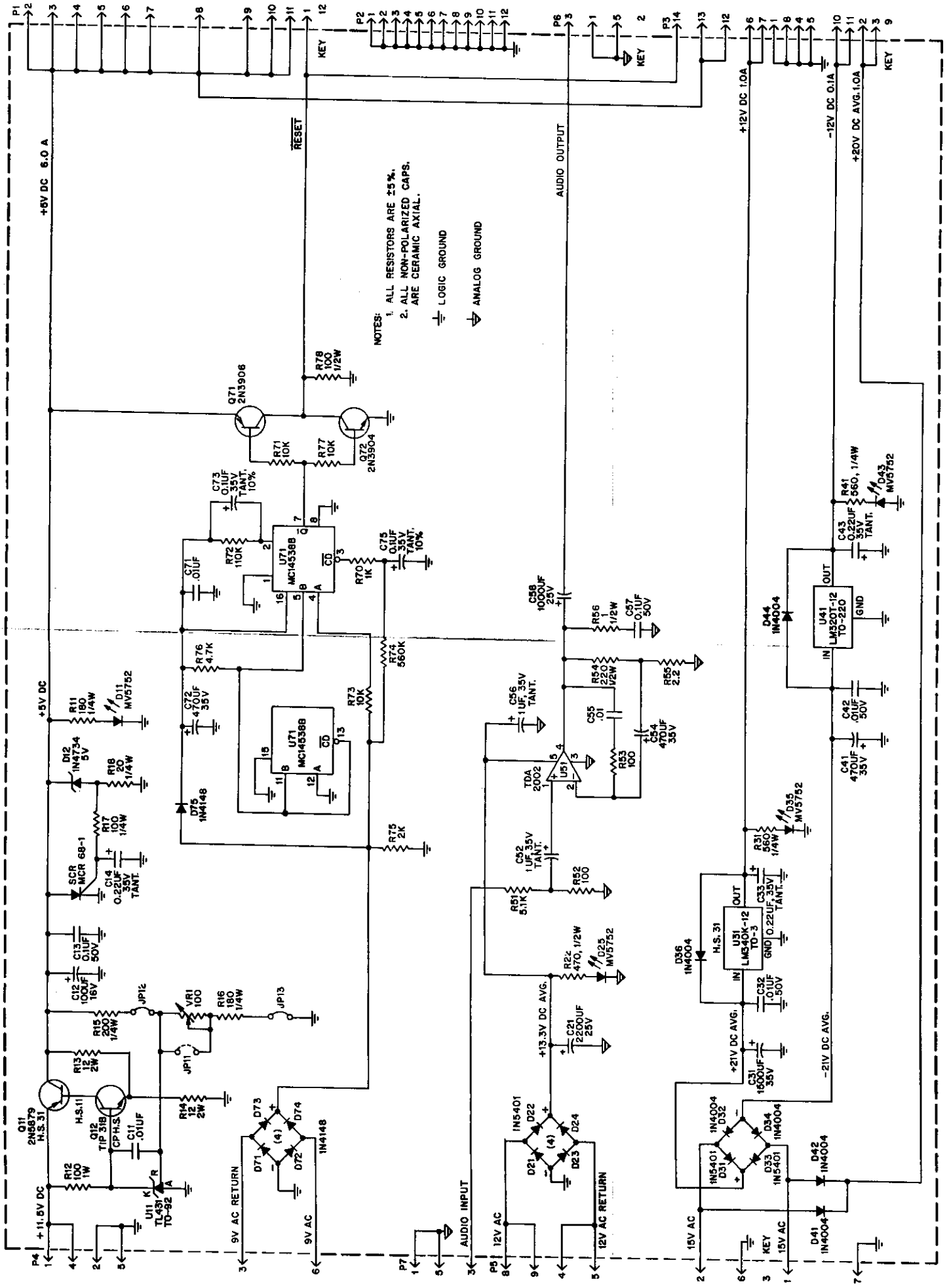
POWER SUPPLY ASSY. (A3), COMPONENT LOCATION



POWER SUPPLY ASSY. (A3), PARTS LIST

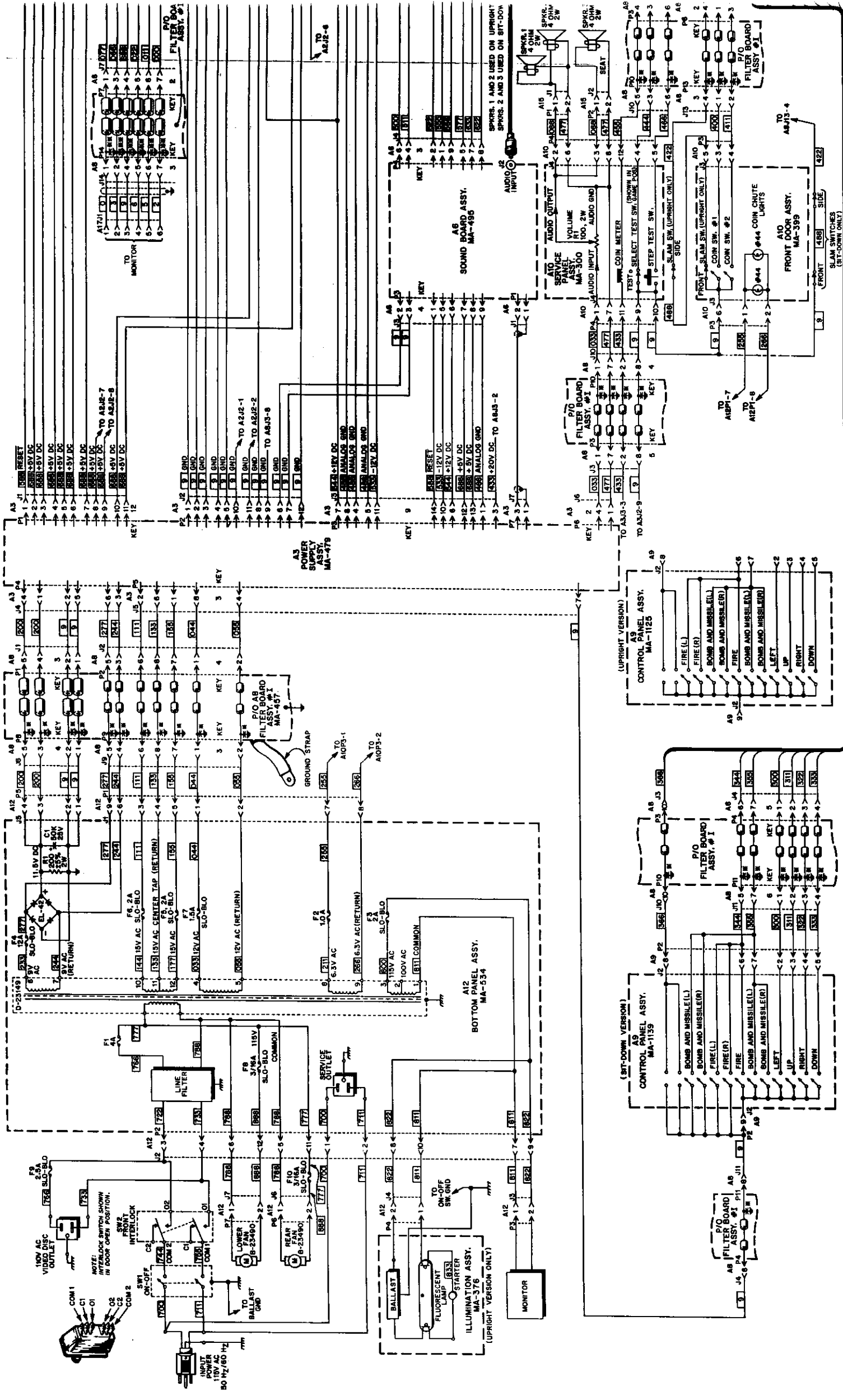
| REFERENCE | DESCRIPTION | PART NO. | REFERENCE | DESCRIPTION | PART NO. |
|------------------------------|-------------------------------|----------|---------------|---------------------------------|----------|
| | Power Supply Assembly | MA-479 | | | |
| C11, C32, C42, C55, C71 | Capacitor, .01UF, 50V | XO-229 | R12 | Resistor, 100 OHM, 5%, 1W | XO-137 |
| C12 | Capacitor, 100UF, 16V | XO-235 | R13, R14 | Resistor, 12 OHM, 5%, 3W | XO-138 |
| C13, C57 | Capacitor, .1UF, 50V | XO-558 | R15 | Resistor, 200 OHM, 5%, 1/4W | XO-143 |
| C14, C33, C43 | Capacitor, .22UF, 35V | XO-615 | 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, 4.70UF, 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

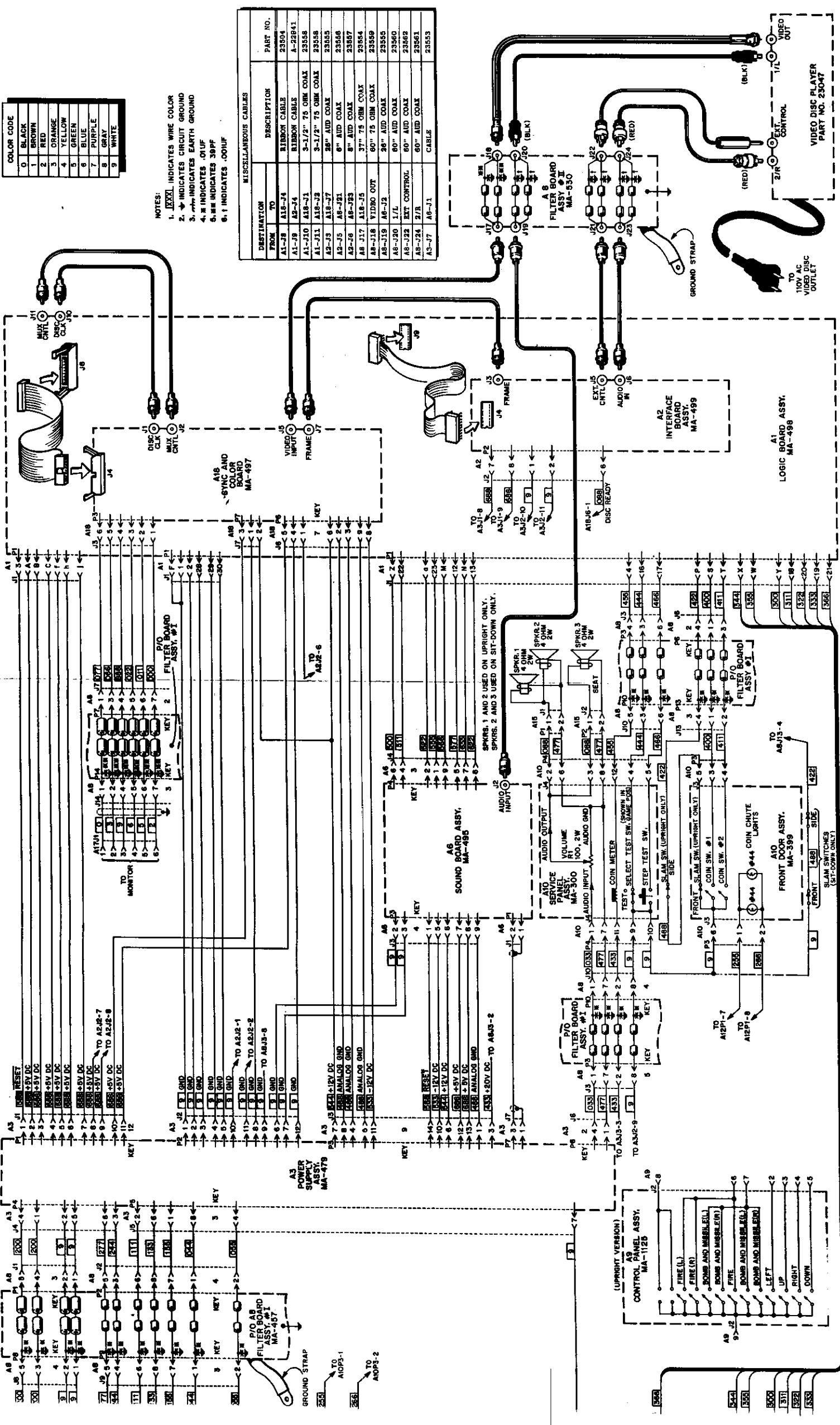


POWER SUPPLY ASSY. (A3), SCHEMATIC DIAGRAM

X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS



X. WIRING AND SCHEMATIC DIAGRAMS, PARTS LISTS



| COLOR CODE | WIRE COLOR |
|------------|------------|
| 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. * INDICATES CIRCUIT GROUND
 3. # INDICATES EARTH GROUND
 4. M INDICATES O/U/P
 5. MM INDICATES 38P/F
 6. I INDICATES .001U/F

| DESTINATION | FROM | DESCRIPTION | PART NO. |
|-------------|-------------|--------------------|----------|
| A1-28 | A18-74 | RIBBON CABLE | 23504 |
| A1-29 | A2-74 | RIBBON CABLE | A-22841 |
| A1-310 | A18-31 | 3-1/2" 75 OHM COAX | 23558 |
| A1-311 | A18-32 | 3-1/2" 75 OHM COAX | 23558 |
| A2-15 | A8-121 | 25' AUD COAX | 23555 |
| A2-16 | A8-122 | 8' AUD COAX | 23557 |
| A2-17 | A18-15 | 37' 75 OHM COAX | 23554 |
| A2-116 | VIDEO OUT | 60" 75 OHM COAX | 23559 |
| A2-119 | A6-12 | 60" 75 OHM COAX | 23555 |
| A2-120 | 1/1 | 60" AUD COAX | 23560 |
| A2-122 | EXT CONTROL | 60" AUD COAX | 23562 |
| A2-224 | 2/R | 60" AUD COAX | 23561 |
| A2-17 | A6-11 | CABLE | 23553 |

XI. PARTS INFORMATION

TABLE OF CONTENTS (UPRIGHT VERSION), (SIT-DOWN VERSION)

| | PAGE |
|---------------------------------------|-----------|
| SPEAKER/MARQUEE ASSY. | 54 |
| ILLUMINATION ASSY. | 54 |
| CONTROL PANEL ASSY. | 54 |
| SERVICE PANEL ASSY..... | 54 |
| BOTTOM PANEL ASSY. | 54 |
| CABINET PARTS (INTERIOR) | 55 |
| CABINET PARTS (EXTERIOR)..... | 55 |
| FILTER BOARD I | 55 |
| FILTER BOARD II | 55 |

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.