

IC CHART

| TYPE | VOLTAGE / PIN NO. | | | | | | | UNUSED GATES |
|------------------------|-------------------|--------|---------|------|------|-----|-----|--------------------|
| | GND | +5V | +5V DAC | +12V | +15V | -5V | -5V | |
| 74S00 | 7 | 14 | | | | | | |
| 74S02 | 7 | 14 | | | | | | |
| 74LS02 | 7 | 14 | | | | | | |
| 74S04 | 7 | 14 | | | | | | P5, P5, P5, |
| 74LS04 | 7 | 14 | | | | | | |
| 74LS06 | 7 | 14 | | | | | | |
| 74LS08 | 7 | 14 | | | | | | |
| 74LS12 | 7 | 14 | | | | | | K4 |
| 74LS11 | 7 | 14 | | | | | | |
| 74LS14 | 7 | 14 | | | | | | |
| 74LS20 | 7 | 14 | | | | | | M5 |
| 74LS27 | 7 | 14 | | | | | | |
| 74LS32 | 7 | 14 | | | | | | L2 |
| 74LS42 | 8 | 16 | | | | | | |
| 74S74 | 7 | 14 | | | | | | |
| 74LS74 | 7 | 14 | | | | | | |
| 74S86 | 7 | 14 | | | | | | B7 |
| 74LS86 | 7 | 14 | | | | | | |
| 74LS129 | 8 | 16 | | | | | | |
| 74LS139 | 8 | 16 | | | | | | |
| 74LS157 | 8 | 16 | | | | | | |
| 74LS161 | 8 | 16 | | | | | | |
| 74LS164 | 7 | 14 | | | | | | |
| 74LS174 | 8 | 16 | | | | | | |
| 74LS175 | 8 | 16 | | | | | | |
| 74LS191 | 8 | 16 | | | | | | |
| 74193 | 8 | 16 | | | | | | |
| 74LS193 | 8 | 16 | | | | | | |
| 74LS194 | 8 | 16 | | | | | | |
| 74LS244 | 10 | 20 | | | | | | |
| 74LS245 | 10 | 20 | | | | | | |
| 74S260 | 7 | 14 | | | | | | |
| 74LS273 | 10 | 20 | | | | | | |
| 74LS367 | 8 | 16 | | | | | | |
| 74LS393 | 7 | 14 | | | | | | |
| 74LS670 | 8 | 16 | | | | | | |
| 2114 (RAM) | 9 | 18 | | | | | | |
| 8316E (ROM) | 12 | 24, 24 | | 19 | | | | |
| 2708 (ROM) | 12 | 24 | | | | | 21 | |
| 825129 (PROM) | 8 | 16 | | | | | | |
| 6502A (MICROPROCESSOR) | 1, 21 | 8 | | | | | | |
| AM6012 | 13 | | 20 | | | 17 | | |
| MC3410 | 2 | | 14 | | | 1 | | |
| DAC-08 | | | 13 | | | 3 | | |
| LM319 | 3, 2 | | | | 11 | 6 | | |
| TLOB2 | | | | | 8 | 4 | | |
| TLOB4 | | | | | 4 | 11 | | |
| LF13201 | 5 | | | | 13 | 4 | | |
| 14050 | 8 | 1 | | | | | | |
| 7404 | 7 | 14 | | | | | | H11, H11, H11, H11 |
| 74LS399 | 8 | 16 | | | | | | |

MEMORY MAP

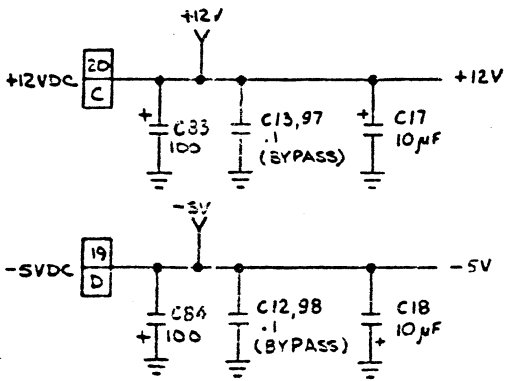
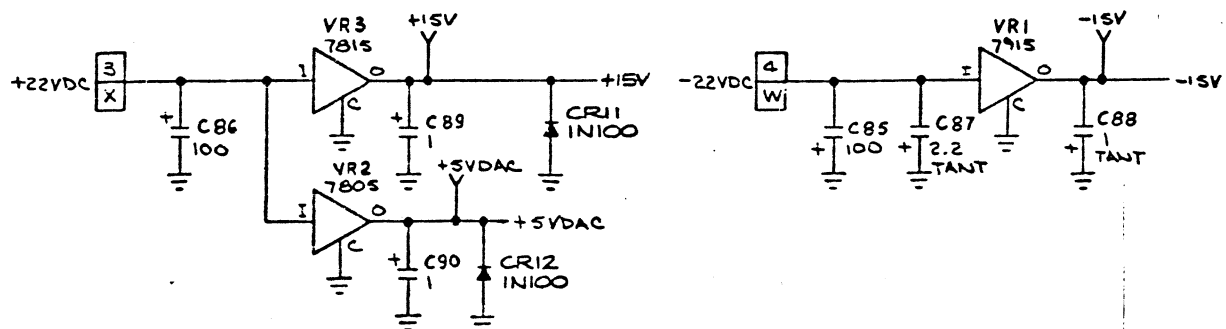
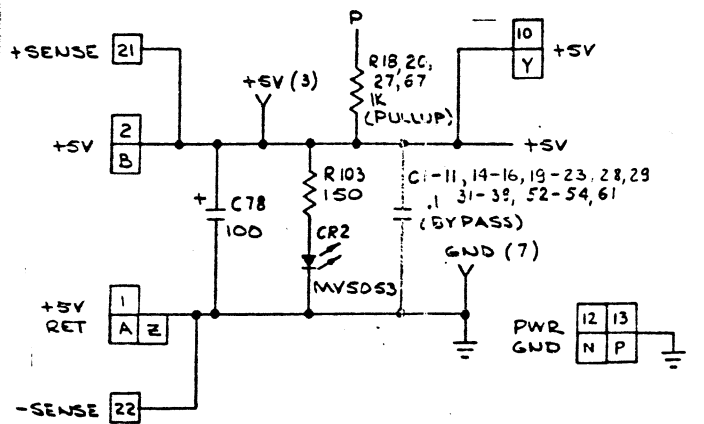
| ADDRESS | DATA | FUNCTION |
|-----------|----------------------|----------------------------|
| 0000-00FF | XXXXXXXXXXXXXXXXXXXX | PROGRAM RAM (1K) |
| 0800-08FF | XXXXXXXXXXXXXXXXXXXX | RIGHT COIN |
| | XXXXXXXXXXXXXXXXXXXX | CENTER COIN |
| | XXXXXXXXXXXXXXXXXXXX | LEFT COIN |
| | XXXXXXXXXXXXXXXXXXXX | SLAM SW |
| | XXXXXXXXXXXXXXXXXXXX | SELF TEST SW |
| | XXXXXXXXXXXXXXXXXXXX | DIAG. STEP SW |
| | XXXXXXXXXXXXXXXXXXXX | HALT |
| | XXXXXXXXXXXXXXXXXXXX | 3RME |
| 2A00-2A0F | XXXXXXXXXXXXXXXXXXXX | OPTIONS 0 |
| 2C00-2C0F | XXXXXXXXXXXXXXXXXXXX | OPTIONS 1 |
| 1000-100F | XXXXXXXXXXXXXXXXXXXX | COIN COUNTER RIGHT |
| | XXXXXXXXXXXXXXXXXXXX | COIN COUNTER CENTER |
| | XXXXXXXXXXXXXXXXXXXX | COIN COUNTER LEFT |
| | XXXXXXXXXXXXXXXXXXXX | VIDEO INVERT X |
| | XXXXXXXXXXXXXXXXXXXX | VIDEO INVERT Y |
| 1200-120F | XXXXXXXXXXXXXXXXXXXX | VECTOR GENERATOR G0 |
| 1400-140F | XXXXXXXXXXXXXXXXXXXX | WATCHDOG CLEAR |
| 1600-160F | XXXXXXXXXXXXXXXXXXXX | VECTOR GENERATOR RESET |
| 0000-00FF | XXXXXXXXXXXXXXXXXXXX | I/O FOR AUX BD |
| 2000-200F | XXXXXXXXXXXXXXXXXXXX | VECTOR RAM (2K) |
| 2200-220F | XXXXXXXXXXXXXXXXXXXX | VECTOR RAM/VECTOR ROM (2K) |
| 2400-240F | XXXXXXXXXXXXXXXXXXXX | VECTOR ROM (4K) |
| 2600-260F | XXXXXXXXXXXXXXXXXXXX | PROGRAM ROM (4K) |
| 2800-280F | XXXXXXXXXXXXXXXXXXXX | PROGRAM ROM (8K) |

REFERENCE DESIG

| HIGHEST | NOT USED |
|---------|----------|
| CR12 | |
| Q9 | |
| VR3 | |
| SW4 | |
| RP2 | |
| R133 | |
| C106 | |

| REVISIONS | | | | | |
|-----------|--|---------|-------|-------|----------|
| SYM | DESCRIPTION | DATE | INCRP | CHECK | APPROVED |
| 2 | PROTOTYPE & UPDATE | 4-1-80 | | | |
| 3 | PRE-PROD. REL. | 6-22-81 | EM | | JM 7/20 |
| A | PROD. REL. | 7/3/81 | EM | | JM 7/20 |
| B | REV ECU 8166, 8175, 8184, 8211, 8231, 8237, 8240, 8251 | 10/1/81 | DML | | JM 7/20 |

- NOTES:
- DENOTES J20 CONNECTOR
 - " TEST "
 - ◇ " J19 "

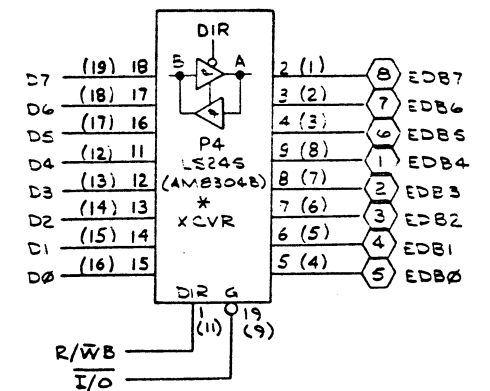
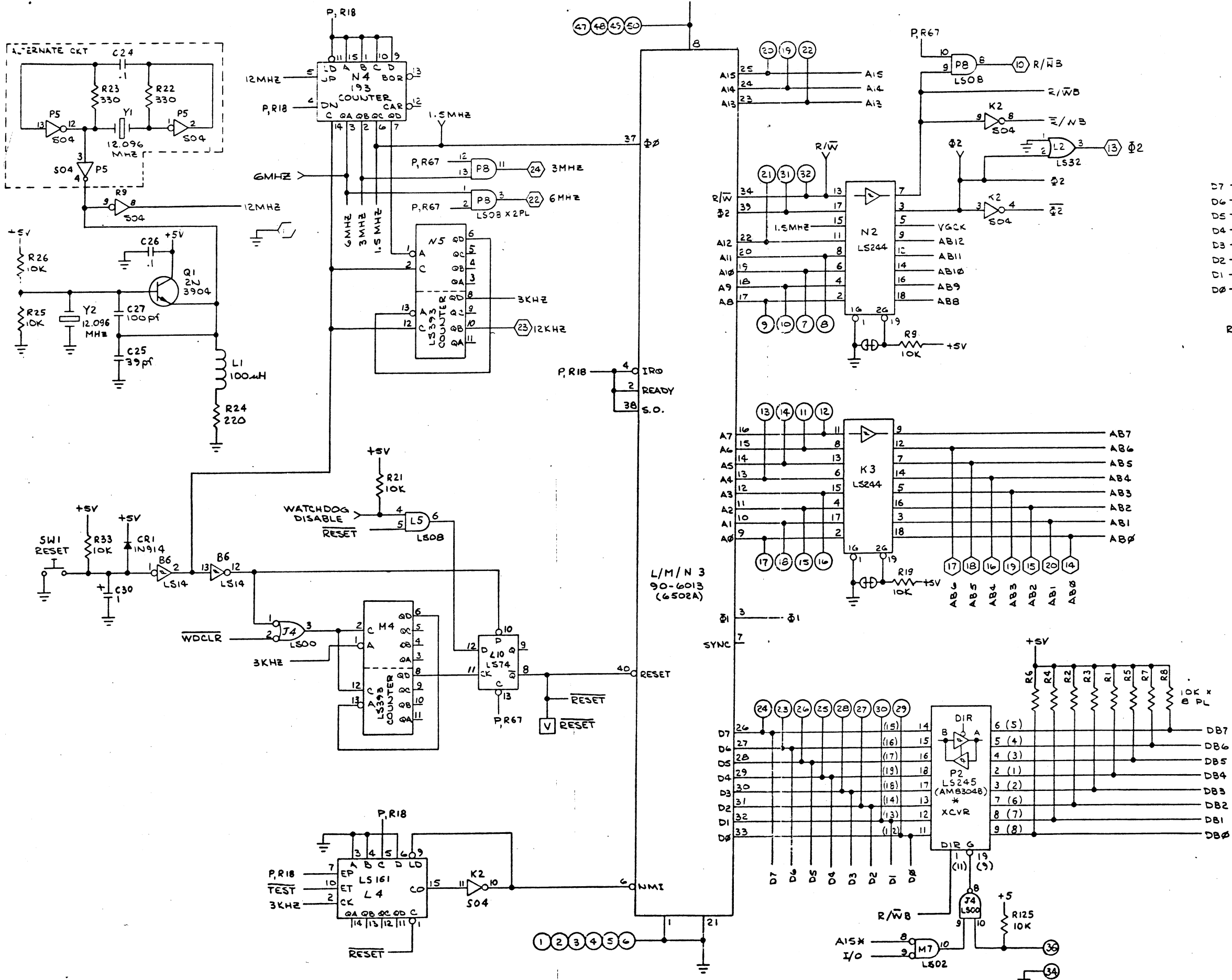


HISTORY PRINT

-01 = MC3410 DAC
-02 = AM6012 ADC

| | | | |
|---|--|---|---|
| AD35742 | DO NOT SCALE DRAWING | DRAWN BY: <i>F. Taha</i> DATE: 4-1-80 | <p>Atari, Inc. 1285 Borregas Avenue Sunnyvale, Calif. 94086</p> |
| NEXT ASSY | FIRST USED ON | CHECKED BY: DATE: | |
| GOUTSTANDING ECNS | UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: | ENGR. MECH DATE: | TITLE SCHEMATIC, 6502A ANALOG VECTOR GENERATOR P.C. BD. |
| | ANGLES: 30° 45° 90° | ENGR. ELECT DATE: | |
| | SURFACE FINISH: 1112-2 | INDUSTRIAL DESIGN DATE: | |
| | FINISH: | HARNES DESIGN DATE: | |
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| | MFG ENGR DATE: | SCALE: - SHEET 1 OF 7 | |

| REVISIONS | | | | | |
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| SYM | DESCRIPTION | DATE | INCRP | CHECK | APPROVED |
| - | SEE SHEET ONE | | | | |



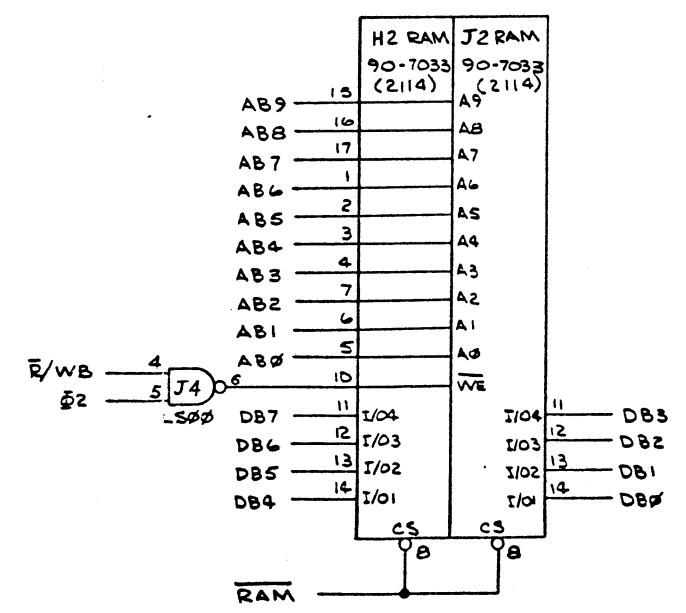
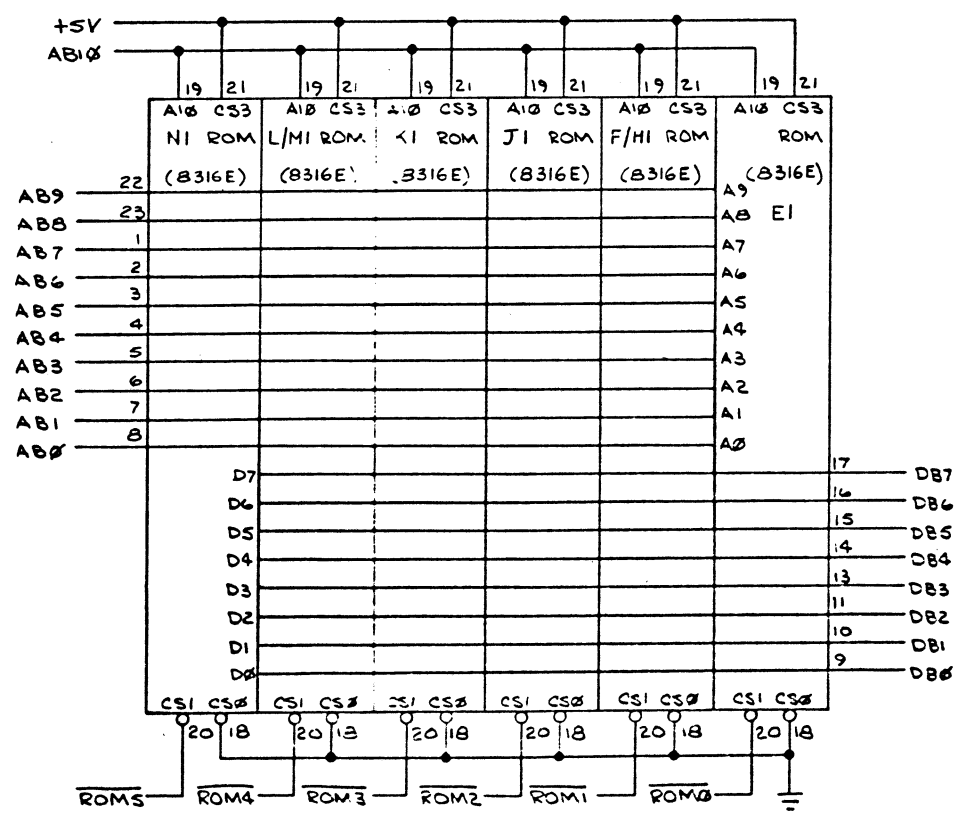
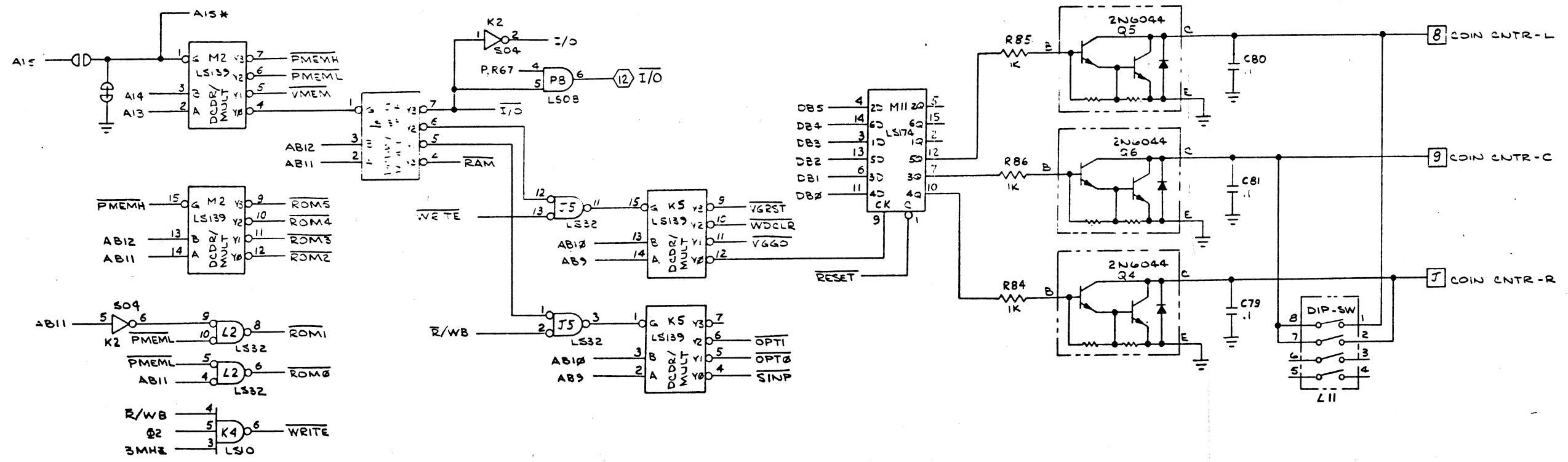
NOTE:
 * USE NUMBERS IN PARENTHESES IF BOARD CONTAINS AMB304B INSTEAD OF 74LS245, 2 PLACES THIS PAGE.

HISTORY PRINT

SYNC, RESET, MICROPROCESSOR

| | | |
|--|-----------------------|--|
| | | Atari, Inc. 1265 Borregas Avenue Sunnyvale, Calif. 94095 |
| TITLE SCHEMATIC, 6502A ANALOG VECTOR GENERATOR P.C. BD | | |
| SIZE D | DRAWING NO. 035742-XX | REV B |
| SCALE - | SHEET 2 OF 7 | |

| REVISIONS | | | | |
|-----------|---------------|------|-------|----------|
| SYM | DESCRIPTION | DATE | INCRP | APPROVED |
| - | SEE SHEET ONE | | | |



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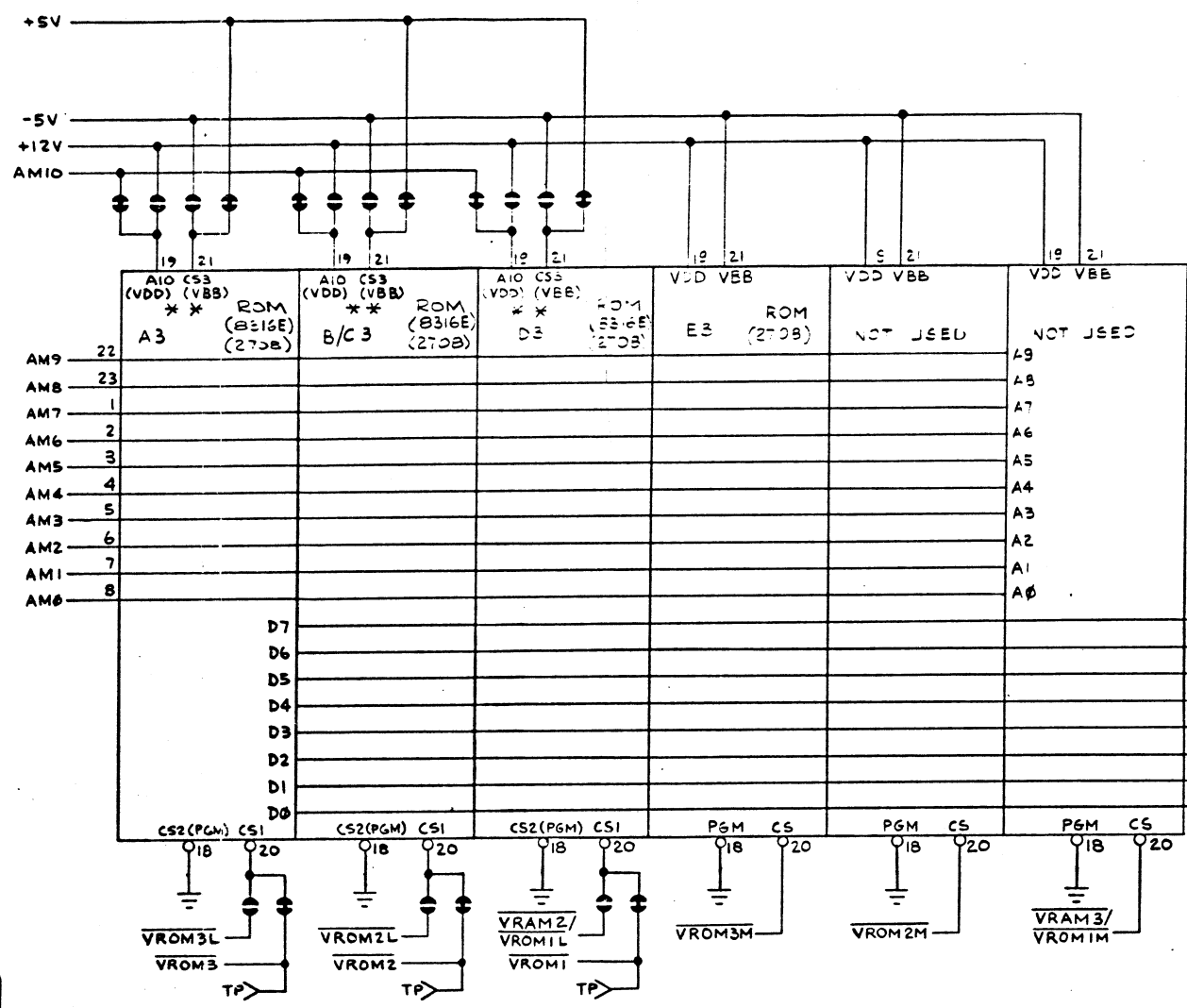
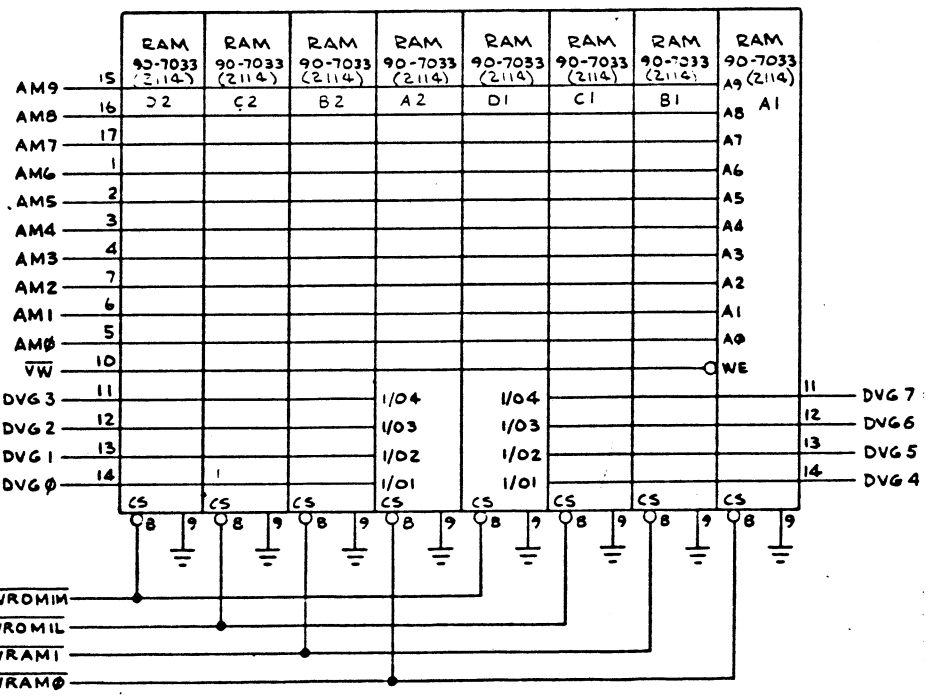
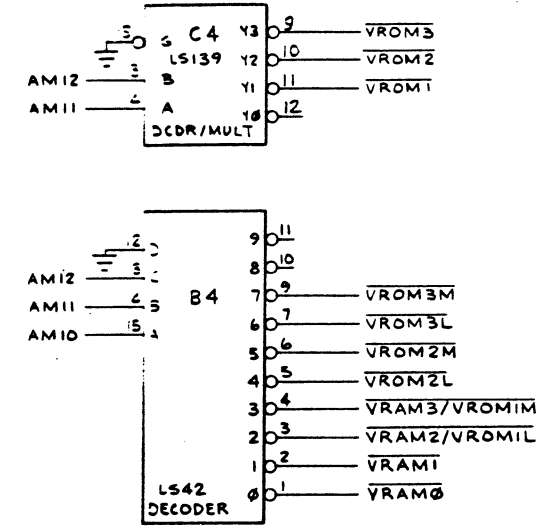
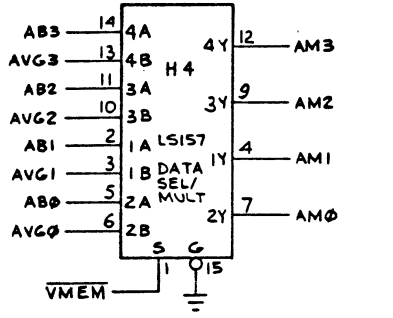
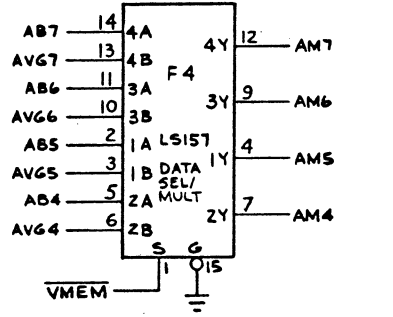
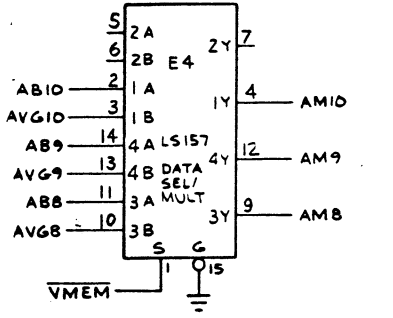
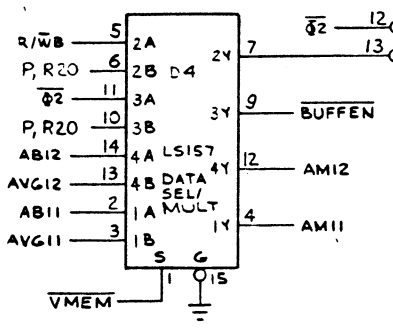
DECODE, COIN DRIVER, MEMORY

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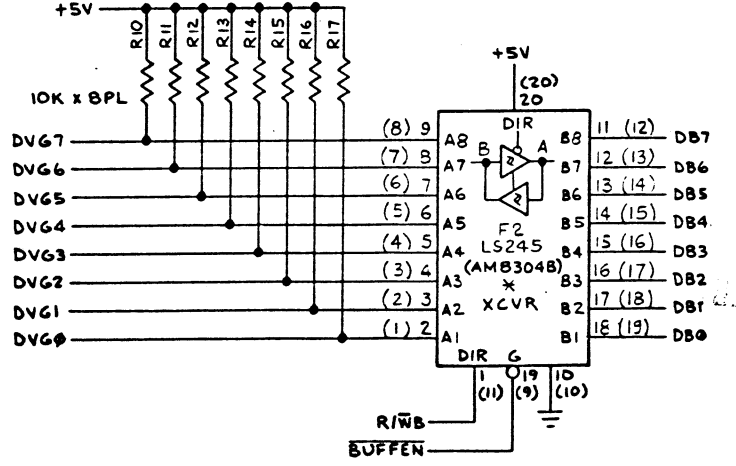
TITLE
SCHEMATIC,
6502A ANALOG VECTOR
GENERATOR P.C. BD

| | | |
|-----------|--------------------------|----------|
| SIZE D | DRAWING NO. 035742-XX | REV B |
| SCALE | SHEET 3 OF 7 | |

| REVISIONS | | | | |
|-----------|-------------|------|--------|----------|
| SYM | DESCRIPTION | DATE | INCORP | APPROVED |
| - | SEE SHEET 1 | | | |



NOTE:
 ** SPLIT PAD CONNECTIONS APPLICABLE TO USE OF 8316E'S. USE OF 2708'S REQUIRE BRIDGING OF OPEN PADS AND CUTTING OF CONNECTED PADS, 3 PLACES, THIS PAGE



NOTE: * USE NUMBERS IN PARENTHESES IF BOARD CONTAINS AM8304B INSTEAD OF 74LS245

VECTOR MUX, VECTOR MEM

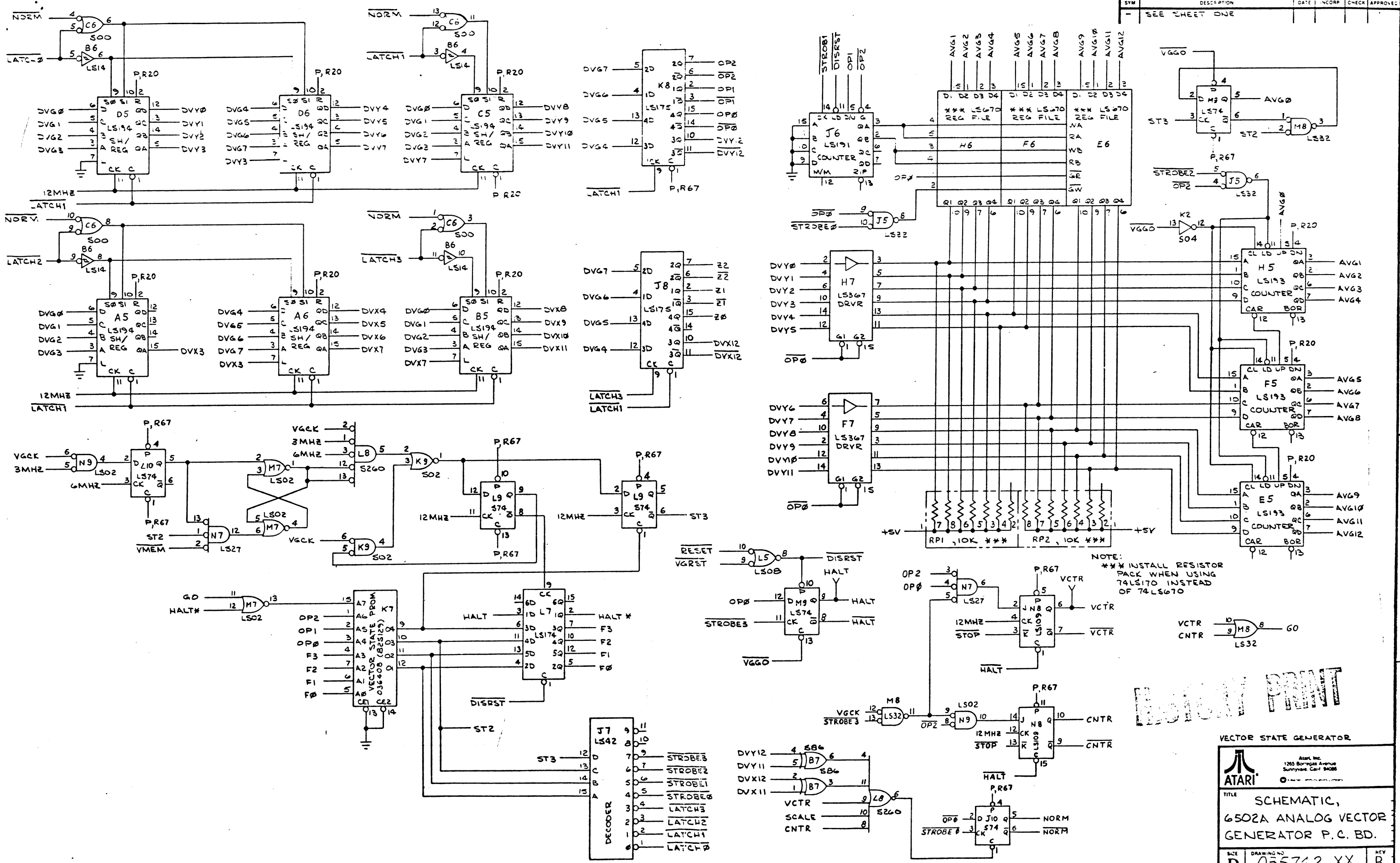
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TITLE
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 6502A ANALOG VECTOR
 GENERATOR P.C. BD.

SIZE D DRAWING NO 035742-XX REV B

SCALE SHEET 2 OF 7

| REVISIONS | | | | |
|-----------|---------------|------|---------|----------------|
| SYM | DESCRIPTION | DATE | IN CORP | CHECK APPROVED |
| - | SEE SHEET ONE | | | |



NOTE:
 *** INSTALL RESISTOR
 PACK WHEN USING
 74LS170 INSTEAD
 OF 74LS670

PRINT

VECTOR STATE GENERATOR

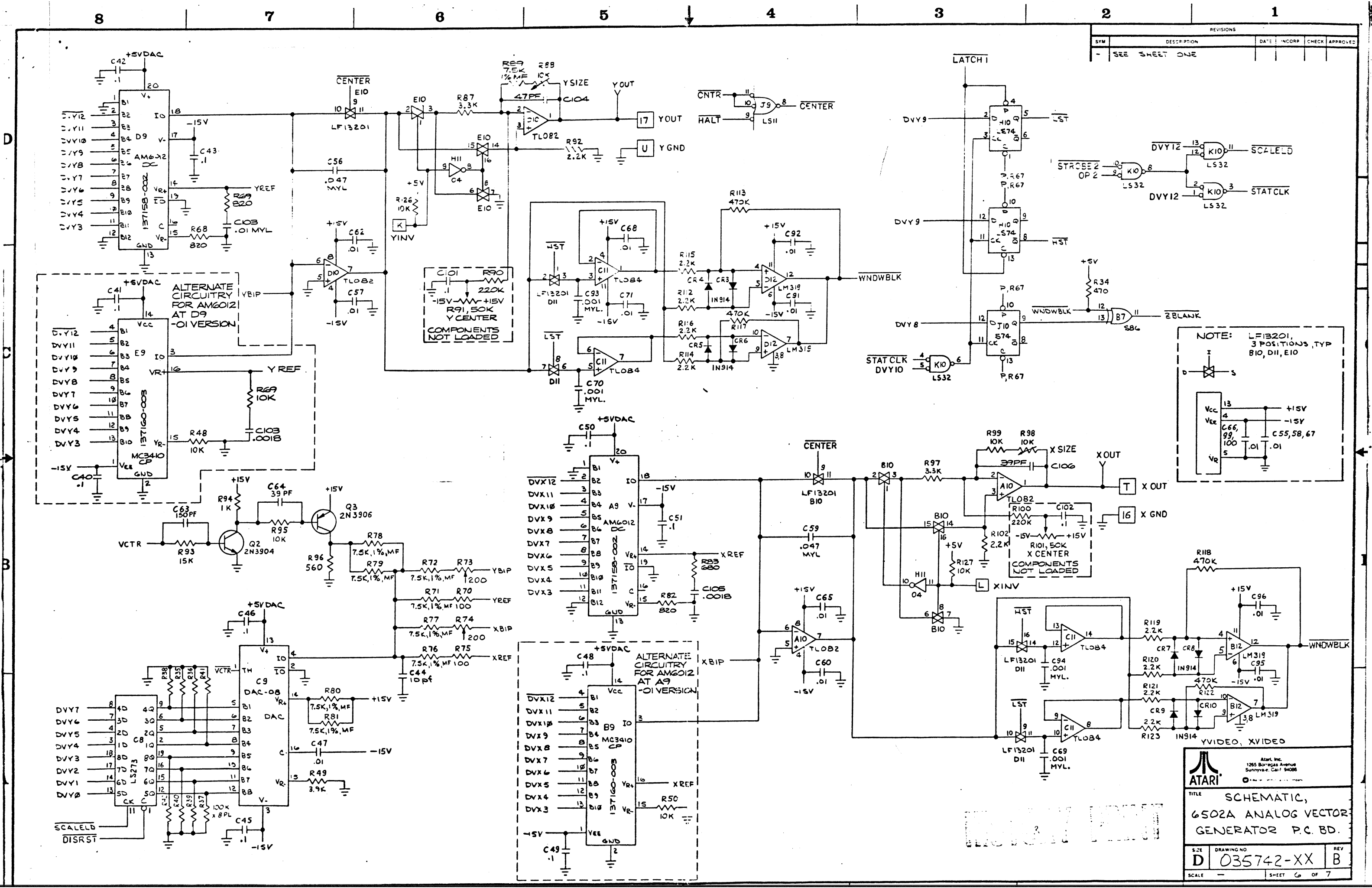
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TITLE: SCHEMATIC,
 6502A ANALOG VECTOR
 GENERATOR P.C. BD.

SIZE: D
 DRAWING NO: 035742-XX
 REV: B

SCALE: - SHEET 5 OF 7

| REVISIONS | | | | |
|-----------|---------------|------|--------|----------------|
| SYM | DESCRIPTION | DATE | INCORP | CHECK APPROVED |
| - | SEE SHEET ONE | | | |



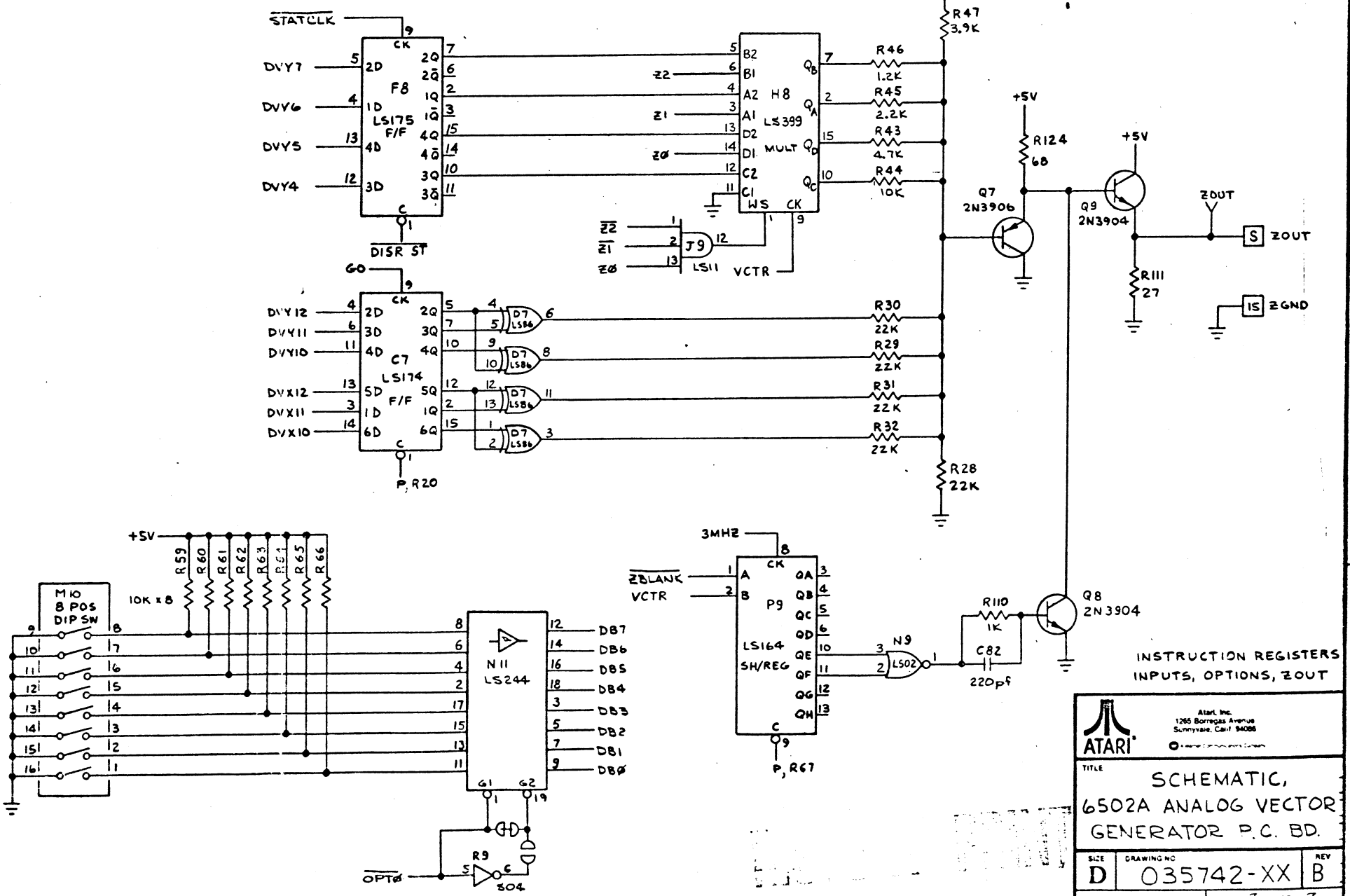
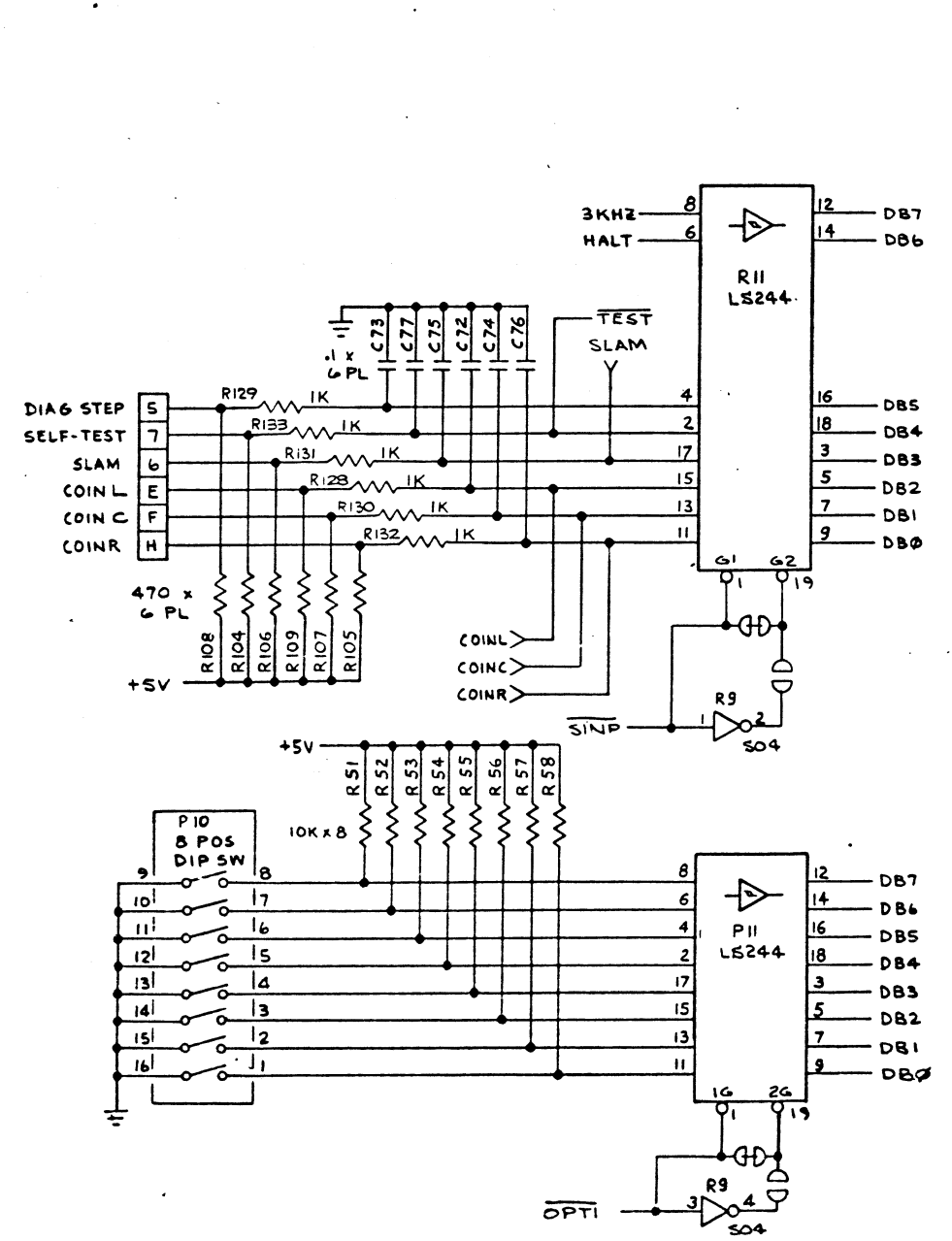
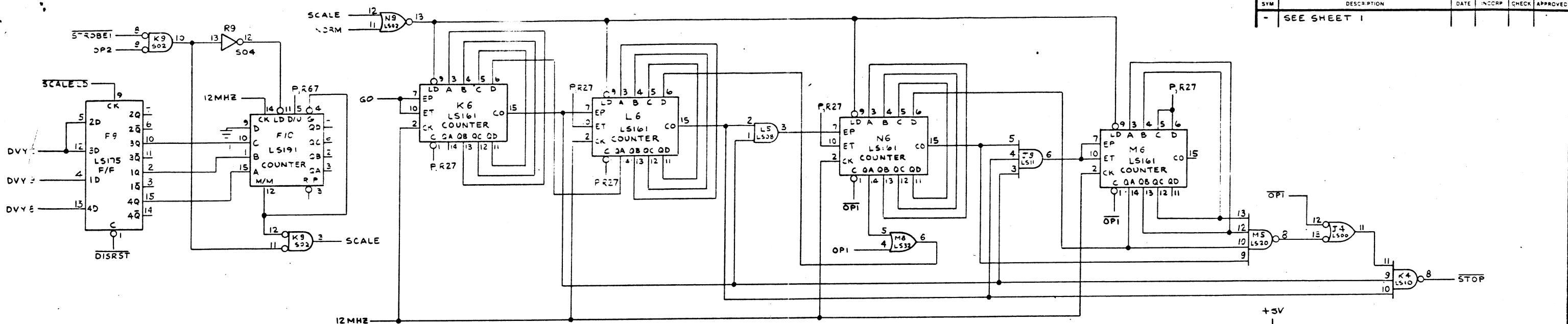
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 Sunnyvale, Calif. 94086

TITLE: SCHEMATIC,
 6502A ANALOG VECTOR
 GENERATOR P.C. BD.

S2E DRAWING NO. REV
D 035742-XX **B**

SCALE: SHEET 6 OF 7

| REVISIONS | | | | |
|-----------|-------------|------|-------|----------|
| SYM | DESCRIPTION | DATE | INCRP | APPROVED |
| - | SEE SHEET 1 | | | |



INSTRUCTION REGISTERS INPUTS, OPTIONS, ZOUT

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TITLE SCHEMATIC,
6502A ANALOG VECTOR
GENERATOR P.C. BD.

SIZE D DRAWING NO. 035742-XX REV B

SCALE - SHEET 7 OF 7

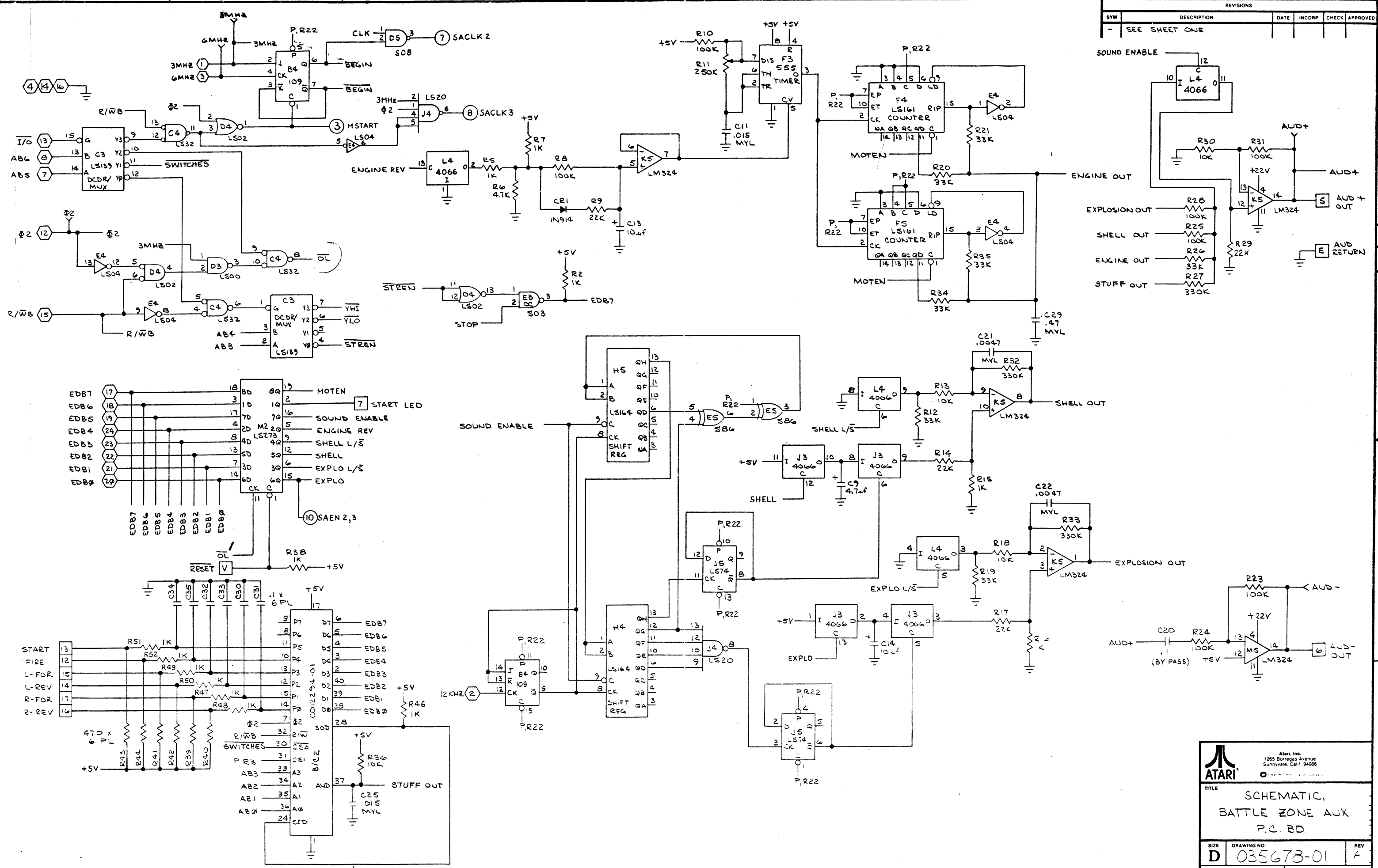
| REVISIONS | | | | |
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| SYM | DESCRIPTION | DATE | INCRP | CHECK APPROVED |
| - | SEE SHEET ONE | | | |

D

C

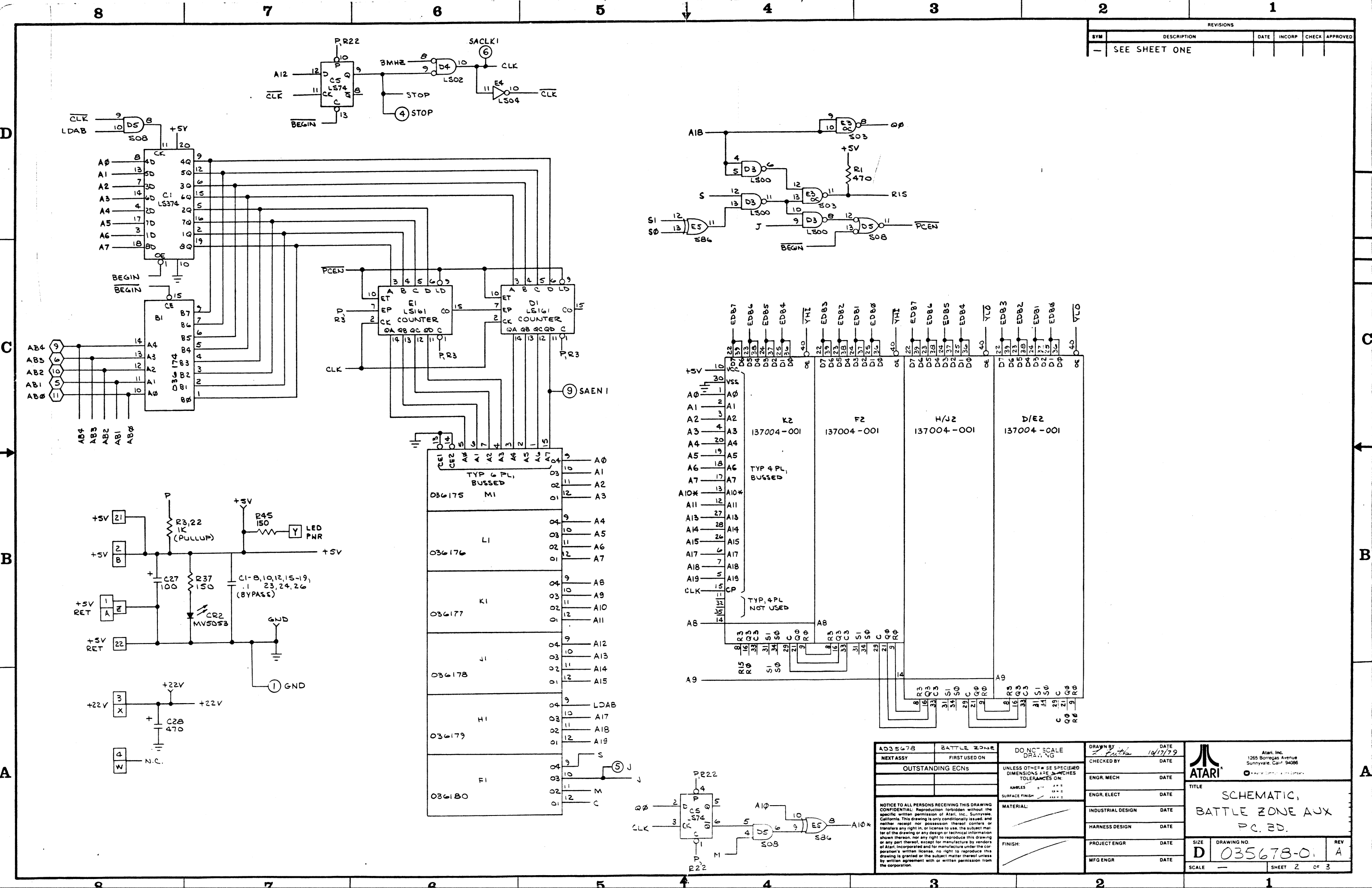
B

A



ATARI
 TITLE: SCHEMATIC, BATTLE ZONE AUX P.C. BD
 SIZE: D
 DRAWING NO.: 035678-01
 REV: A
 SCALE: — SHEET 3 OF 3

| REVISIONS | | | | |
|-----------|---------------|------|-------|----------------|
| SYM | DESCRIPTION | DATE | INCRP | CHECK APPROVED |
| - | SEE SHEET ONE | | | |



| | | | | |
|------------------|---------------|--|---------------------------------------|--|
| AD35678 | BATTLE ZONE | DO NOT SCALE DRAWING | DRAWN BY <i>Z. L...</i> DATE 10/17/79 | Atari, Inc. 1265 Borregas Avenue Sunnyvale, Calif. 94086 |
| NEXT ASSY | FIRST USED ON | | CHECKED BY DATE | |
| OUTSTANDING ECNS | | UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: | ENGR. MECH DATE | TITLE |
| | | ANGLES: 30° 45° 60° 90° 120° 135° 150° 180° | ENGR. ELECT DATE | SCHEMATIC, BATTLE ZONE AUX PC. BD. |
| | | SURFACE FINISH: AS BUILT | INDUSTRIAL DESIGN DATE | |
| | | MATERIAL: | HARNES DESIGN DATE | PROJECT ENGR DATE |
| | | FINISH: | MFG ENGR DATE | SIZE D |
| | | | | DRAWING NO. 035678-01 |
| | | | | SCALE - |
| | | | | SHEET 2 OF 3 |

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| IC CHART | | | | | | | | UNUSED GATES |
|---------------|-------------------|-----|------|------|------|------|-----|--------------|
| TYPE | VOLTAGE / PIN NO. | | | | | | | |
| | GND | +5V | +22V | +12V | +15V | -15V | -5V | |
| 74LS00 | 7 | 14 | | | | | | |
| 74LS02 | 7 | 14 | | | | | | |
| 74LS03 | 7 | 14 | | | | | | E3 |
| 74LS04 | 7 | 14 | | | | | | |
| 7407 | 7 | 14 | | | | | | |
| 74S08 | 7 | 14 | | | | | | |
| 74LS20 | 7 | 14 | | | | | | |
| 74LS32 | 7 | 14 | | | | | | C4 |
| 74LS74 | 7 | 14 | | | | | | |
| 74S86 | 7 | 14 | | | | | | |
| 74109 | 8 | 16 | | | | | | |
| 74LS139 | 8 | 16 | | | | | | |
| 74LS161 | 8 | 16 | | | | | | |
| 74LS164 | 7 | 14 | | | | | | |
| 74LS273 | 10 | 20 | | | | | | |
| 74LS374 | 10 | 20 | | | | | | |
| LM324 | 11 | | 4 | | | | | M5, M5, M5 |
| 555 | 1 | 8 | | | | | | |
| 4066 | 7 | 14 | | | | | | |
| CO12294 - O1 | 1 | 17 | | | | | | |
| 137004 - 001 | 30 | 10 | | | | | | |
| 82S123 (PROM) | 8 | 16 | | | | | | |
| 82S129 (PROM) | 8 | 16 | | | | | | |

| MEMORY MAP | | | | | | | | | | | |
|-------------|----------|------------|--------------------|--|--|--|--|--|--|--|--|
| HEX/DECIMAL | ADDRESS | DATA | FUNCTION | | | | | | | | |
| | 00000000 | XXXXXXXXXX | BOARD NOT ENABLED | | | | | | | | |
| | 00000001 | XXXXXXXXXX | MBOX STATUS | | | | | | | | |
| | 00000002 | XXXXXXXXXX | MBOX READ LOW | | | | | | | | |
| | 00000003 | XXXXXXXXXX | MBOX READ HI | | | | | | | | |
| | 00000004 | XXXXXXXXXX | SWITCHES | | | | | | | | |
| | 00000005 | XXXXXXXXXX | MOTOR SOUND | | | | | | | | |
| | 00000006 | XXXXXXXXXX | START LED | | | | | | | | |
| | 00000007 | XXXXXXXXXX | SOUND ENABLE | | | | | | | | |
| | 00000008 | XXXXXXXXXX | ENGINE REV. | | | | | | | | |
| | 00000009 | XXXXXXXXXX | SHELL LOUDNESS | | | | | | | | |
| | 0000000A | XXXXXXXXXX | SHELL SOUND | | | | | | | | |
| | 0000000B | XXXXXXXXXX | EXPLOSION LOUDNESS | | | | | | | | |
| | 0000000C | XXXXXXXXXX | EXPLOSION SOUND | | | | | | | | |
| | 0000000D | XXXXXXXXXX | MBOX START | | | | | | | | |

| REVISIONS | | | | |
|-----------|---------------------|---------|--------|----------|
| SYM | DESCRIPTION | DATE | INCORP | APPROVED |
| 3 | PRE - PROD. RELEASE | 6/18/80 | EM | |
| A | PROD REL. | 7/4/80 | EM | |

| REFERENCE DESIG | |
|-----------------|----------|
| HIGHEST | NOT USED |
| R 52 | R 4 |
| C 35 | |
| CR 2 | |

- NOTES:
- 44 PIN EDGE CONNECTOR
 - 24 PIN STRIP CONNECTOR
 - 12 PIN TEST CONNECTOR

| | | | |
|--|---------------|--|--|
| A035678 | BATTLE ZONE | DO NOT SCALE DRAWING | DRAWN BY E M DATE 6/12/80 |
| NEXT ASSY | FIRST USED ON | UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: | CHECKED BY DATE |
| OUTSTANDING ECNS | | ANGLES ±1° ±.2° | ENGR. MECH DATE |
| | | SURFACE FINISH ±.012 | ENGR. ELECT DATE 6/20/80 |
| | | MATERIAL: | INDUSTRIAL DESIGN DATE |
| | | FINISH: | HARNES DESIGN DATE |
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| | | | MFG ENGR DATE 7/1/80 |
| ATARI Atari, Inc. 1265 Borregas Avenue Sunnyvale, Calif. 94086 | | | TITLE SCHEMATIC, BATTLE ZONE AUX. P.C. BD. |
| SIZE D | | DRAWING NO. 035678 - 01 | REV A |
| SCALE - | | SHEET 1 OF 3 | |

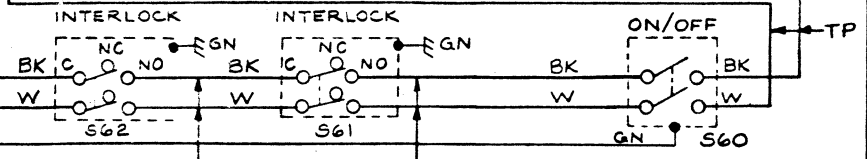
VECTOR GENERATOR PCB
SCHEM 035742-XX

- P19
- P20
- RESET
- +5V OUT
- GND
- COIN L
- COIN C
- COIN R
- TEST
- SLAM
- COIN CNTR R
- COIN CNTR C
- COIN CNTR L
- 5VDC
- GND
- 22VDC
- GND
- +12VDC
- +22VDC
- +5V REG
- +5V RTN
- +5V RTN
- +5V RTN
- +SENSE
- SENSE
- +5V RTN
- Z OUT
- Y OUT
- X OUT
- Z GND
- Y GND
- X GND

POWER SUPPLY SCHEM. 035887-01

- P5
- 60 VAC CT
- 60 VAC CT
- 6.1 VAC
- 36 VAC CT
- GND
- GND
- 10.6 VDC
- 10.6 VDC
- 10.6 VDC
- 120 VAC OUT
- AC OUT
- AC
- ZC
- GND

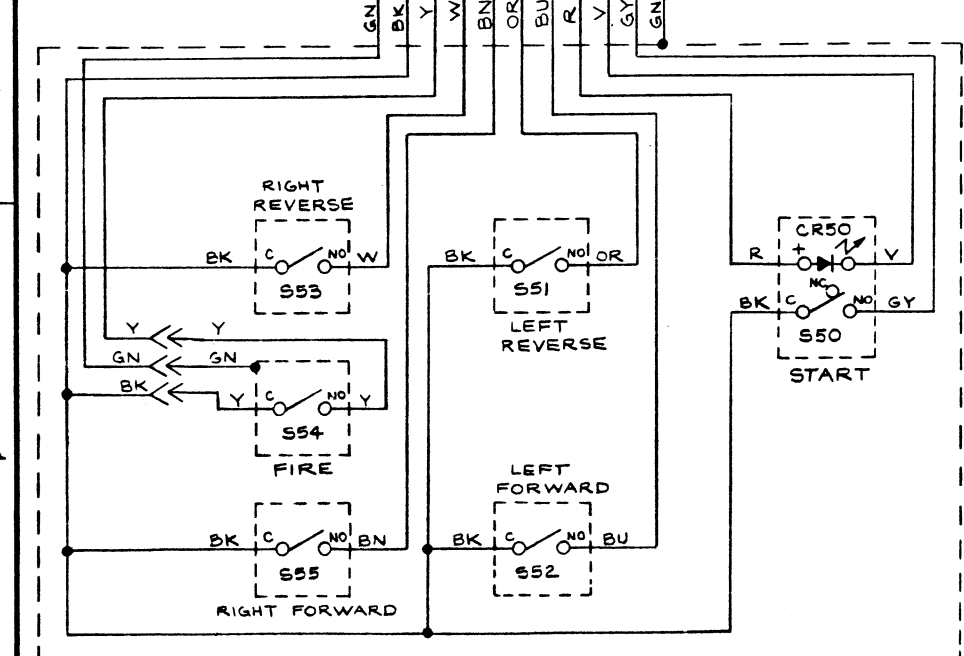
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|-----------|------------------|----------|-------|----------------|
| SYM | DESCRIPTION | DATE | INCRP | CHECK APPROVED |
| 1 | PRE-PROD REL | 5/7/80 | | |
| A | PROD REL | 8/19/80 | | |
| B | REV PER ECN 8155 | 11/15/80 | | |
| C | REV PER ECN 8221 | 11/15/80 | | |



AUX PCB
SCHEM 035678-01

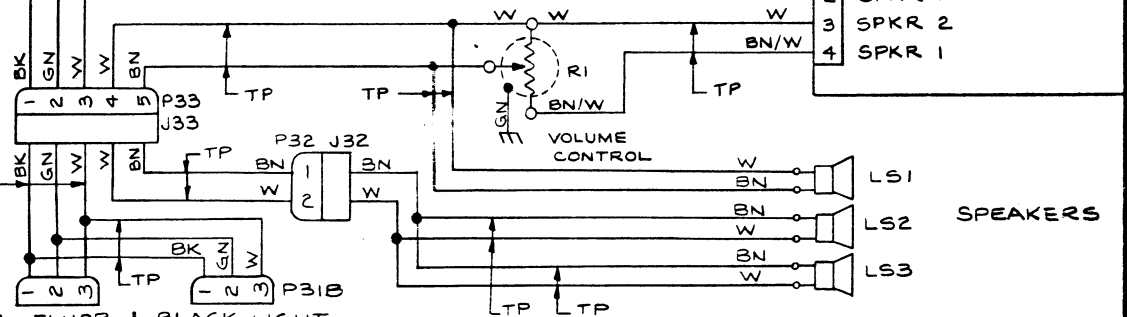
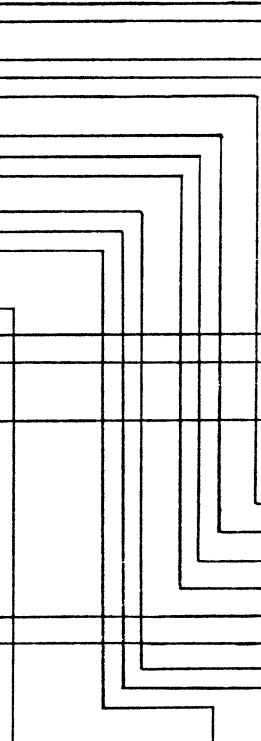
- P18
- RESET
- +5V
- START
- START LED
- LED PWR
- LFT FORWARD
- LFT REVERSE
- RT FORWARD
- RT REVERSE
- FIRE
- GND
- GND
- AUDIO -OUT
- AUDIO +OUT
- +22VDC
- +5V RTN
- +5V RTN
- AUDIO RTN

- P17/24
- V
- R
- BK
- Y
- BN
- OR
- W
- GY
- BU/BK
- GN/BK
- V/BK
- R/BK
- R/GN
- BN/W
- R/GN
- W/GY
- W/BN
- R/W
- R/W
- R/GN
- R/Y
- R/BU
- R/GN
- R
- OR
- Y
- BK
- PK
- BK
- X



MONITOR

- P22
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16



FOR FLUOR. & BLACK LIGHT
WIRING DIAGRAM SEE 035833-01

FOR COIN DOOR SCHEMATIC
SEE 034988-01

NOTE:
USED WITH COIN DOOR ASSYS NOT
EQUIPPED WITH TEST SWITCH.

| | | | | | | | |
|------------------|--|---|--|------------------------------|--|---|--|
| BATTLE ZONE | | DO NOT SCALE DRAWING | | DRAWN BY STEVIE DATE 4/22/80 | | ATARI Atari, Inc. 1265 Borregas Avenue Sunnyvale, Calif. 94085 | |
| NEXT ASSY | | FIRST USED ON | | CHECKED BY DATE 5/2/80 | | TITLE | |
| OUTSTANDING ECNS | | UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | ENGR. MECH DATE | | WIRING DIAGRAM (BATTLE ZONE) | |
| | | ANGLES ±1° ±2° | | ENGR. ELECT DATE | | SIZE DRAWING NO. | |
| | | SURFACE FINISH ✓ | | INDUSTRIAL DESIGN DATE | | D 036242-01 | |
| | | MATERIAL | | HARNESS DESIGN DATE 5/1/80 | | REV | |
| | | FINISH | | PROJECT ENGR DATE 8-6-80 | | C | |
| | | | | MFG ENGR DATE 8-6-80 | | SCALE SHEET OF | |