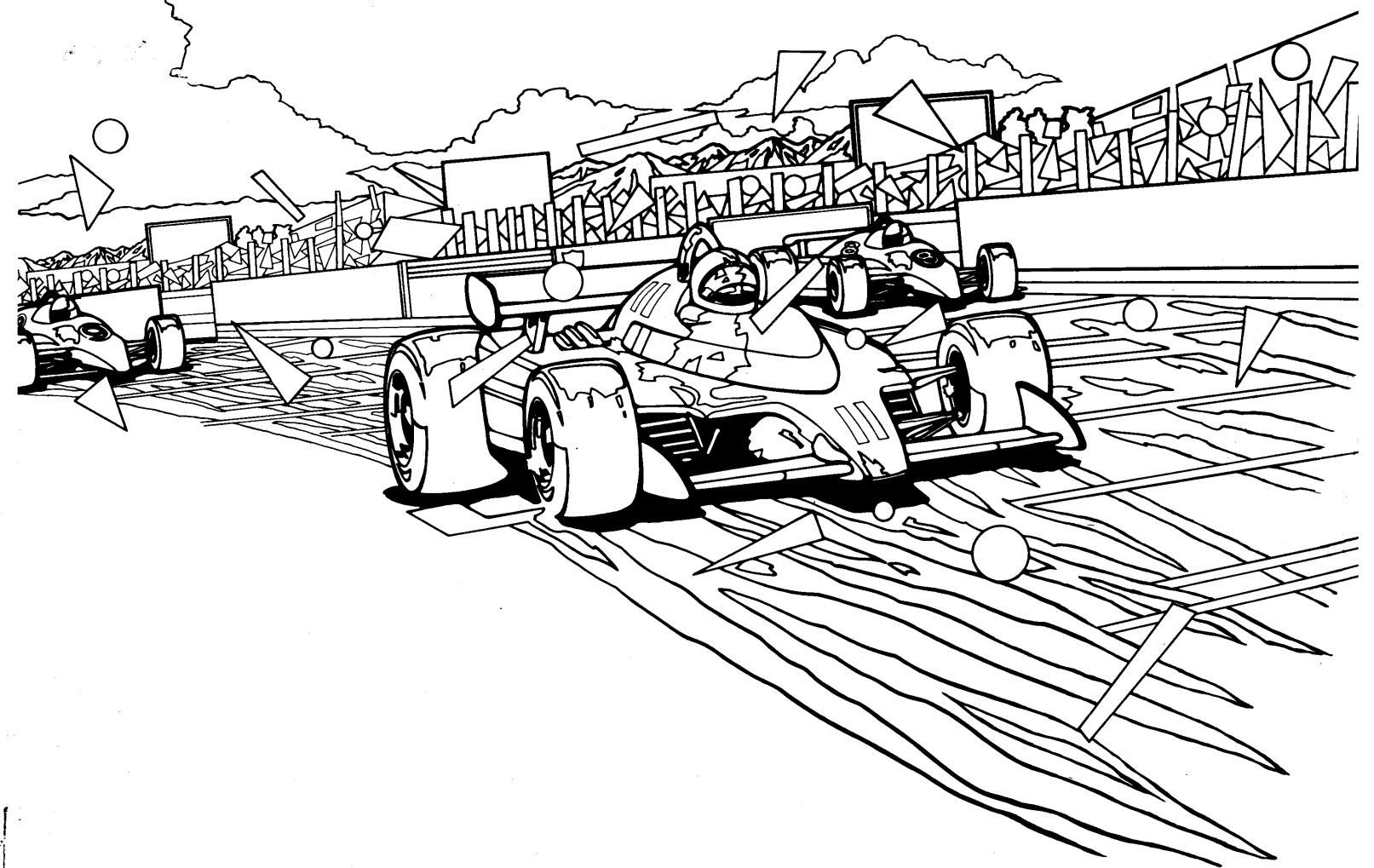


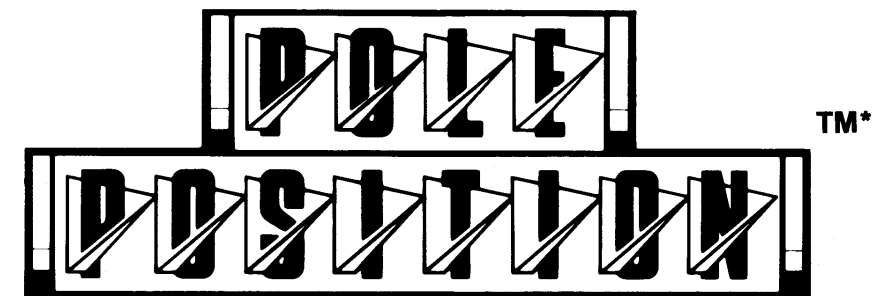
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NOTE  
This staple temporarily holds the schematic package together. Remove the staple before using these schematics.

|           |  |
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| Sheet 2A  | Pole Position Sit-Down Main Wiring Diagram (039464-01 B)   |
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## Schematic Package Supplement to

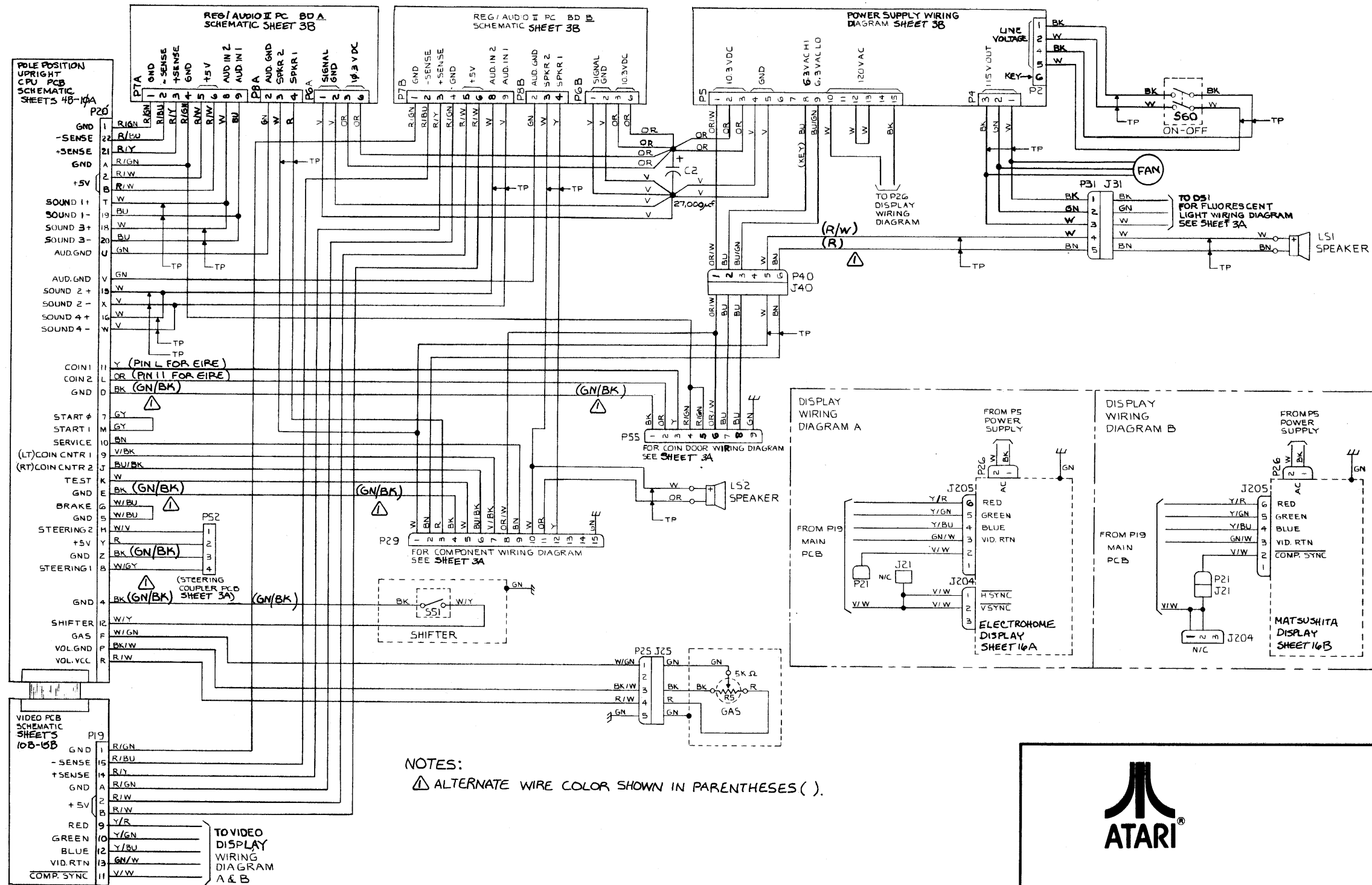



## Operation, Maintenance, and Service Manual

\*Pole Position is engineered and designed by Namco Ltd. Manufactured under license by Atari, Inc.

2M

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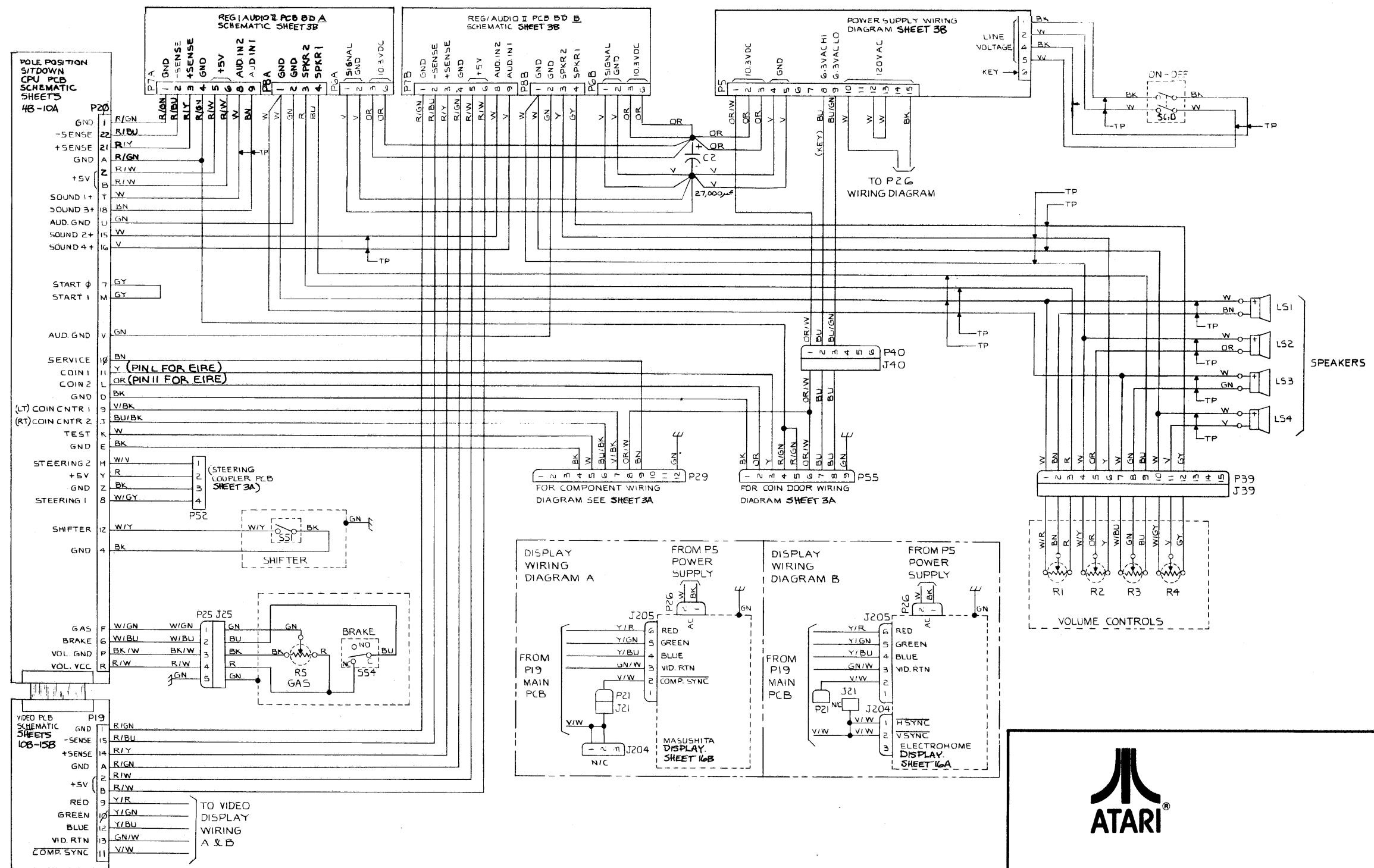



  
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**Pole Position Upright Main Wiring Diagram**

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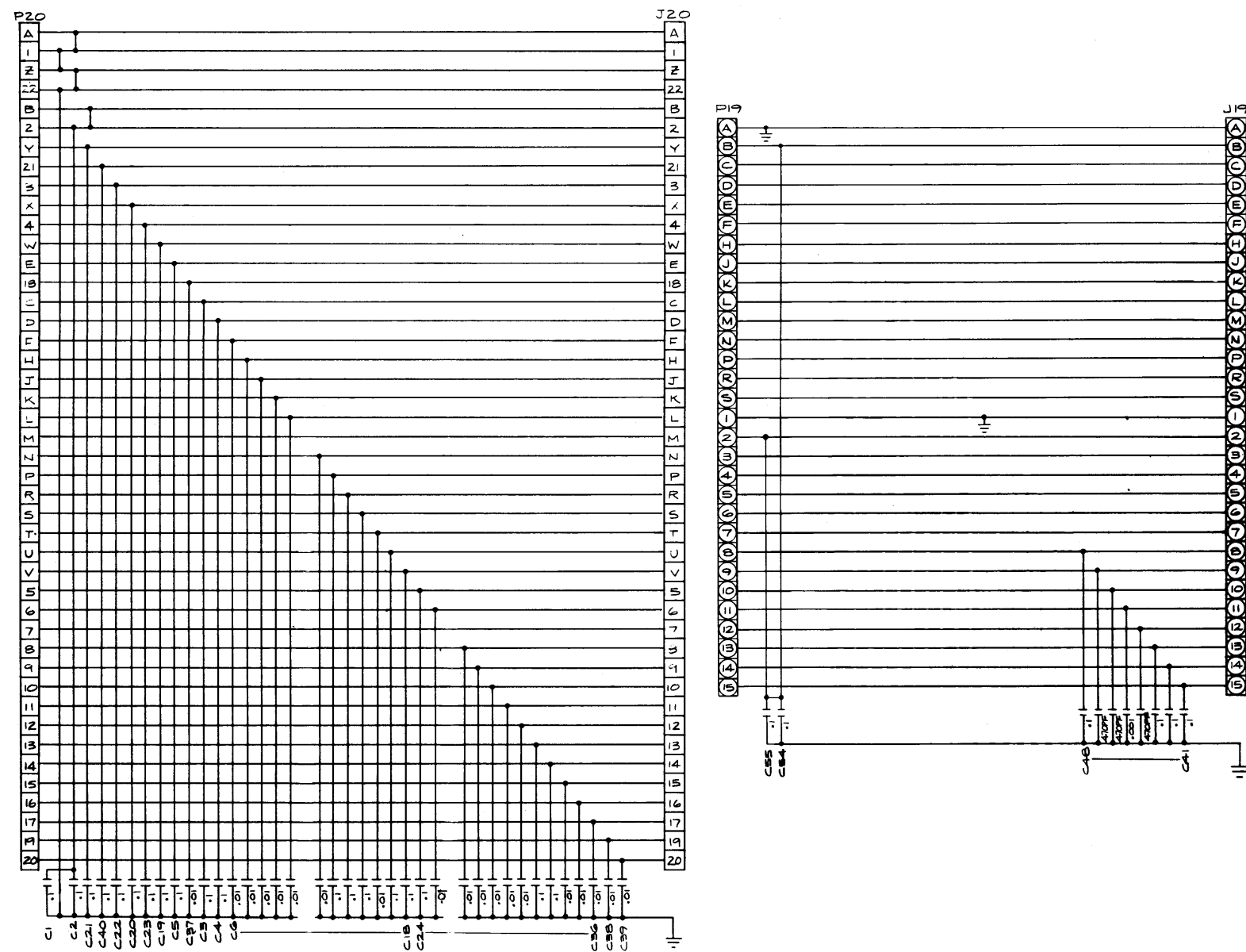
  
**ATARI**

**Pole Position Sit-Down Main Wiring Diagram**

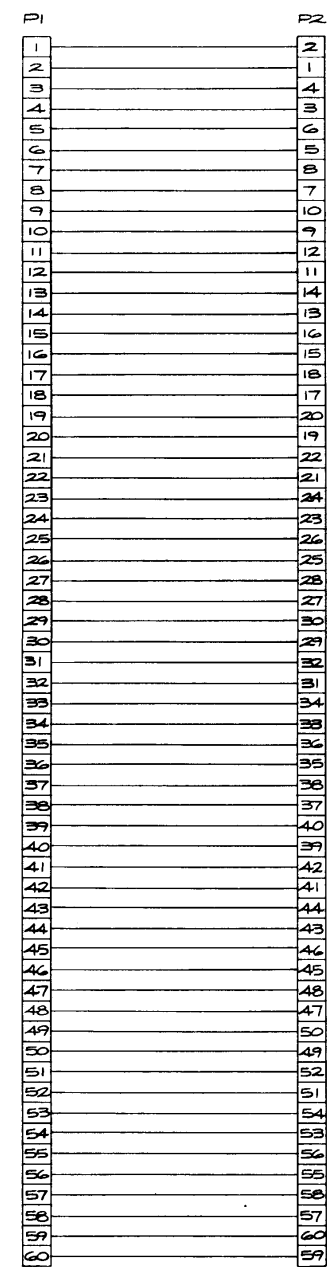
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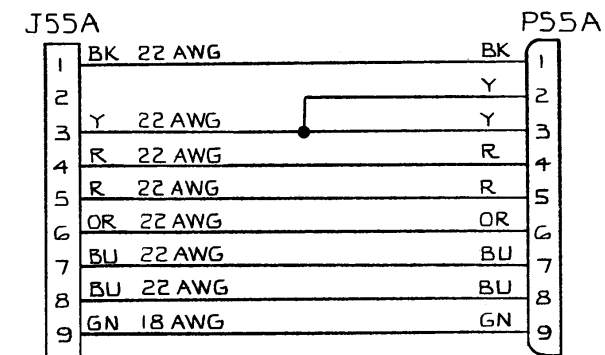
### EMI Shield PCB Wiring Diagram



### EMI End PCB Wiring Diagram



### Coin Option Interconnect Wiring Diagram

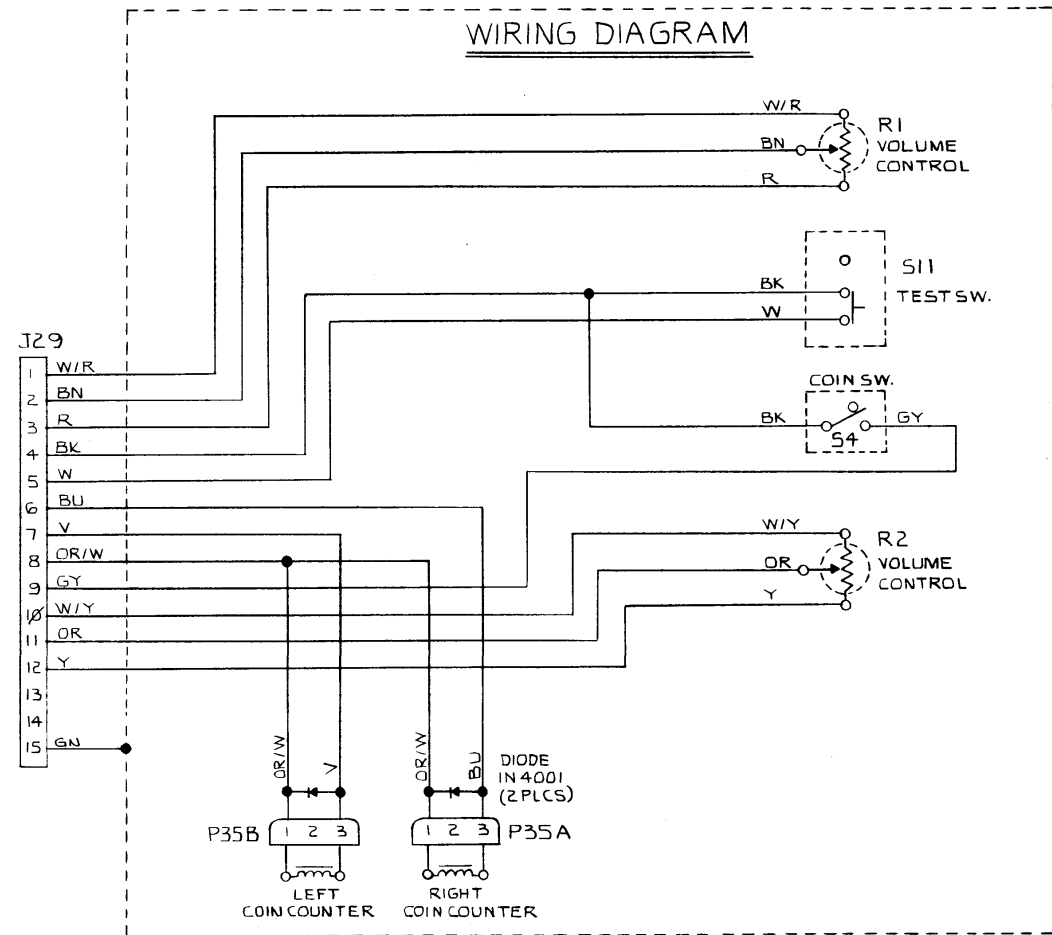


### Pole Position Game Wiring Interfaces

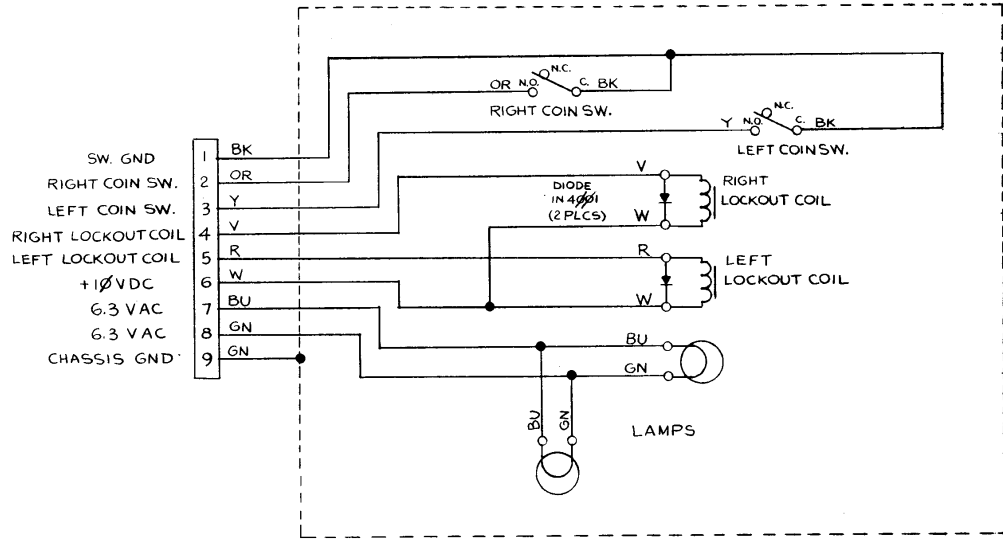
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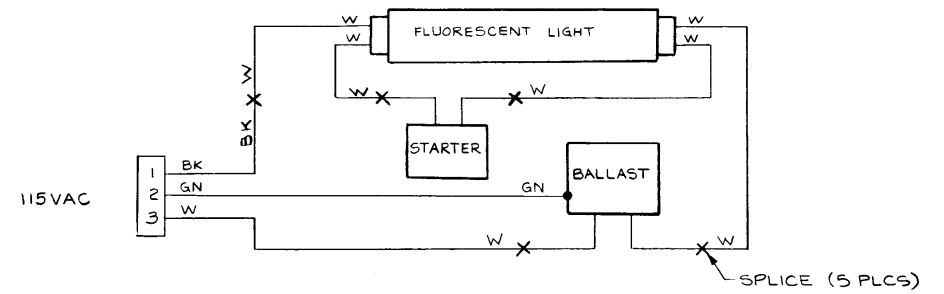
**Upright Utility-Panel Wiring Diagram**



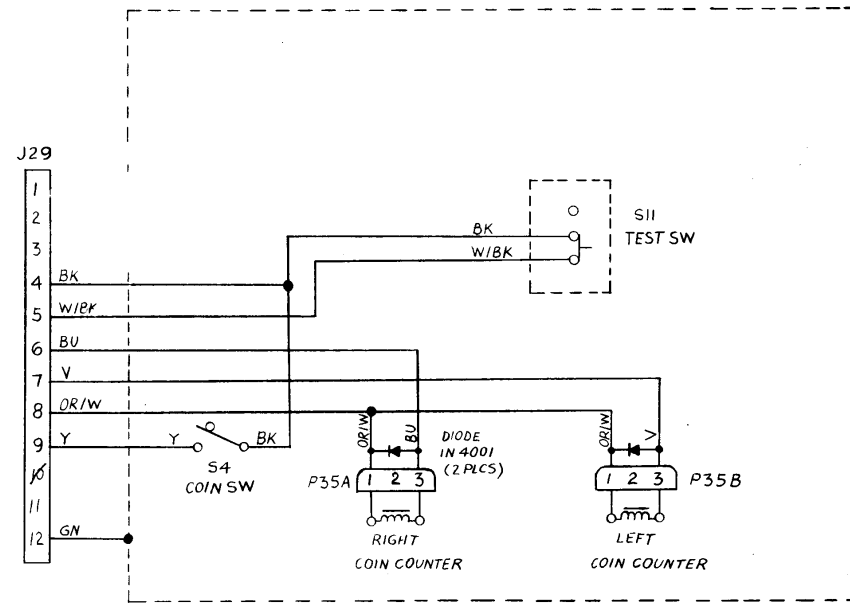
**Coin-Door Wiring Diagram**



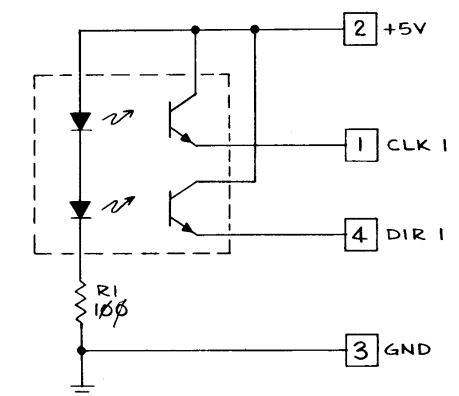
**Upright-Only Fluorescent Light Wiring Diagram**



**Sit-Down Utility-Panel Wiring Diagram**



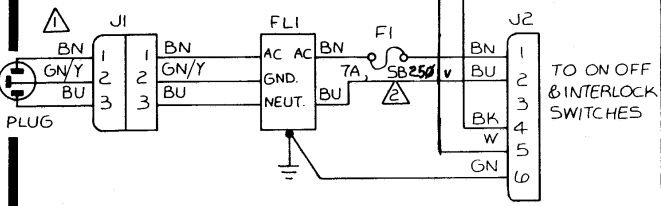
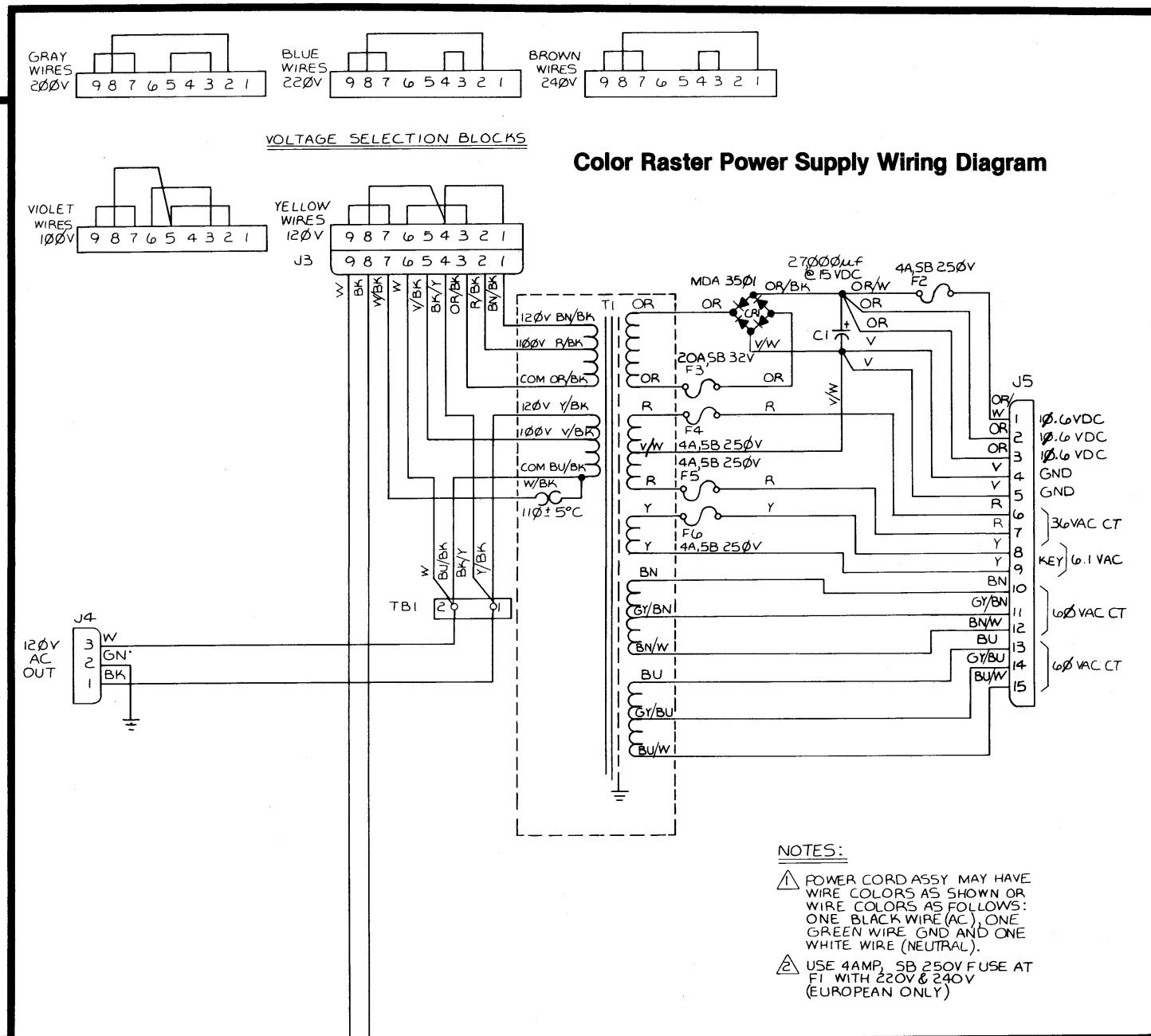
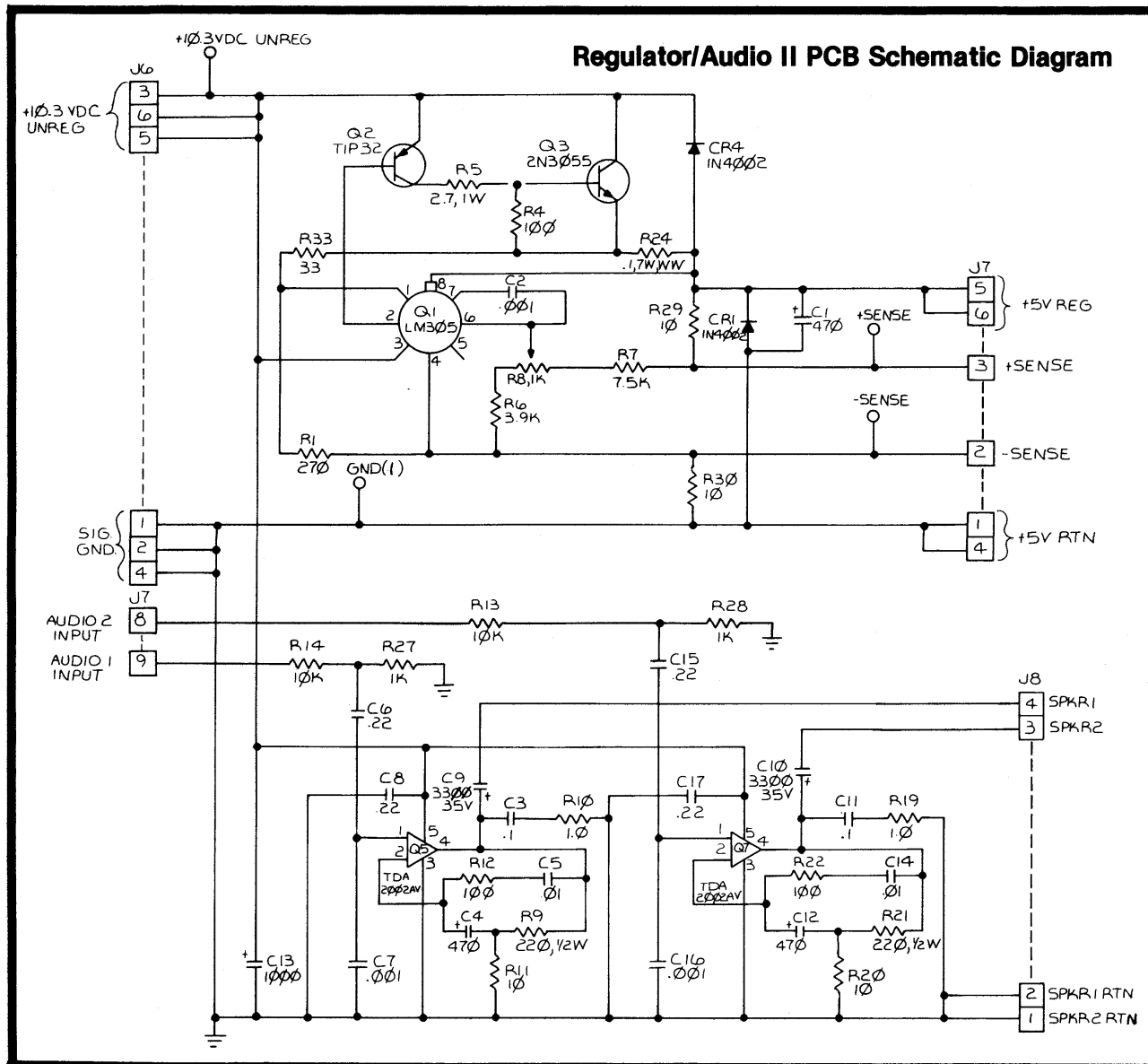
**Steering Coupler PCB Schematic**




**Pole Position Game Wiring Interfaces**

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**Pole Position Reg./Audio II PCB  
and Power Supply Diagrams**

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# MEMORY MAP

## CPU 1 AND 2

| HEXADECIMAL ADDRESS                     | READ/ WRITE | FUNCTION  |
|---|-------------|---|
| 0000-37FFF                              | R           | Program Memory  |
| 4000-7FFF                               | R           | Program Memory  |
| 8000-8FFF<br>(8700-87FF)<br>(8F00-8FFF) | R/W         | Motion Object Memory<br>Vertical and Horizontal Position<br>Character, Color, Vertical Size,<br>Horizontal Size |
| 9000-97FF<br>(9000-93FF)<br>(9700-97FF) | R/W         | Road Memory<br>Character<br>Horizontal Scroll   |
| 9800-9FFF<br>A000-AFFF)                 | R/W<br>R/W  | Alphanumeric Memory<br>View Character Memory  |
| C000                                    | W           | View Horizontal Position  |
| C100                                    | W           | Road Vertical Position  |

## CPU 3

| HEXADECIMAL ADDRESS                     | READ/ WRITE | FUNCTION  |
|---|-------------|---|
| 0000-1FFF                               | R           | Program Memory  |
| 2000-2FFF                               | R           | Program Memory  |
| 3000-37FF                               | R/W         | Battery Back-Up RAM   |
| 4000-43FF<br>(4380-43FF)                | R/W         | Motion Object Memory<br>Vertical and Horizontal Position                          |
| 4400-47FF<br>(4780-47FF)                | R/W         | Motion Object Memory<br>Character, Color, Vertical Size,<br>Horizontal Size       |
| 4800-48FF<br>(4800-49FF)<br>(4B80-4BFF) | R/W         | Road Memory<br>Character<br>Horizontal Scroll                                     |
| 4C00-57FF<br>(4C00-4FFF)<br>(5000-53FF) | R/W         | Alphanumeric Memory<br>Alphanumeric<br>View Character                             |
| 8000-83FF<br>(83C0-83FF)                | R/W         | Sound Memory<br>Sound   |
| 9000                                    | R/W         | 4-Bit CPU Controller  |
| A000                                    | R/W         | Input/Output  |
| A000                                    | W           | IRQ Enable (1 = enable, 0 = disable)  |
|   | R           | Bit 0: Not Used<br>Bit 1: 128 V<br>Bit 2: Power-Line Sense<br>Bit 3: ADC End Flag |
| A001                                    | W           | 4-Bit CPU Enable  |
| A002                                    | W           | Sound Enable  |
| A003                                    | W           | ADC Input Select  |
| A004                                    | W           | CPU 1 Enable  |
| A005                                    | W           | CPU 2 Enable  |
| A006                                    | W           | Start Switch  |
| S007                                    | W           | Color Enable  |
| A100                                    | W           | Watchdog Reset  |
| A200                                    | W           | Car Sound (Lower Nybble)  |
| A300                                    | W           | Car Sound (Upper Nybble)  |

## Schematic Reference Designators and Symbols

Logic symbols depict the logic function performed by that particular device and may differ from the manufacturer's data.

### REFERENCE DESIGNATORS:

|    |  |
|----|--|
| C  | Capacitor                                  |
| CR | Diode, signal or rectifier                 |
| F  | Fuse                                       |
| J  | Connector                                  |
| L  | Inductor, fixed or variable                |
| LS | Speaker                                    |
| P  | Connector                                  |
| Q  | Transistor or silicon-controlled rectifier |
| R  | Resistor, fixed or variable                |
| S  | Switch                                     |
| T  | Transformer                                |
| TP | Twisted wire pair                          |
| VR | Voltage regulator                          |
| Y  | Crystal                                    |

### WIRE COLORS:

|    |        |
|----|--------|
| R  | Red    |
| GN | Green  |
| Y  | Yellow |
| W  | White  |
| BU | Blue   |
| BN | Brown  |
| BK | Black  |
| OR | Orange |
| V  | Violet |
| GY | Gray   |

Electrical components shown on the schematic diagrams are in the following units unless otherwise noted:

Capacitors = microfarads ( $\mu f$ )  
Resistors = ohms ( $\Omega$ )  
Inductors = microhenrys ( $\mu h$ )

### SYMBOLS:



Ground



Test Point



PCB edge connector pad

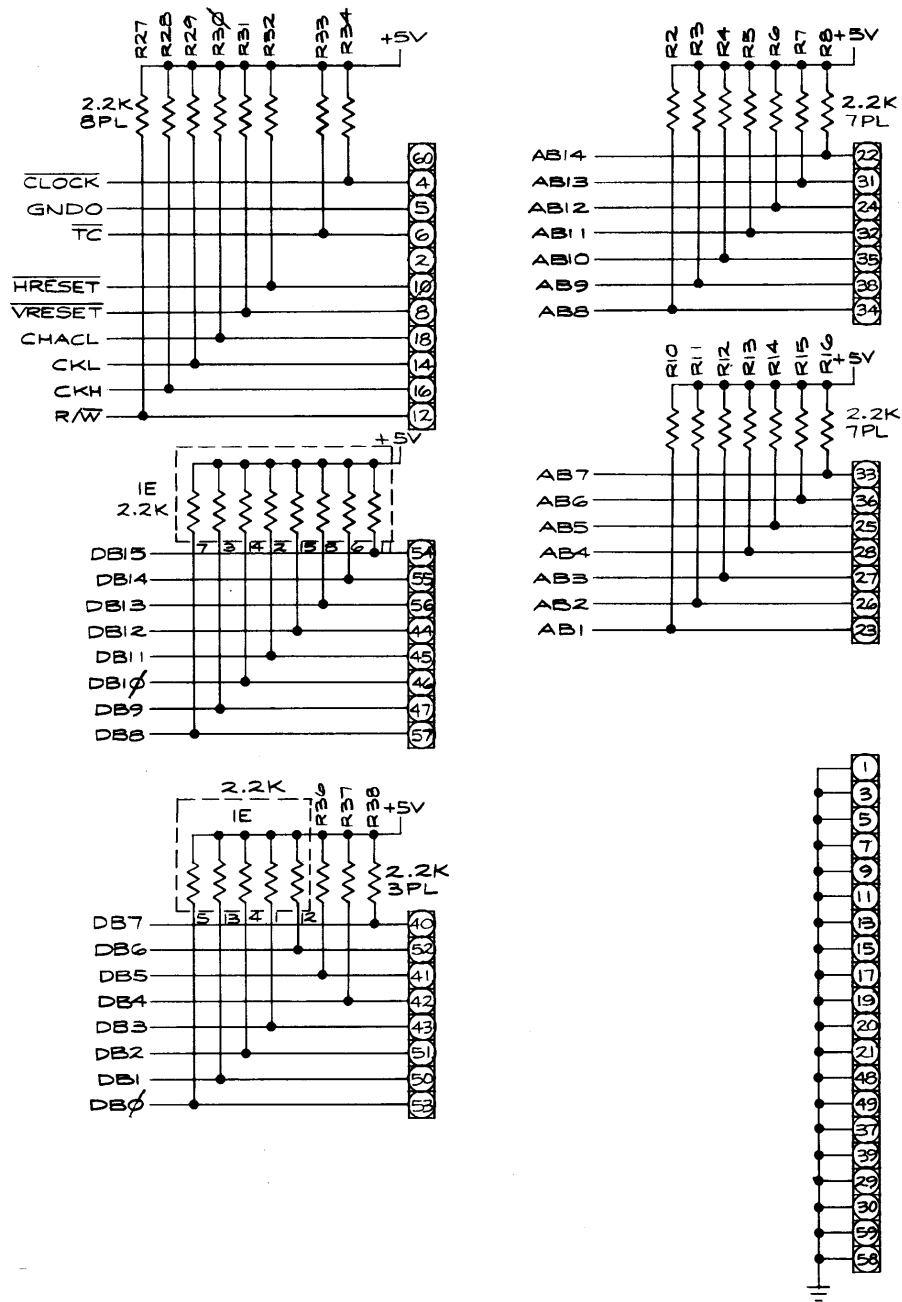


## Pole Position Memory Map and Schematic Notes

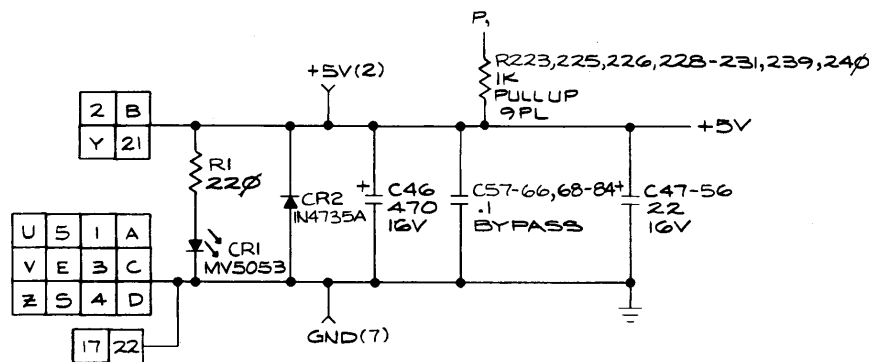
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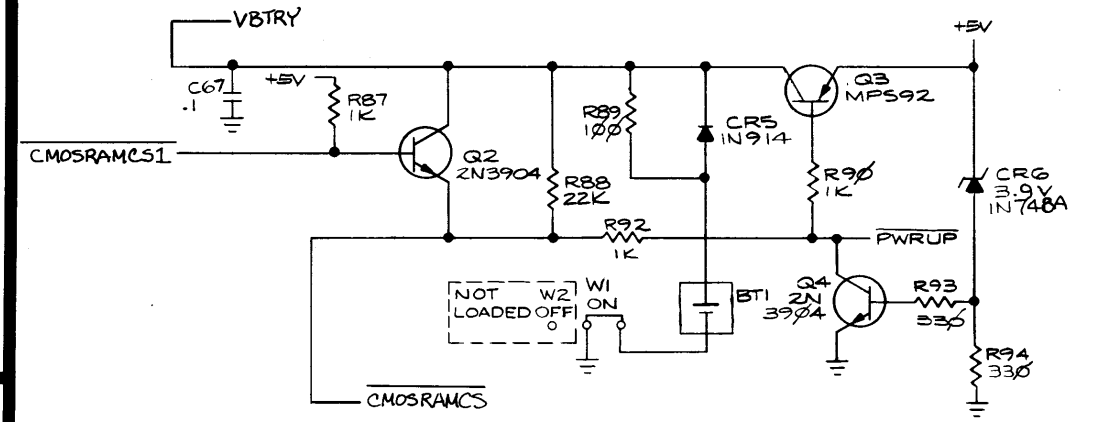
### CPU PCB Edge Connector



### CPU PCB Power Input

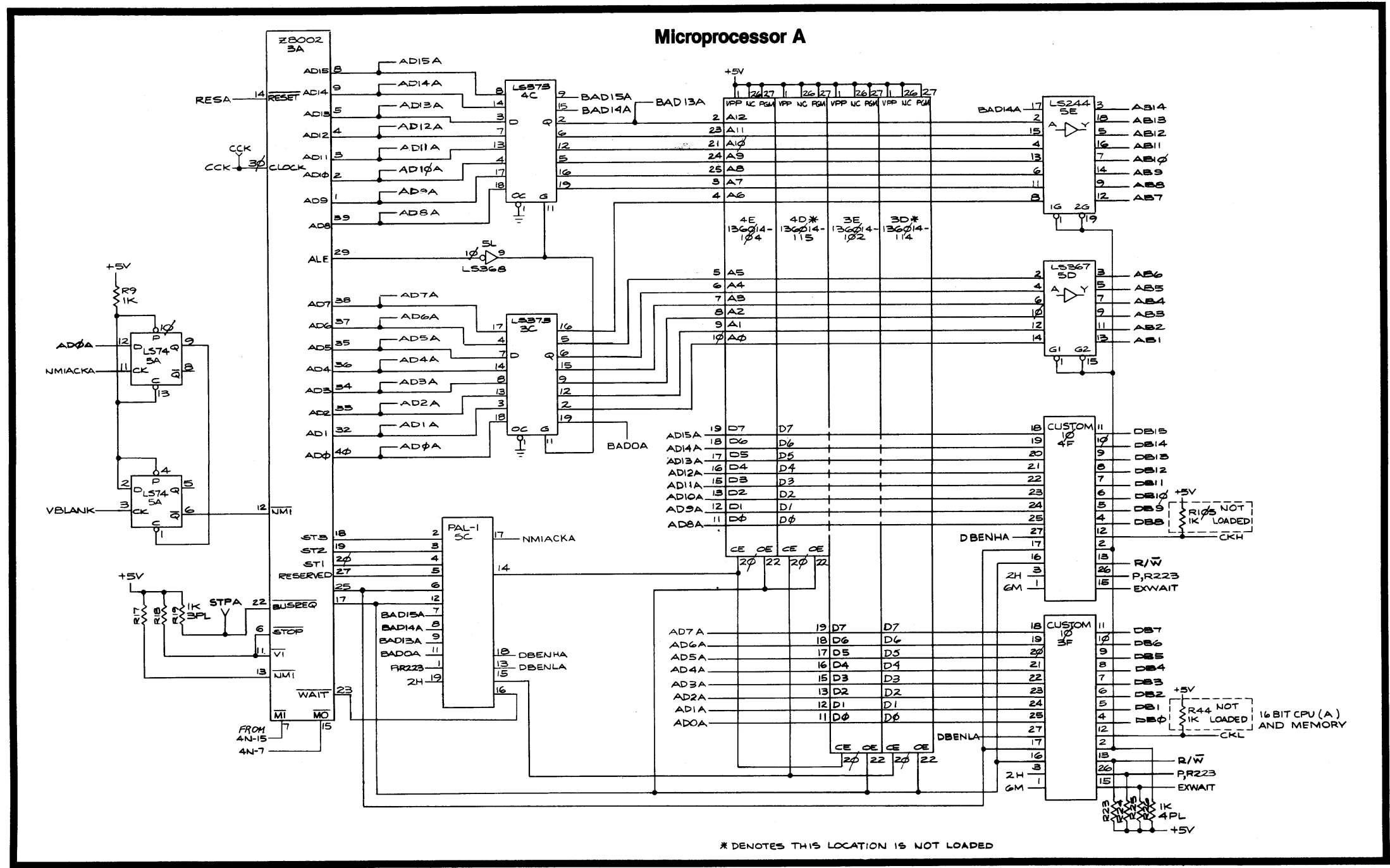



### RAM Battery Back-Up Power



### Pole Position CPU PCB Schematic Diagram



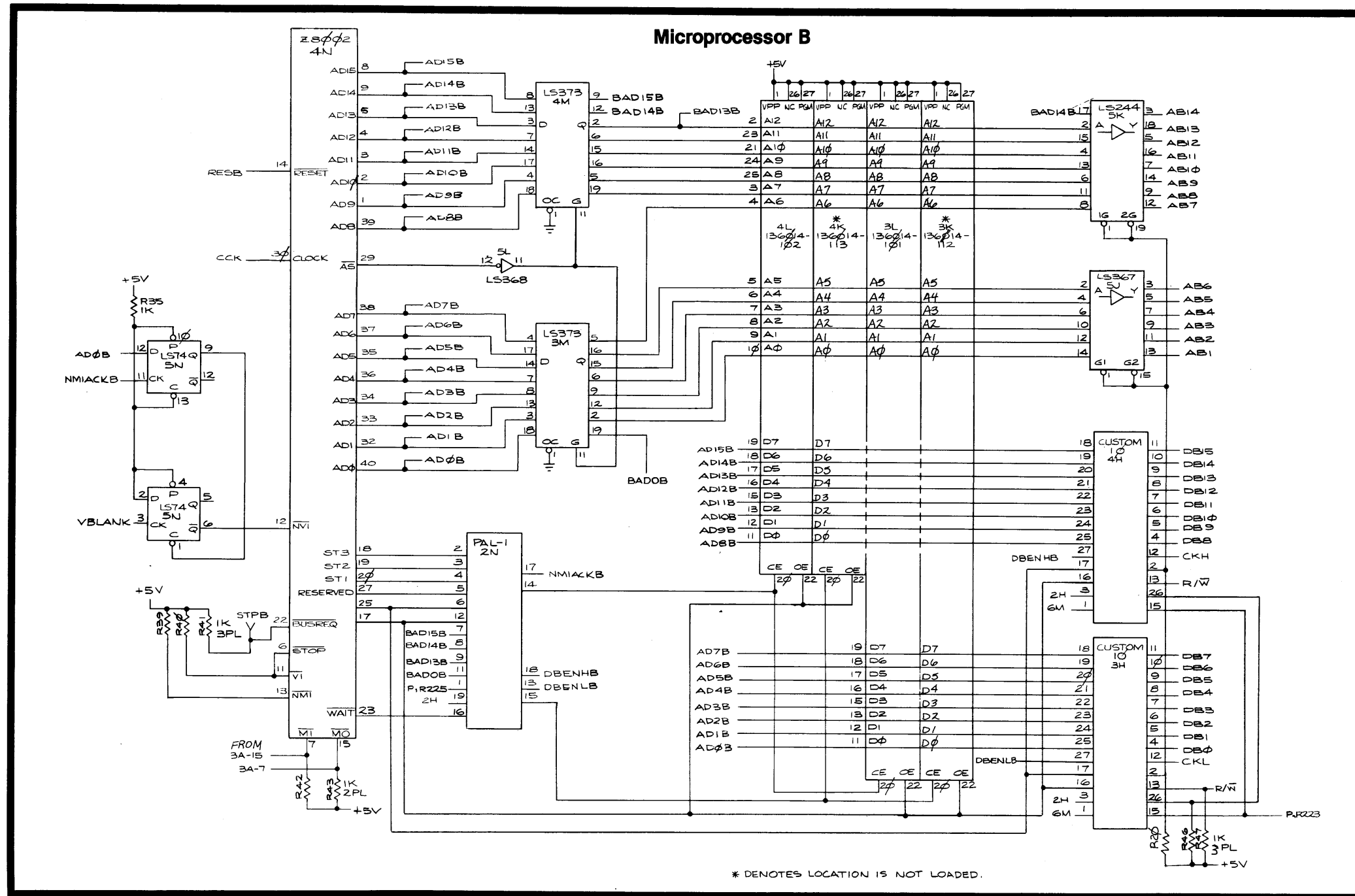




## Pole Position CPU PCB Schematic Diagram

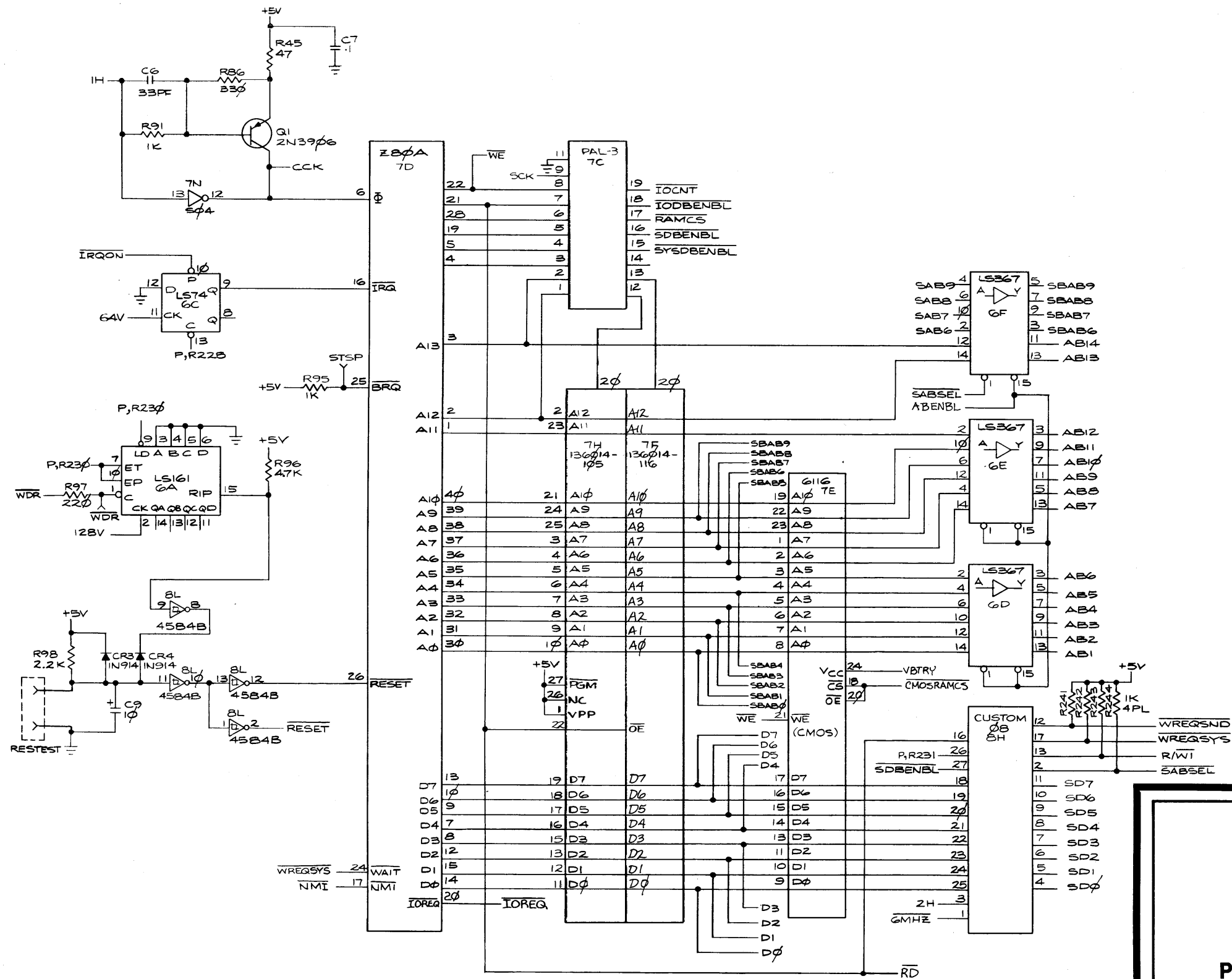
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### Pole Position CPU PCB Schematic Diagram

# Sound Microprocessor

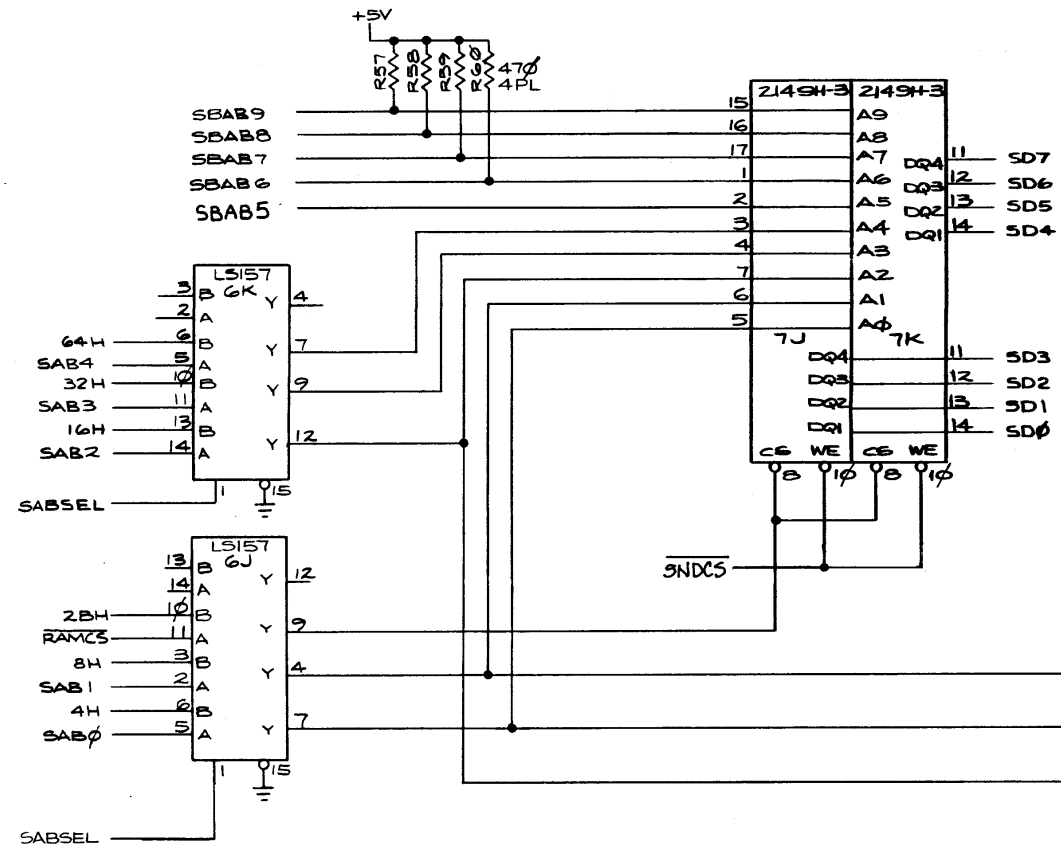


## Pole Position CPU PCB Schematic Diagram

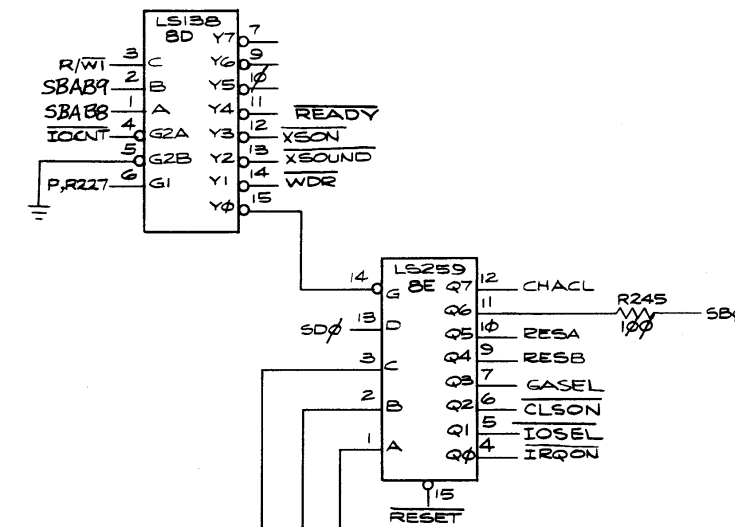
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### Sound Memory



### Sound and I/O Address Decoders

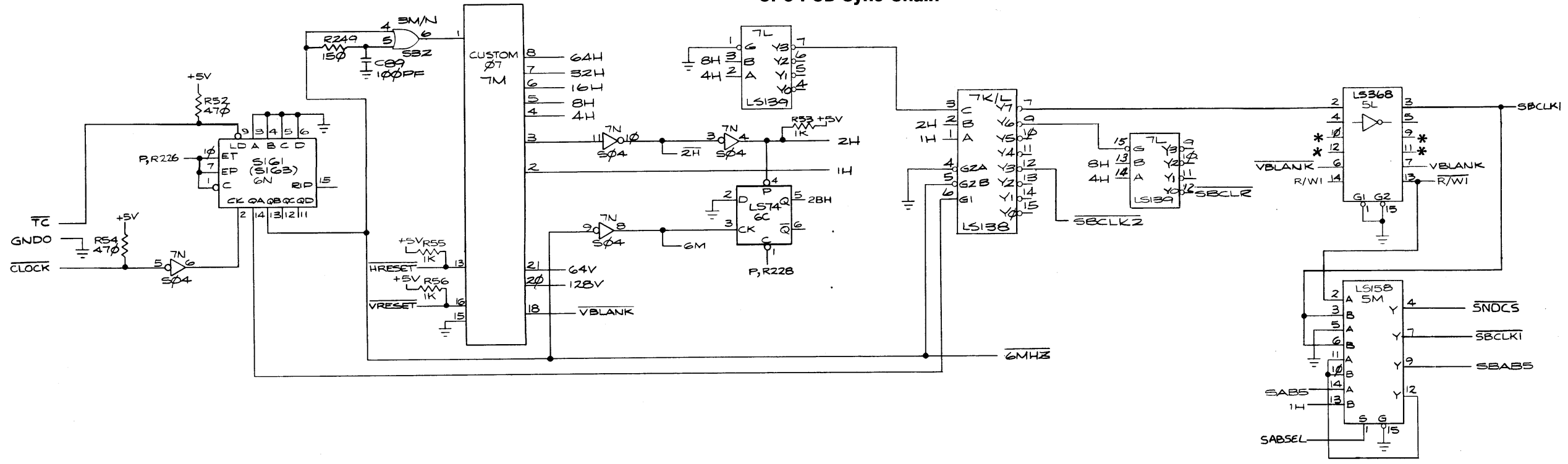


### Pole Position CPU PCB Schematic Diagram

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CPU PCB Sync Chain



\* USED IN SHEET 5A +5B

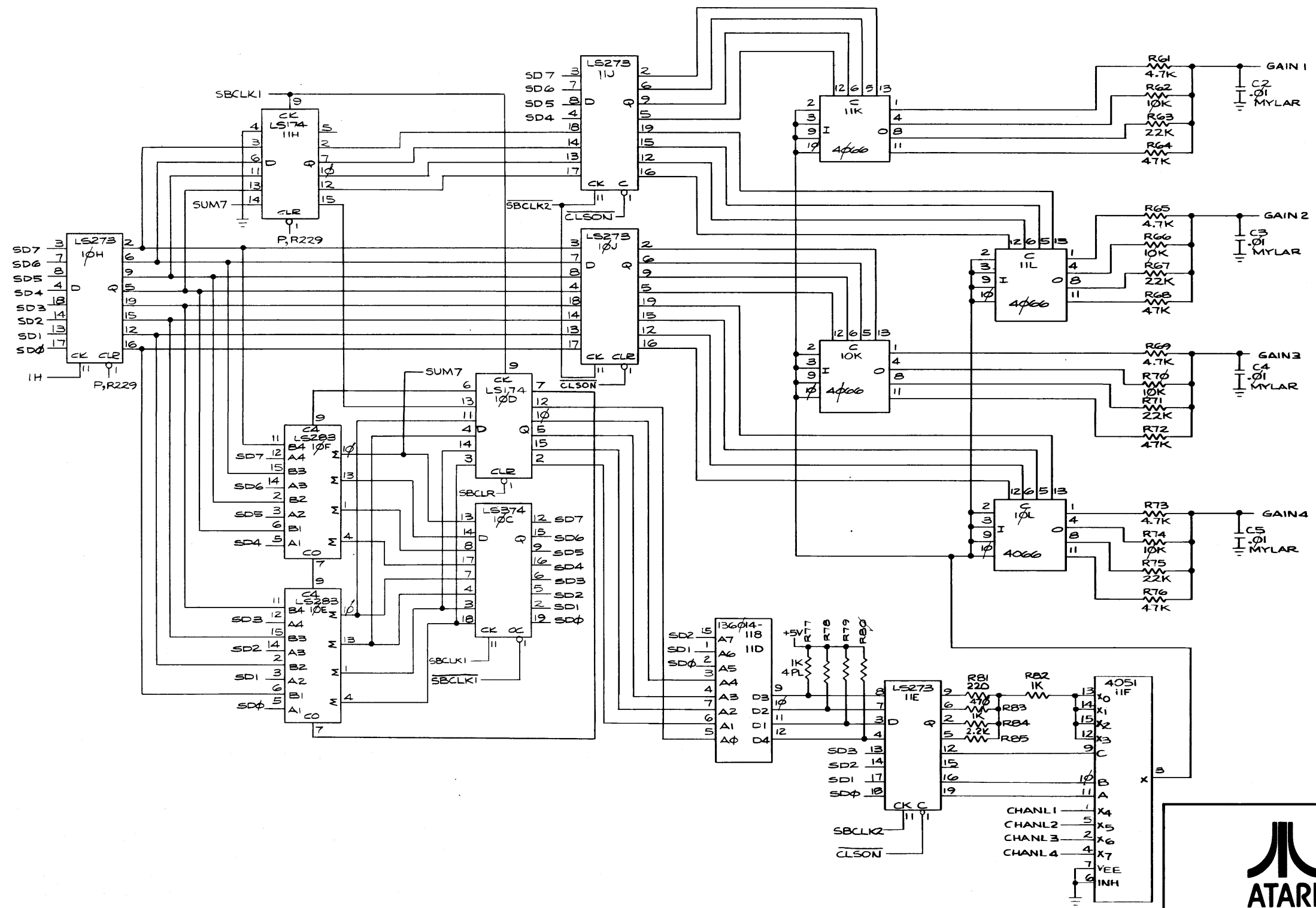


Pole Position CPU PCB Schematic Diagram

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### Sound Buffers and Multiplexer

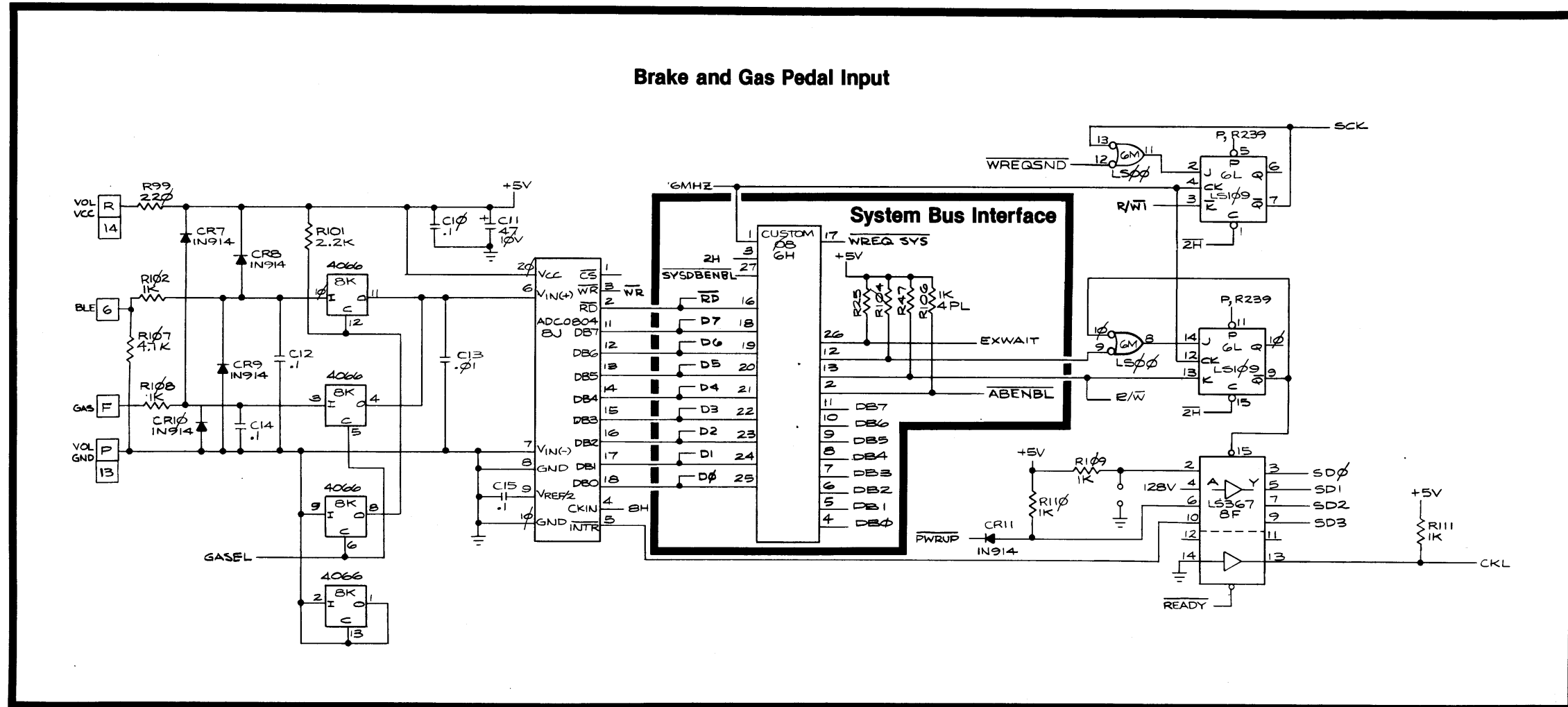


### Pole Position CPU PCB Schematic Diagram

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### Brake and Gas Pedal Input

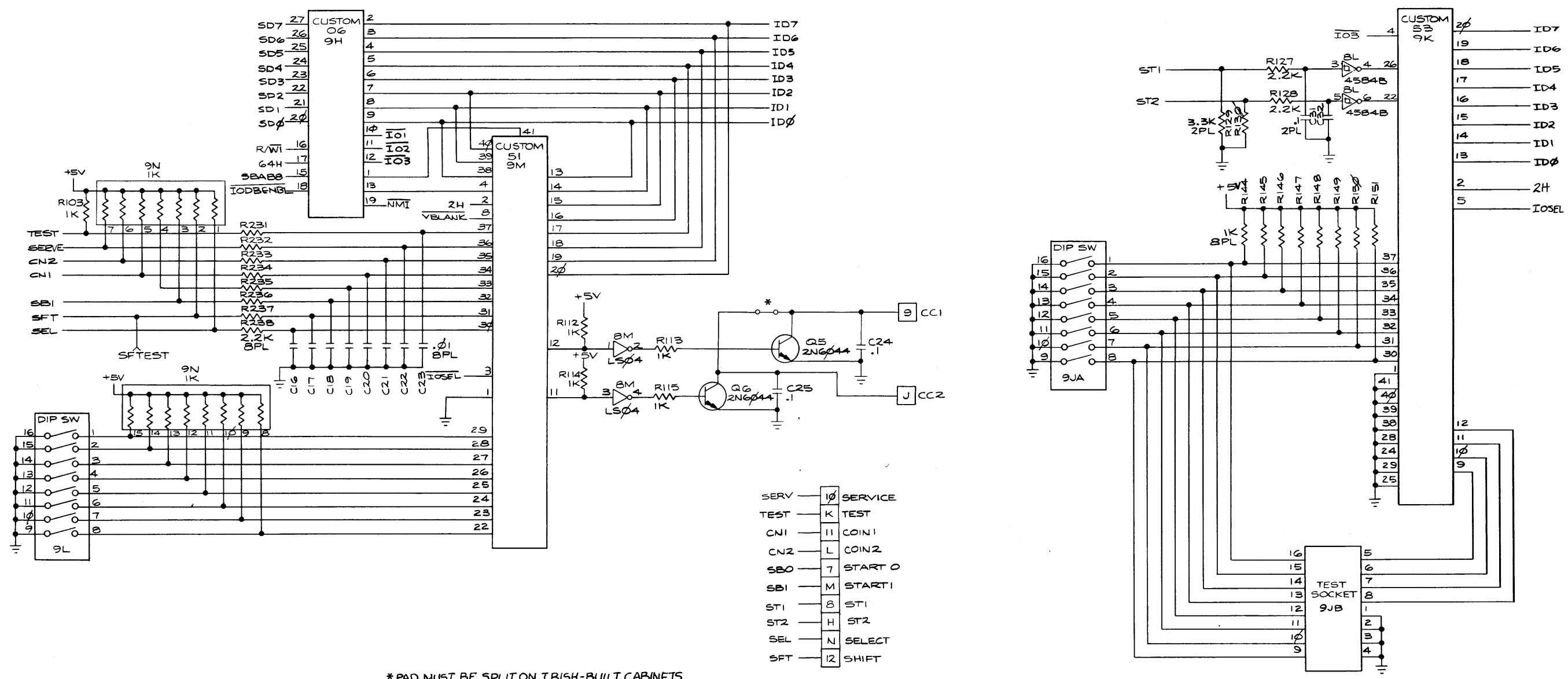


### Pole Position CPU PCB Schematic Diagram

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### Option Switch Input and I/O Interface



\* PAD MUST BE SPLIT ON IRISH-BUILT CABINETS

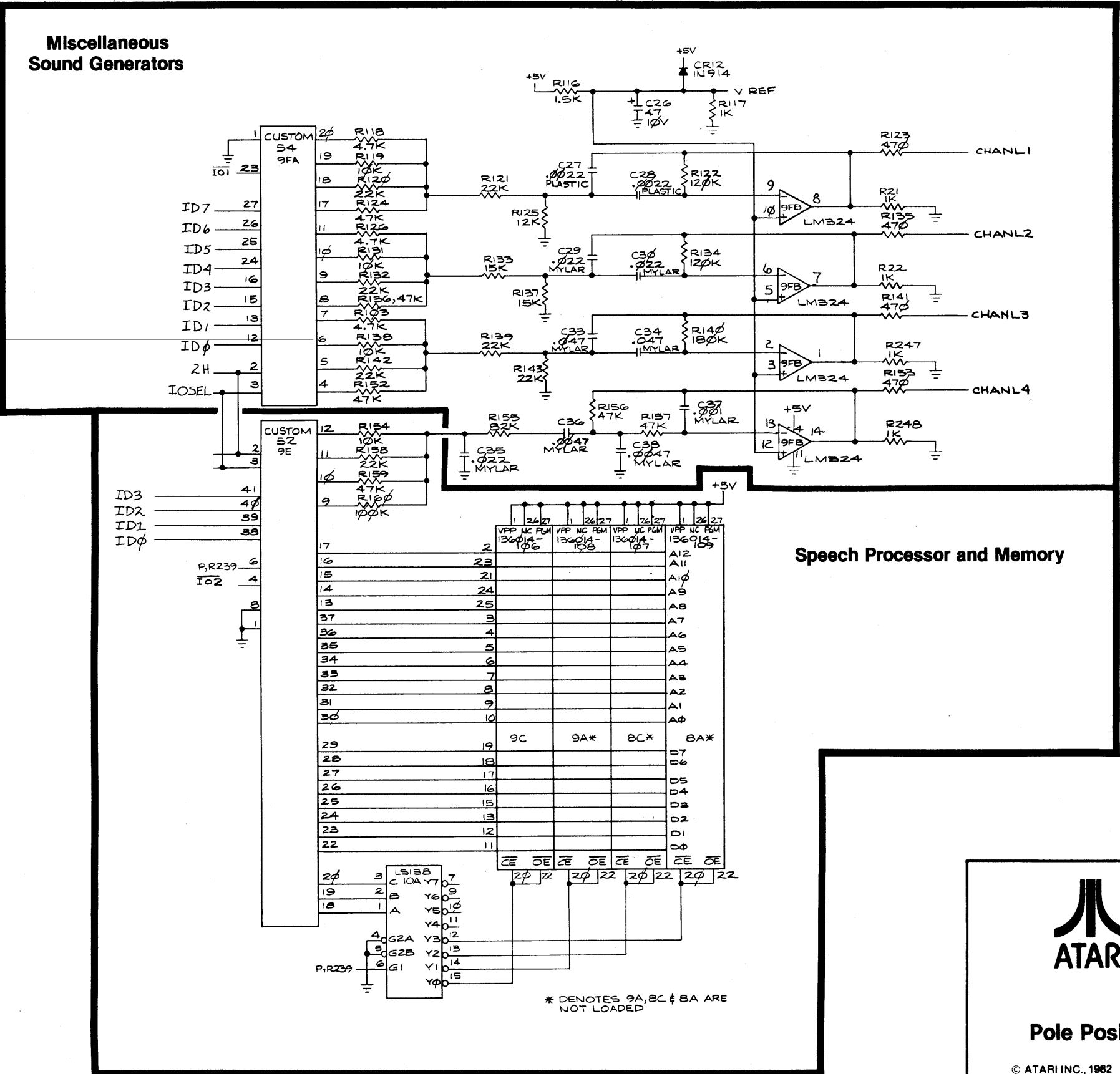


### Pole Position CPU PCB Schematic Diagram

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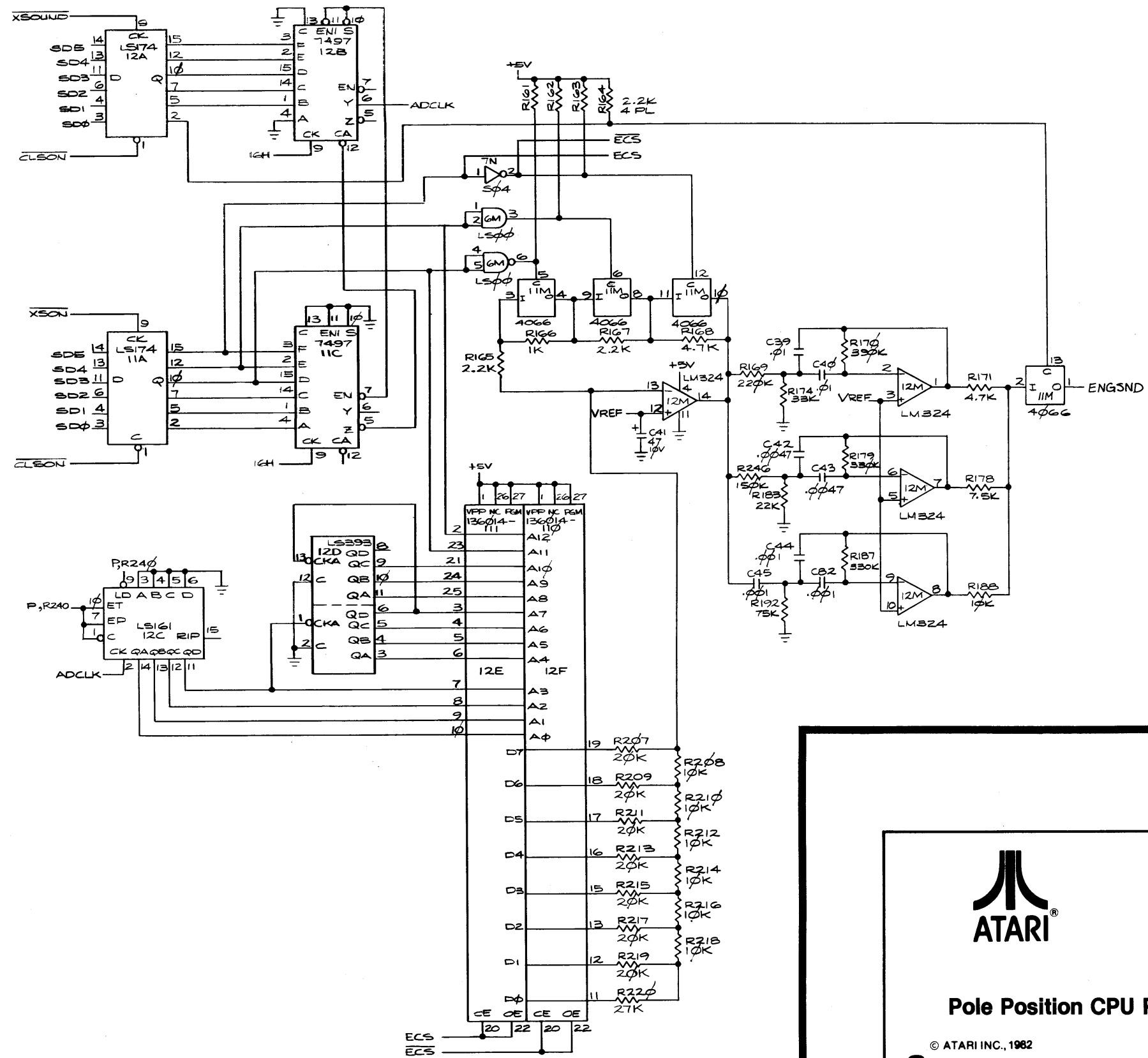
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**Pole Position CPU PCB Schematic Diagram**

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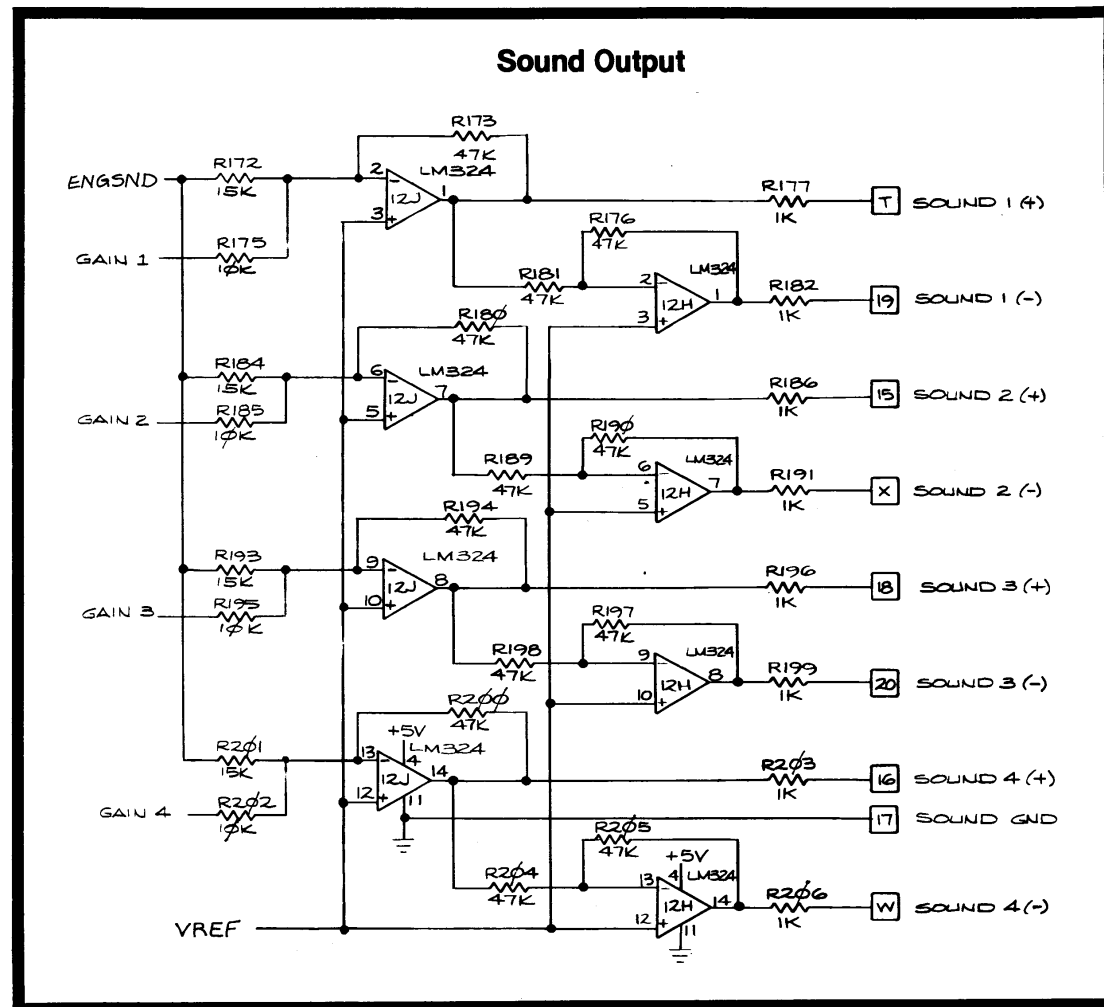
### Engine Sound Generator



### Pole Position CPU PCB Schematic Diagram

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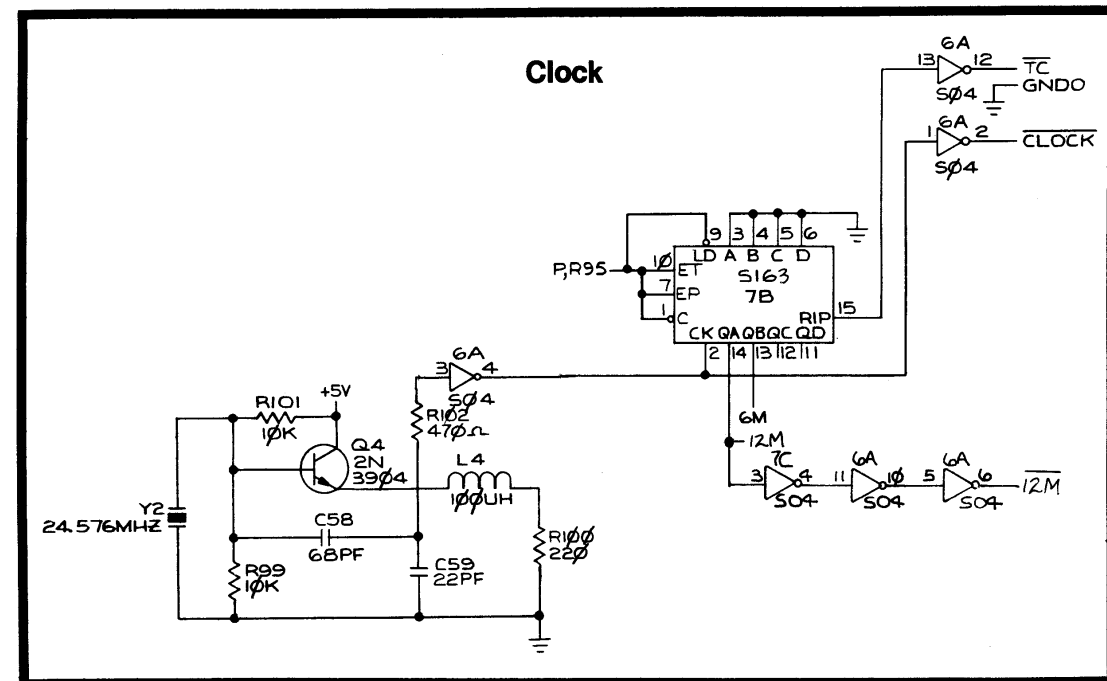
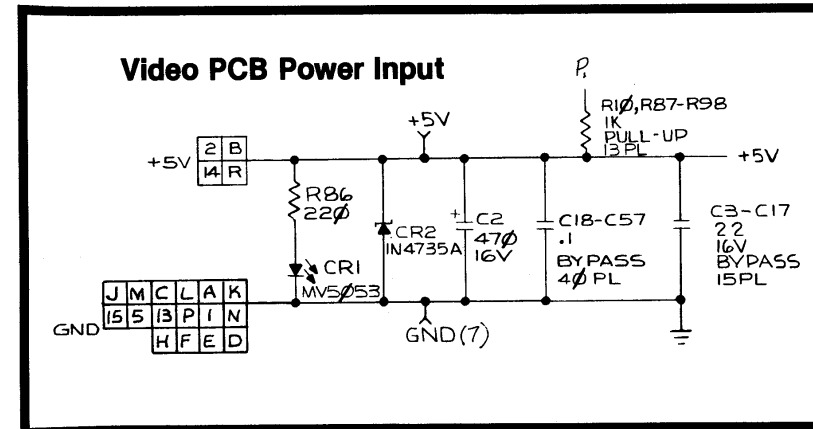
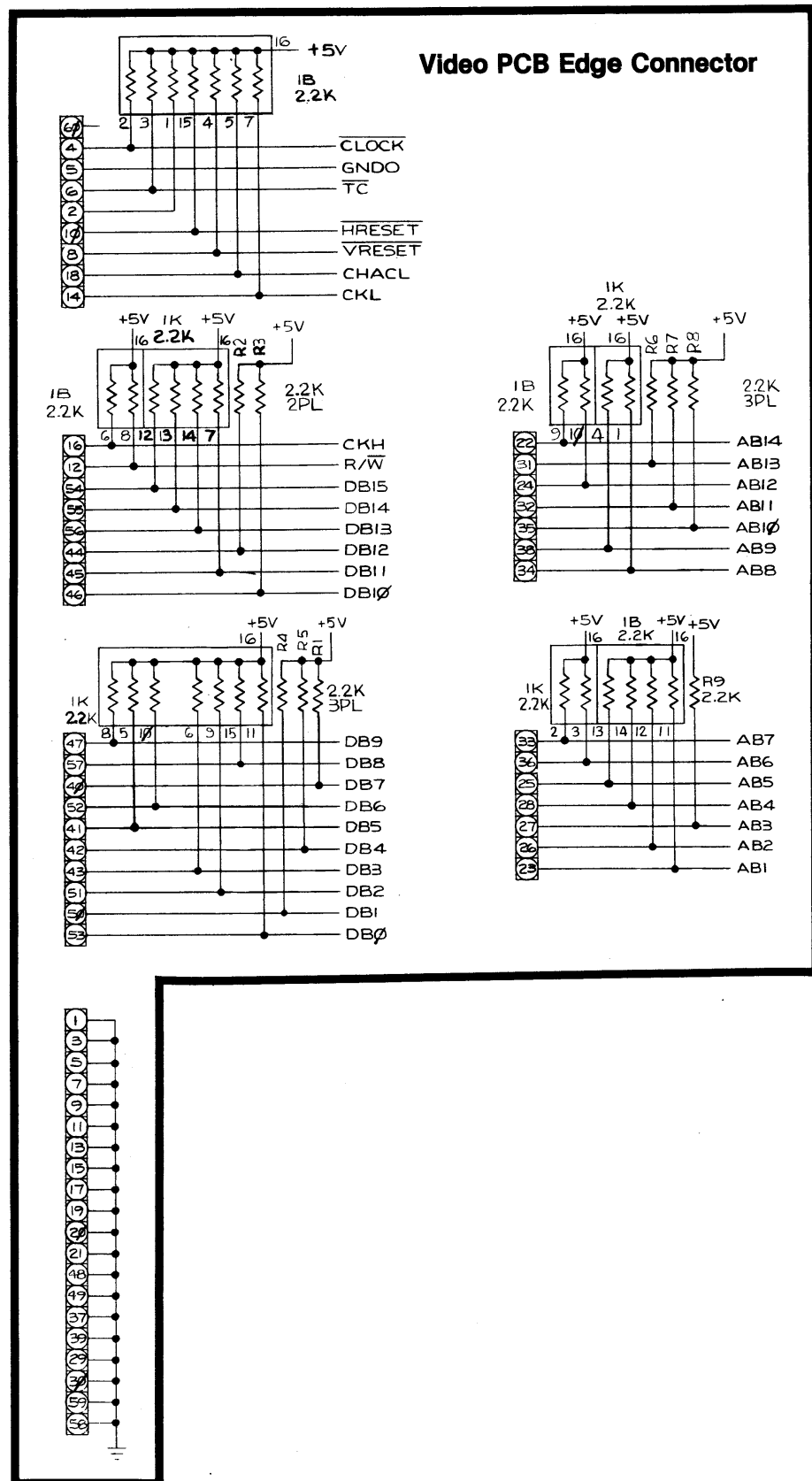
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### Pole Position CPU PCB Schematic Diagram

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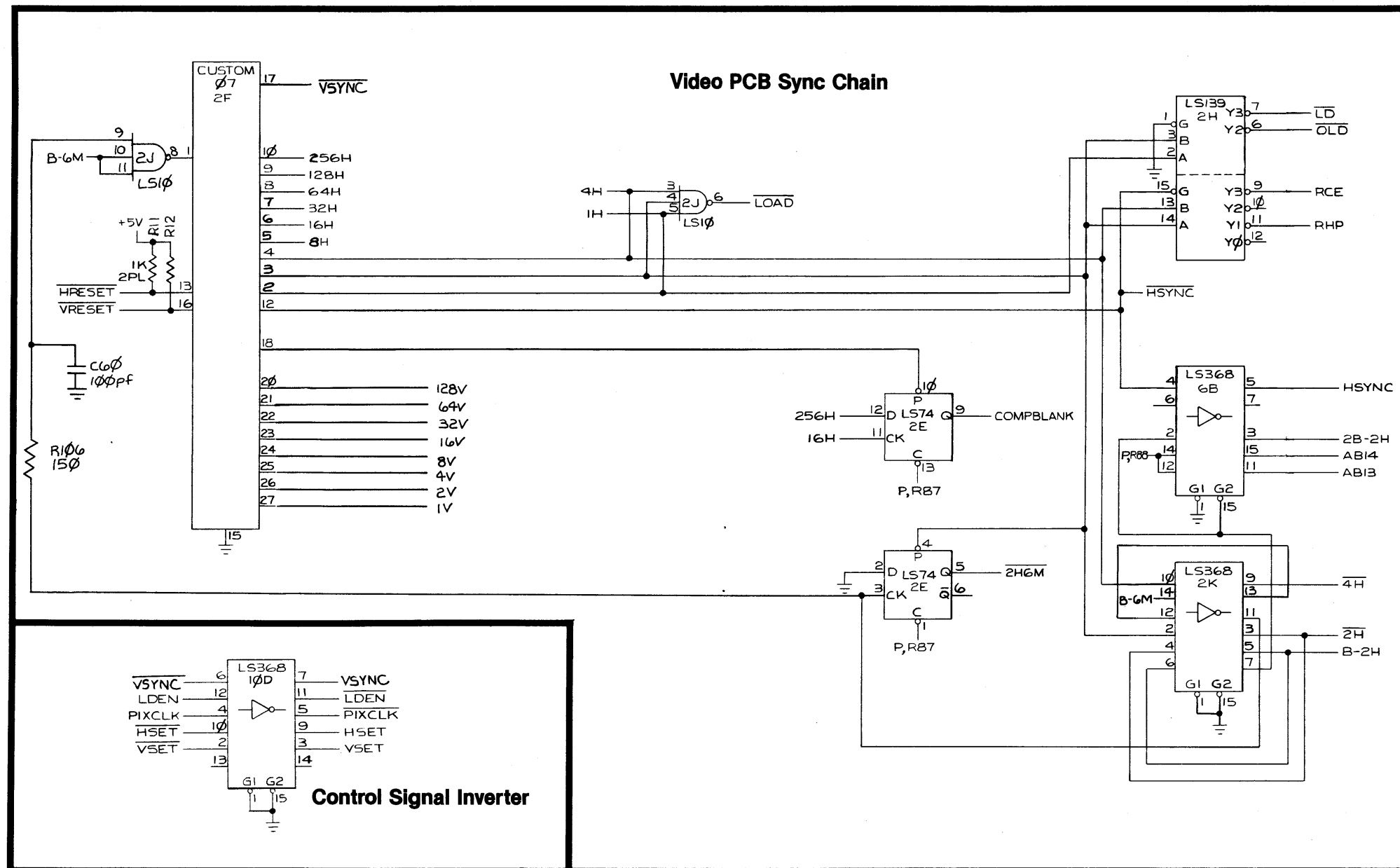


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**Pole Position Video PCB Schematic Diagram**

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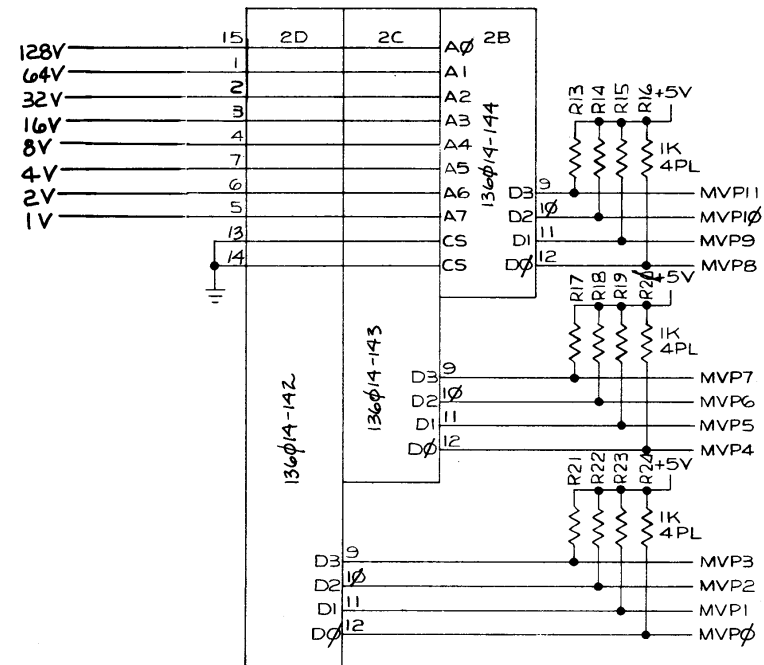


### Pole Position Video PCB Schematic Diagram

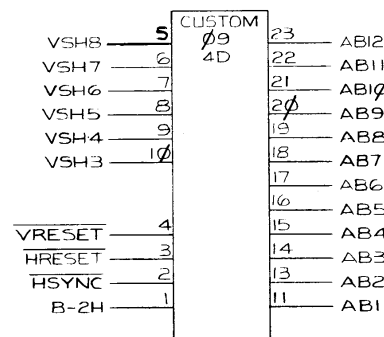
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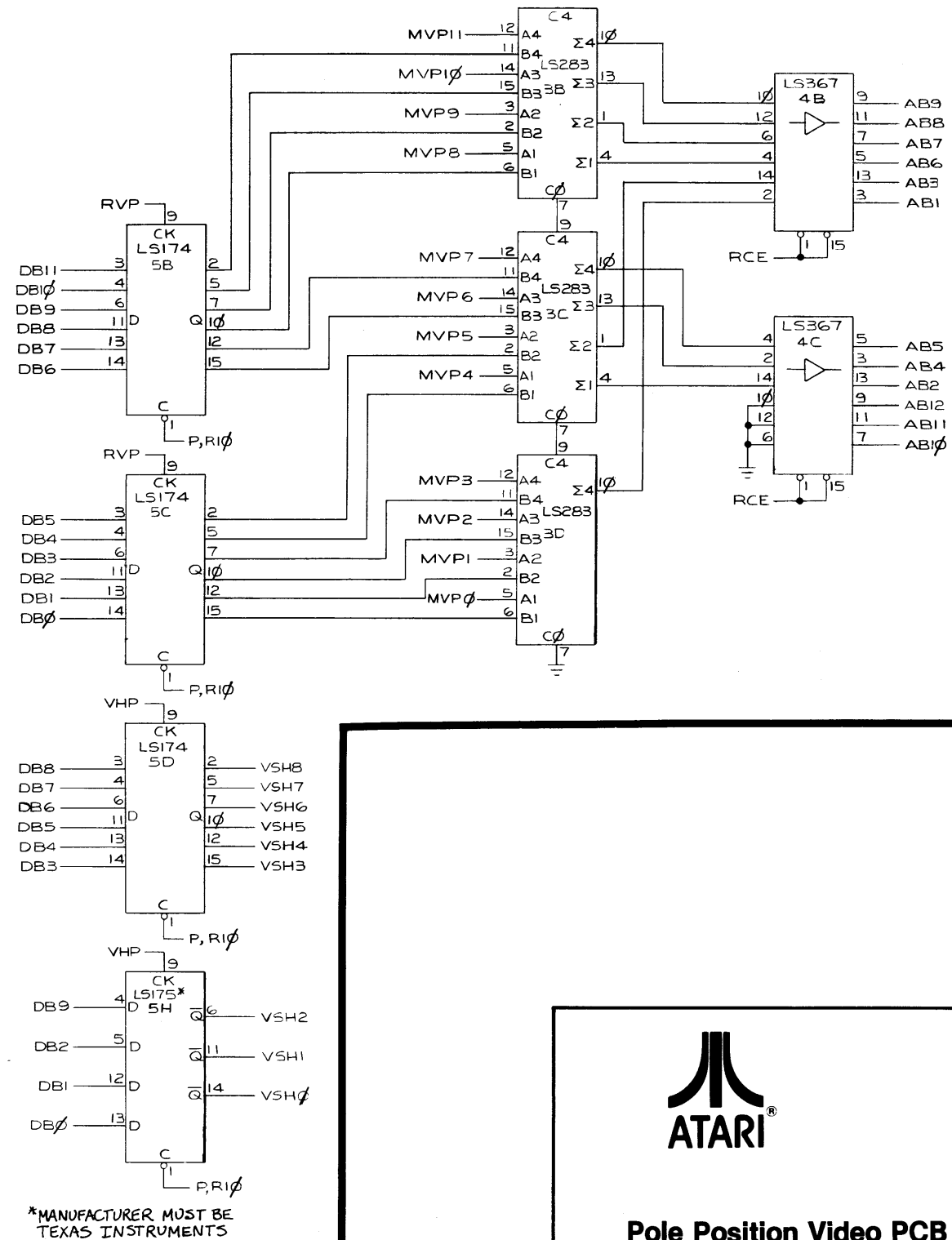
### Vertical Position Modifiers



### Address Bus Interface



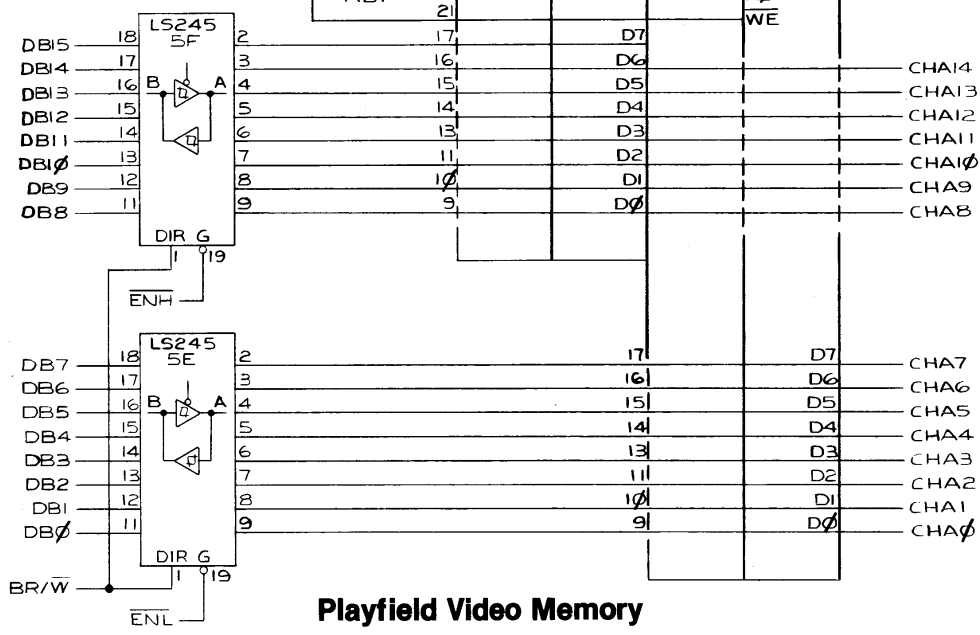
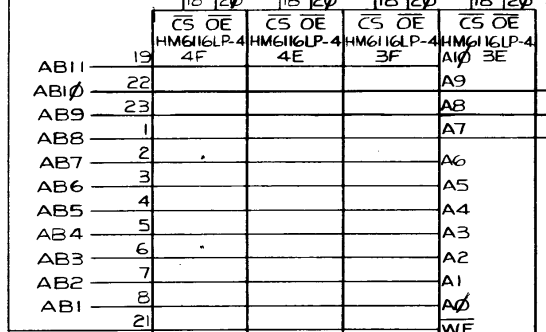
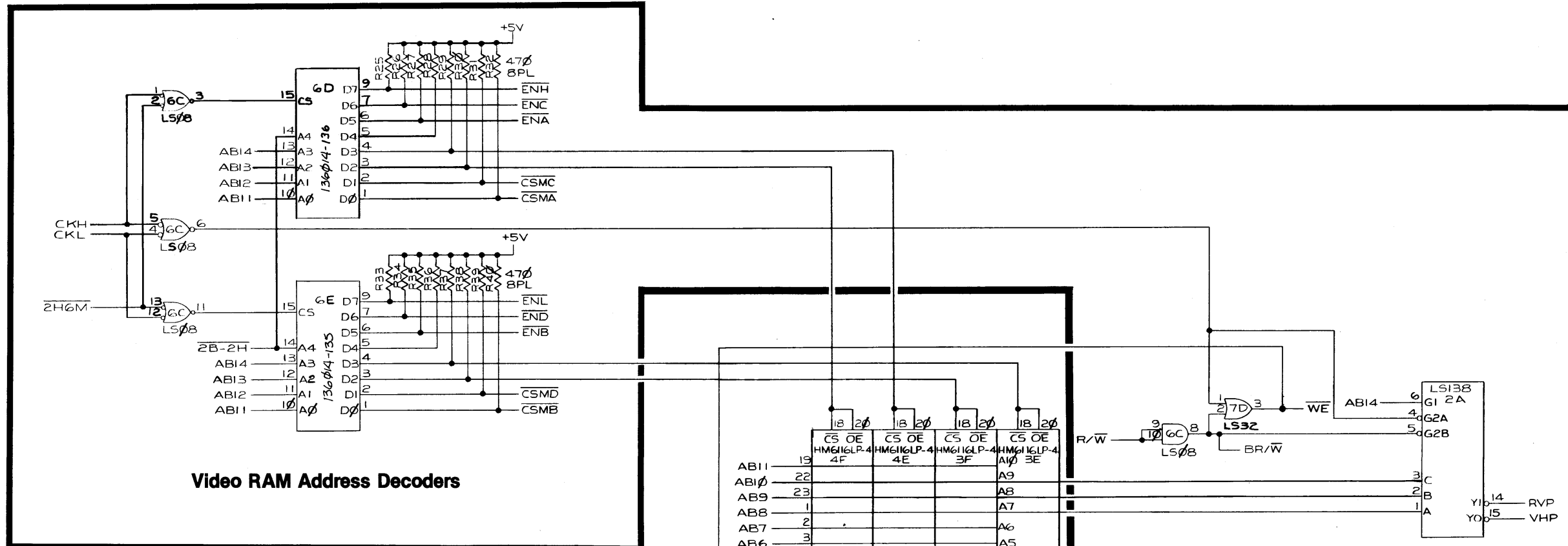
### Vertical Position Buffers and Adders



### Pole Position Video PCB Schematic Diagram

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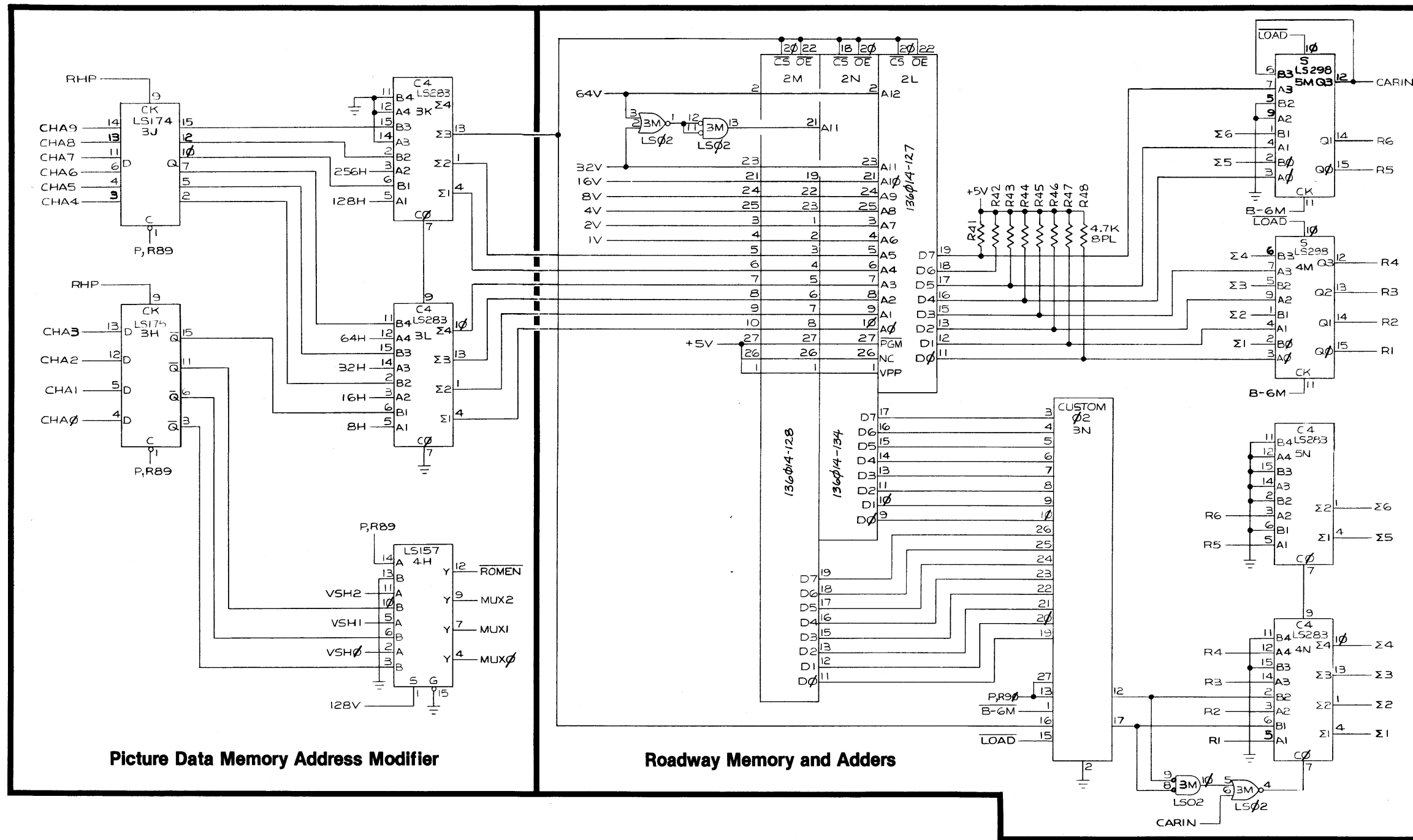


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**Pole Position Video PCB Schematic Diagram**

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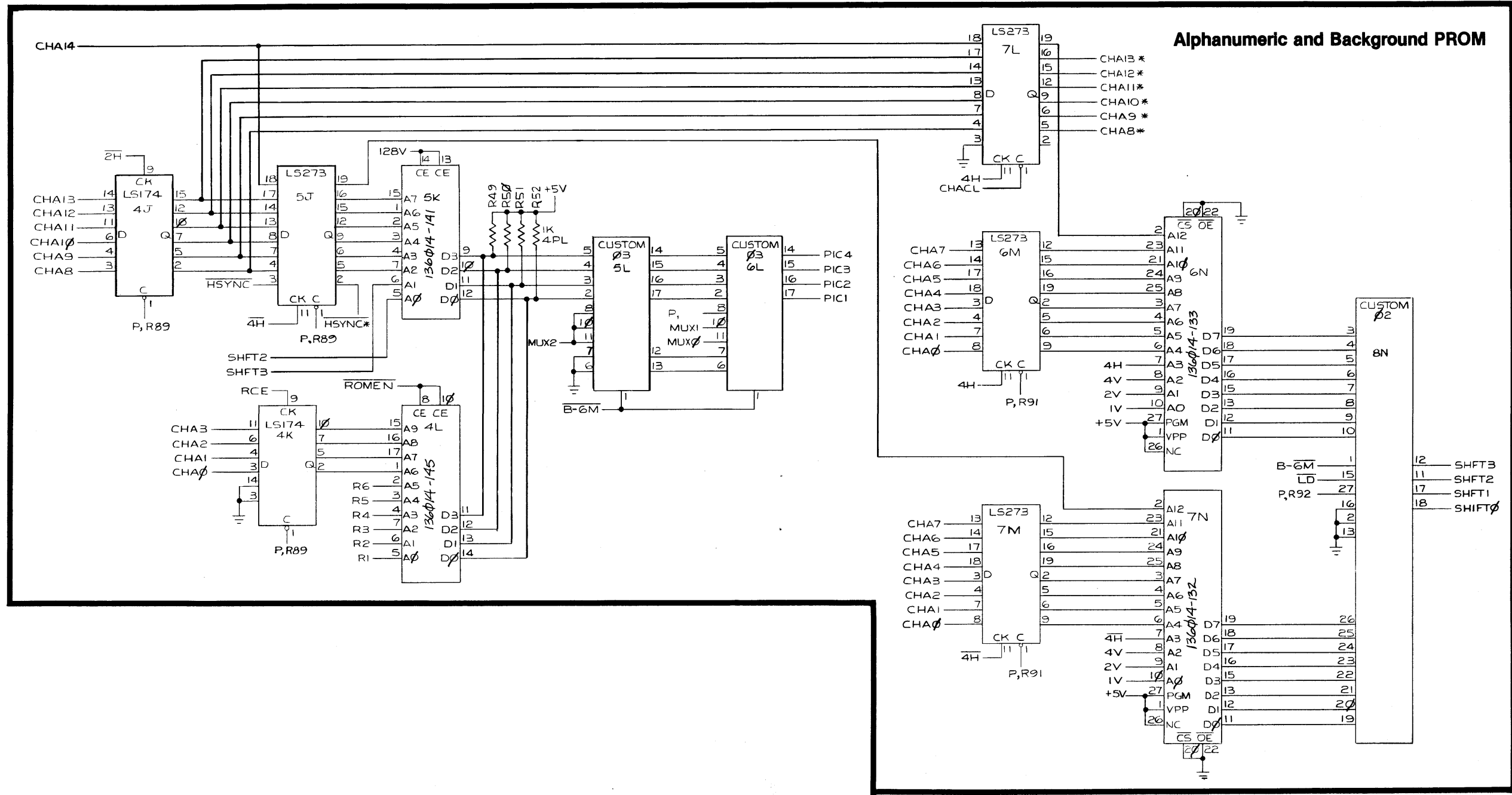


**Pole Position Video PCB Schematic Diagram**

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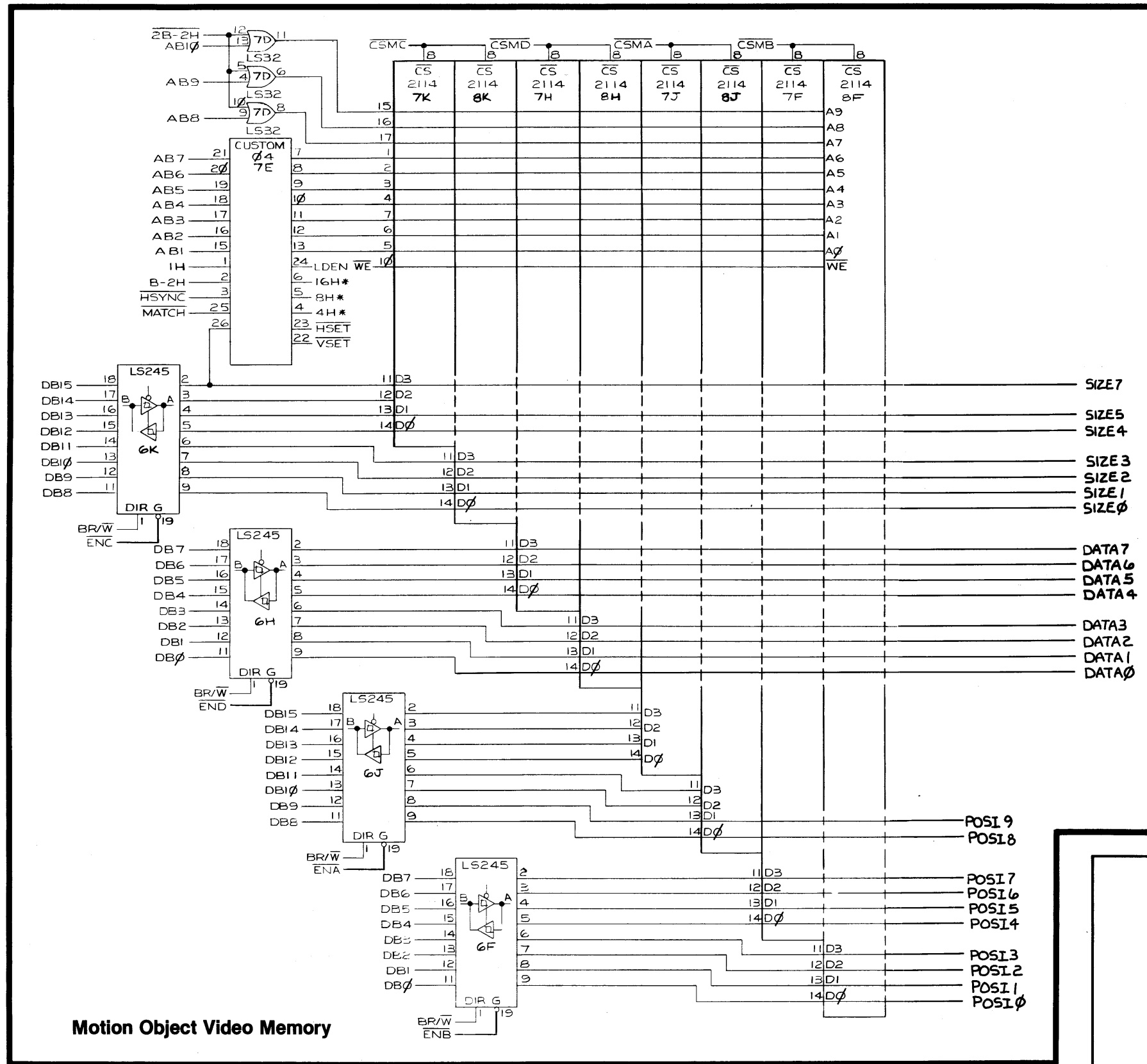
**Alphanumeric and Background PROM**



**Pole Position Video PCB Schematic Diagram**

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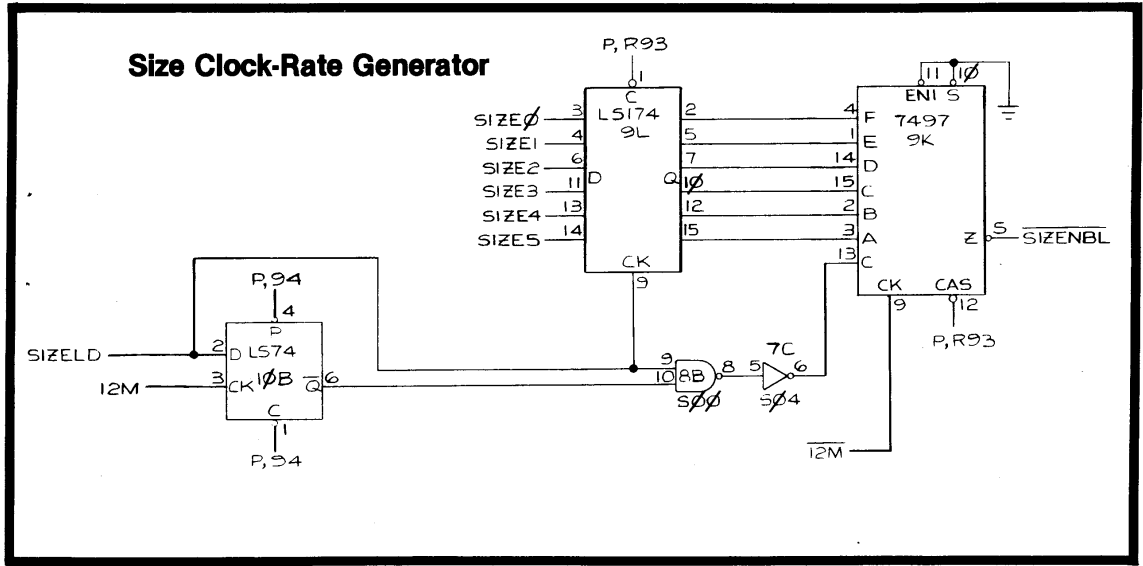
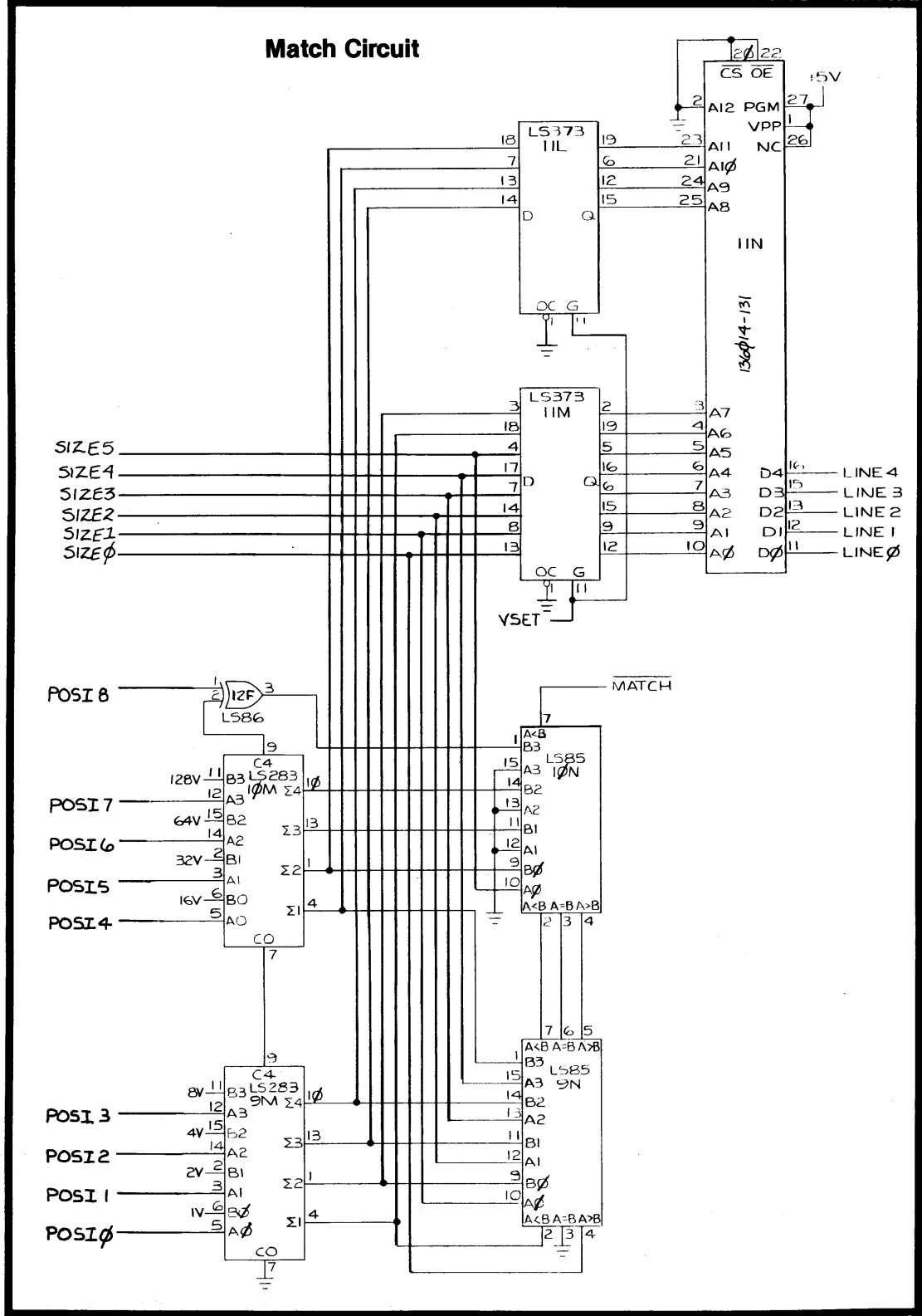
Motion Object Video Memory




Pole Position Video PCB Schematic Diagram

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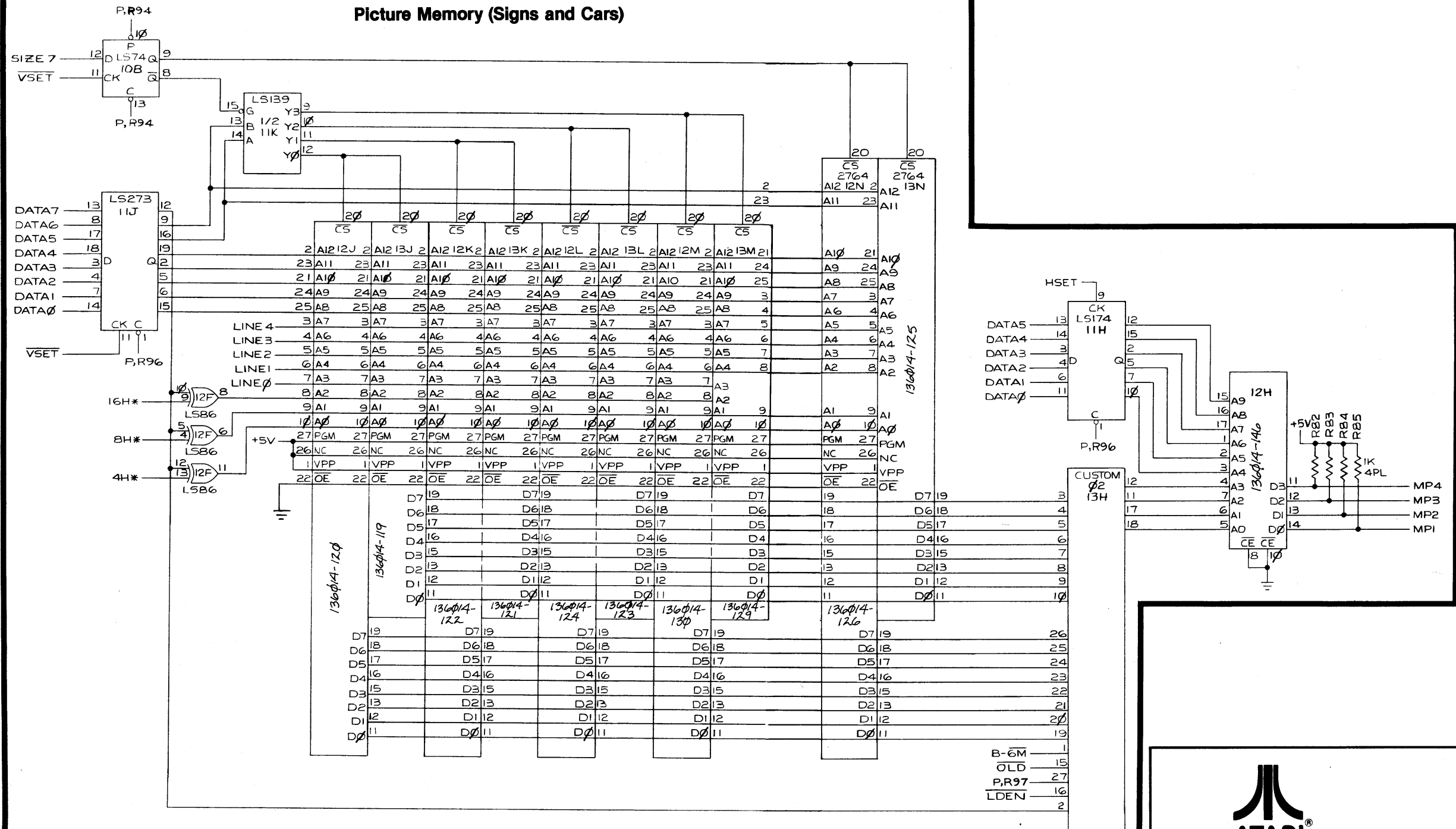
**Pole Position Video PCB Schematic Diagram**

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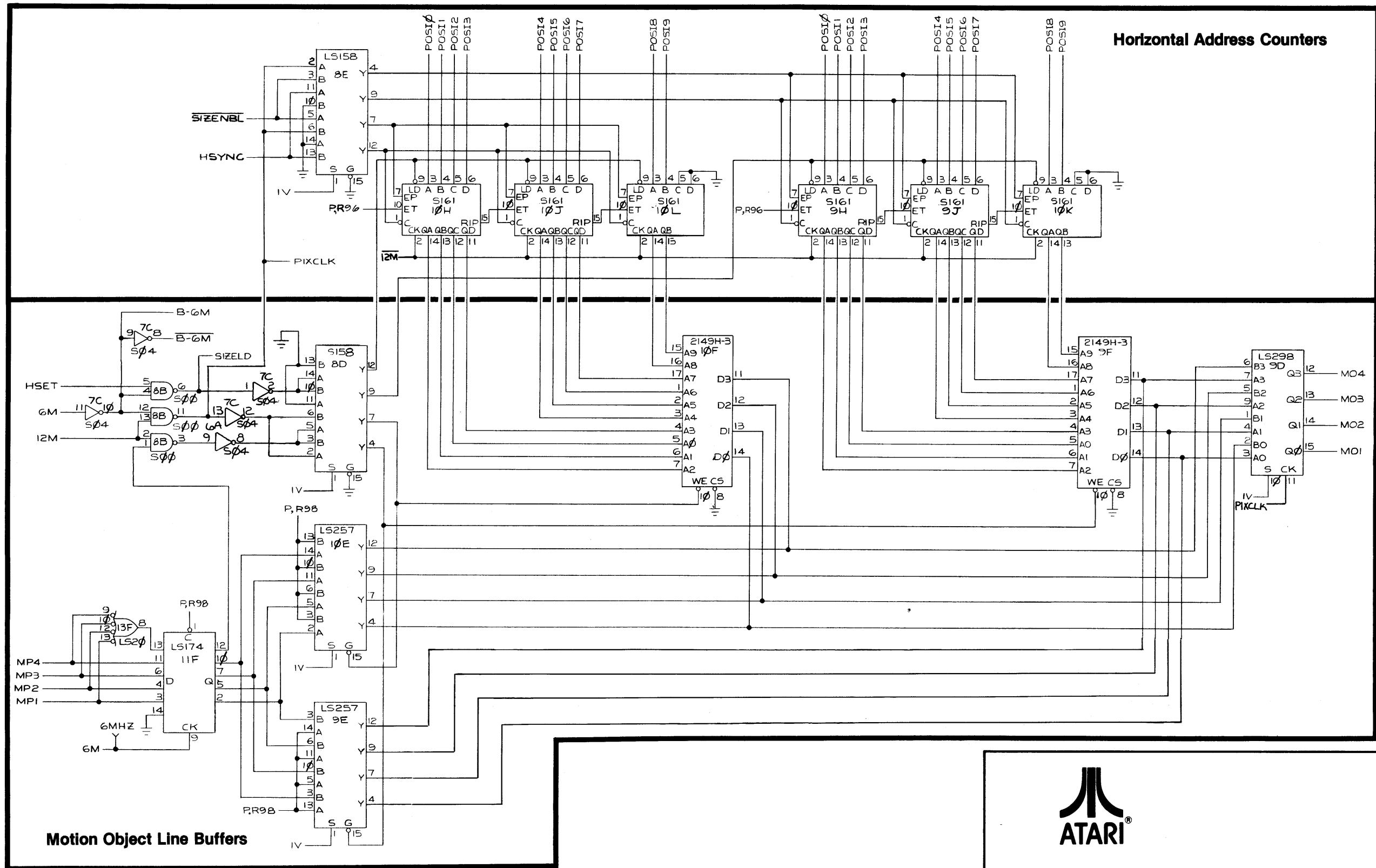
### Picture Memory (Signs and Cars)



### Pole Position Video PCB Schematic Diagram

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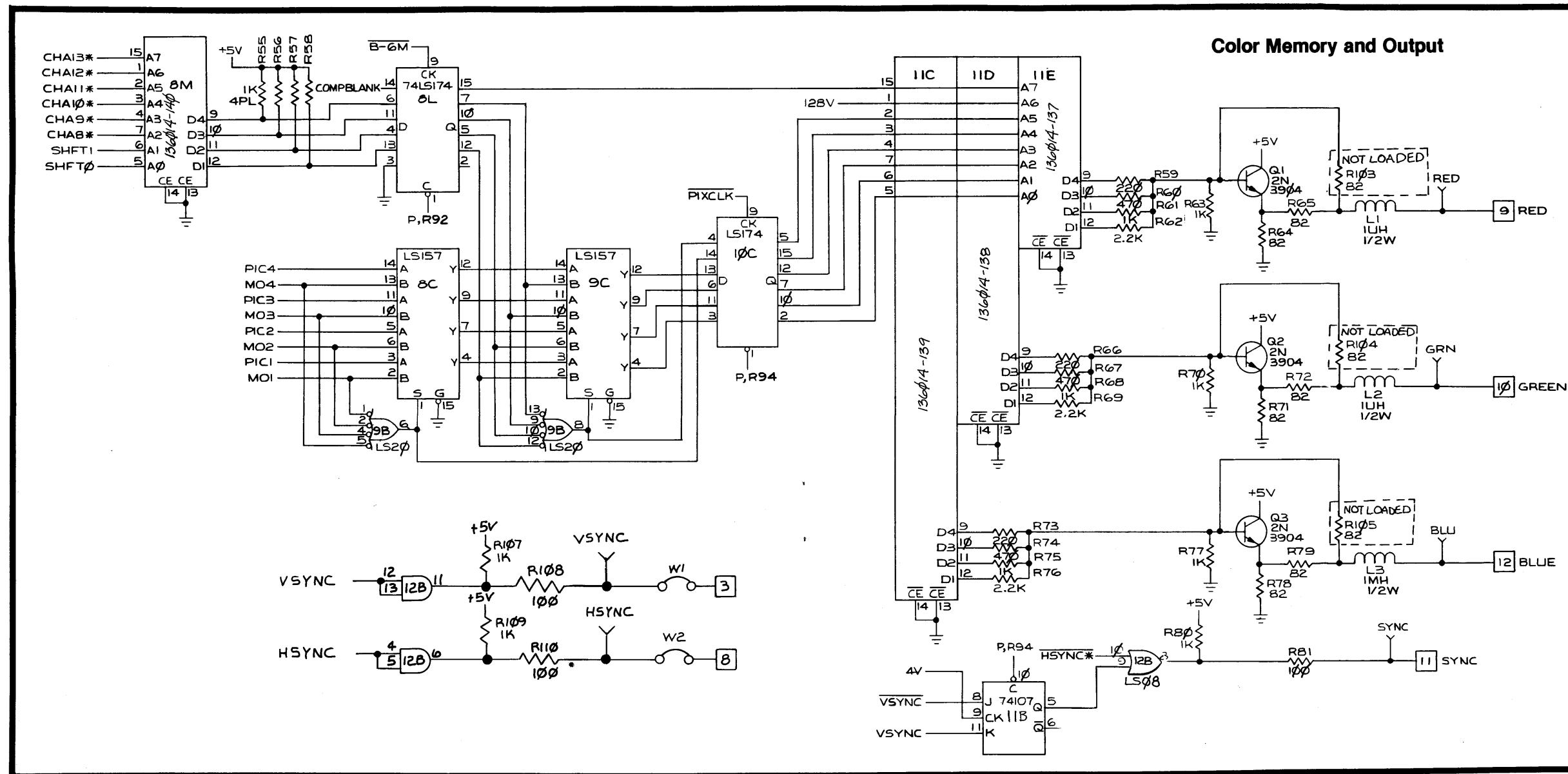
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**Pole Position Video PCB Schematic Diagram**

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**Pole Position Video PCB Schematic Diagram**

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# Electrohome 19-Inch Color Raster-Scan Video Display Schematic Diagram

## Schematic Notes

Unless otherwise specified

Resistance: ( $\Omega$ ) (K $\rightarrow$ K $\Omega$ , M $\rightarrow$ M $\Omega$ ), 1/4 (W) carbon resistor

Capacitance: 1 or higher  $\rightarrow$  (pF), less than 1  $\rightarrow$  ( $\mu$ F)

working voltage  $\rightarrow$  50 (V)

ceramic capacitor

Inductance: ( $\mu$ H)

Electrolytic Cap: Capacitance Value ( $\mu$ F)/working voltage (V),

NP  $\rightarrow$  non-polar (or bipolar) electrolytic cap.

Refer to the parts list for additional component information.

$\odot$  indicates test point connection

$\perp$  indicates chassis ground unless otherwise specified

Hz indicates cycles per second

For **safety** purposes (and continuing reliability)

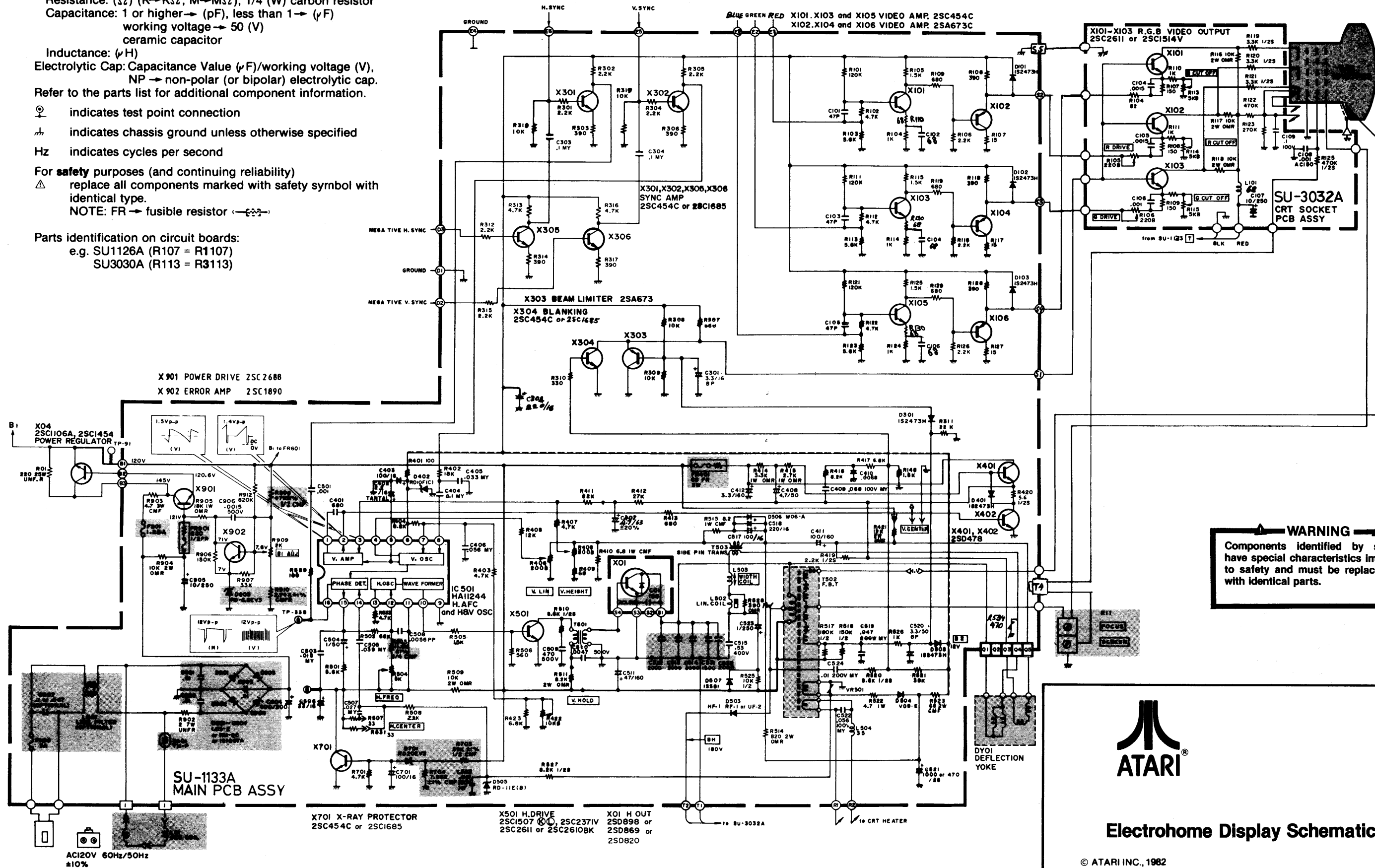
$\triangle$  replace all components marked with safety symbol with identical type.

NOTE: FR  $\rightarrow$  fusible resistor

Parts identification on circuit boards:

e.g. SU1126A (R107 = R1107)

SU3030A (R113 = R3113)



**WARNING**  
Components identified by shading have special characteristics important to safety and must be replaced only with identical parts.



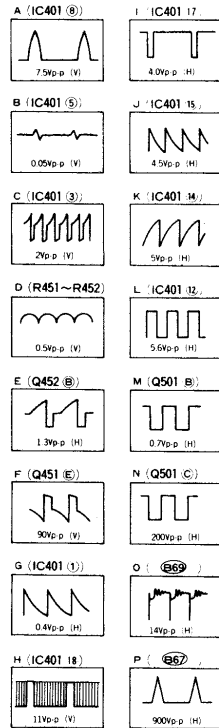
## Electrohome Display Schematic Diagram

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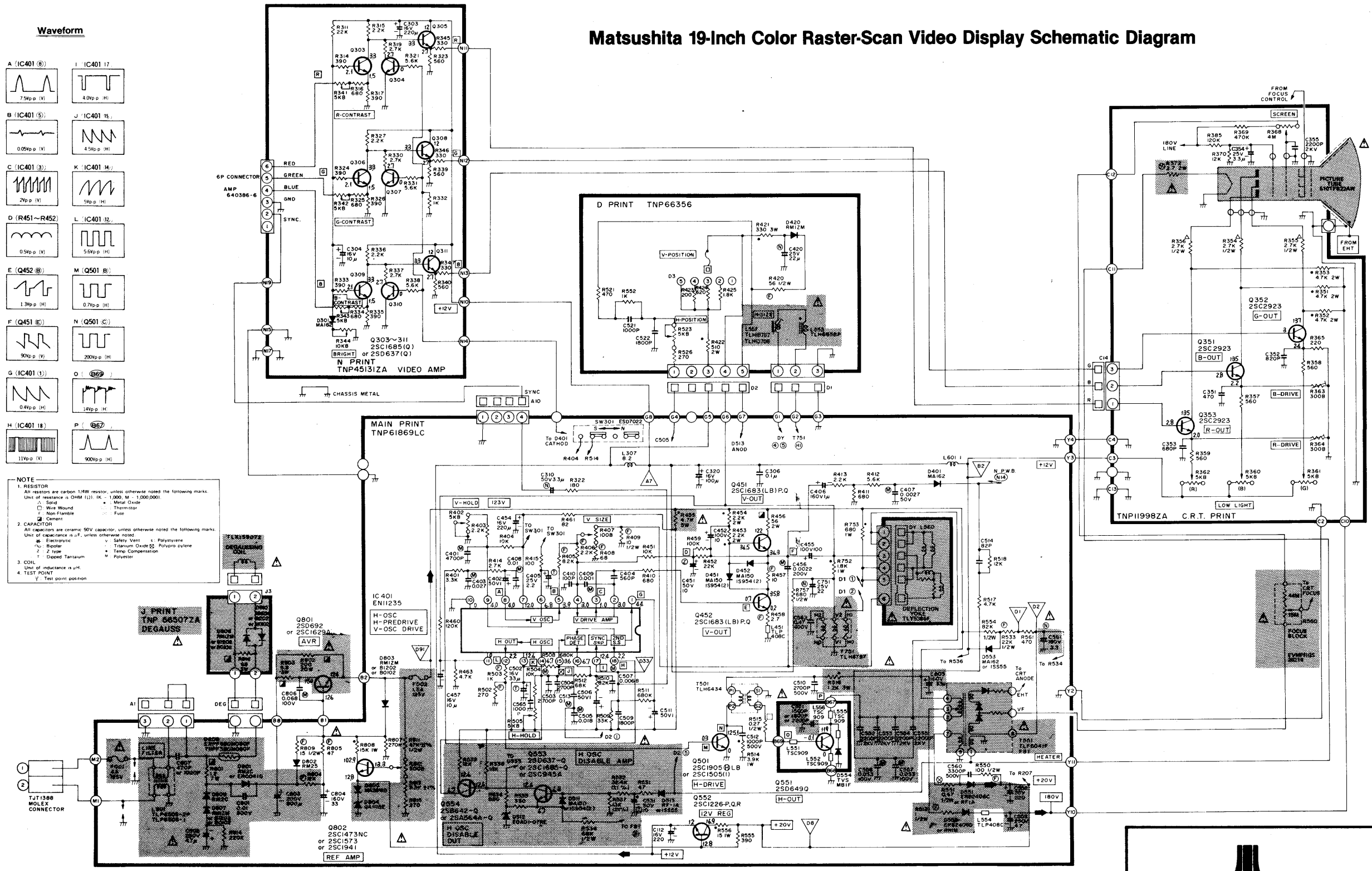
SP-218 Sheet 16A  
8th printing

**Waveform**



**NOTE**  
 1. RESISTOR  
 All resistors are carbon 1/4W resistor, unless otherwise noted the following marks:  
 Unit of resistance: Ohm (Ω), K - 1,000, M - 1,000,000.  
 □ Wire Wound      △ Metal Oxide  
 □ Non-Flammable      □ Thermistor  
 □ Cement      □ Fuse  
 2. CAPACITORS  
 All capacitors are ceramic 50V capacitor, unless otherwise noted the following marks:  
 Unit of capacitance: pF, unless otherwise noted.  
 □ Electrolytic      □ Safety Vent      □ Polystyrene  
 □ Paper      □ Titanium Oxide      □ Polypropylene  
 □ Z type      □ Temp. Compensation      □ Polyester  
 □ Doped Tantalum      □ Polyester  
 3. COIL  
 Unit of inductance: μH.  
 4. TEST POINT  
 □ Test point position

**Matsushita 19-Inch Color Raster-Scan Video Display Schematic Diagram**



**WARNING**  
 Components identified by shading have special characteristics important to safety and must be replaced only with identical parts.

**Matsushita Display Schematic Diagram**

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