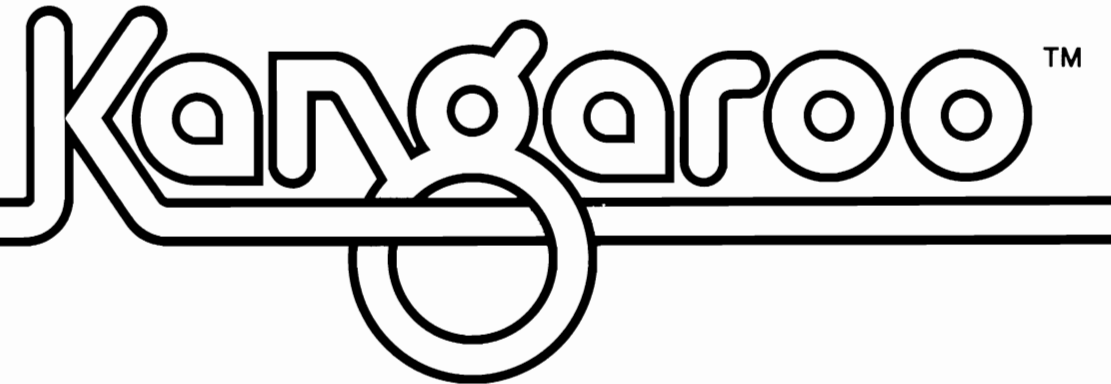


Schematic Package Supplement  
to

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- Sheet 6A Inputs, Outputs
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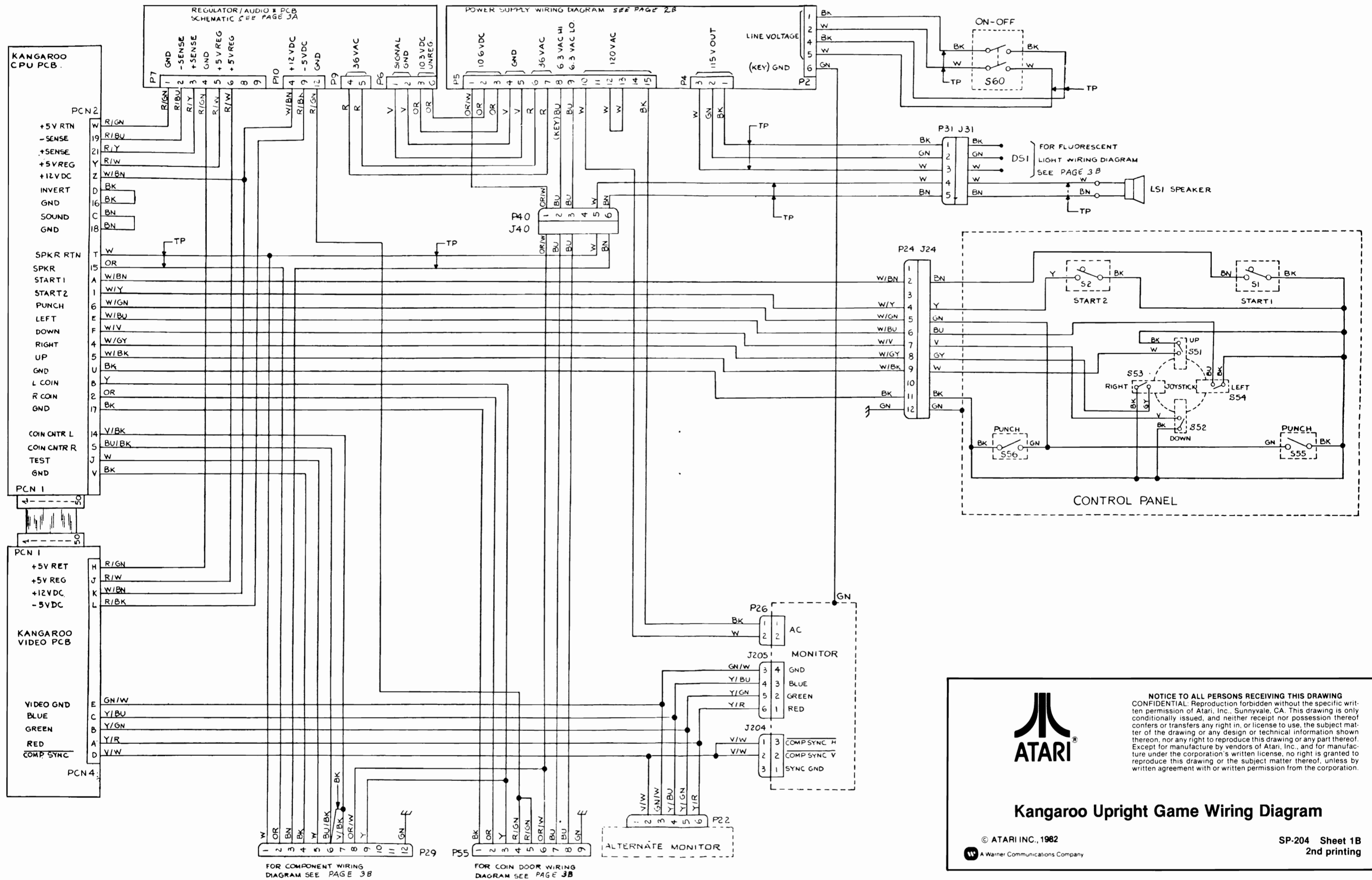
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## Operation, Maintenance and Service Manual

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







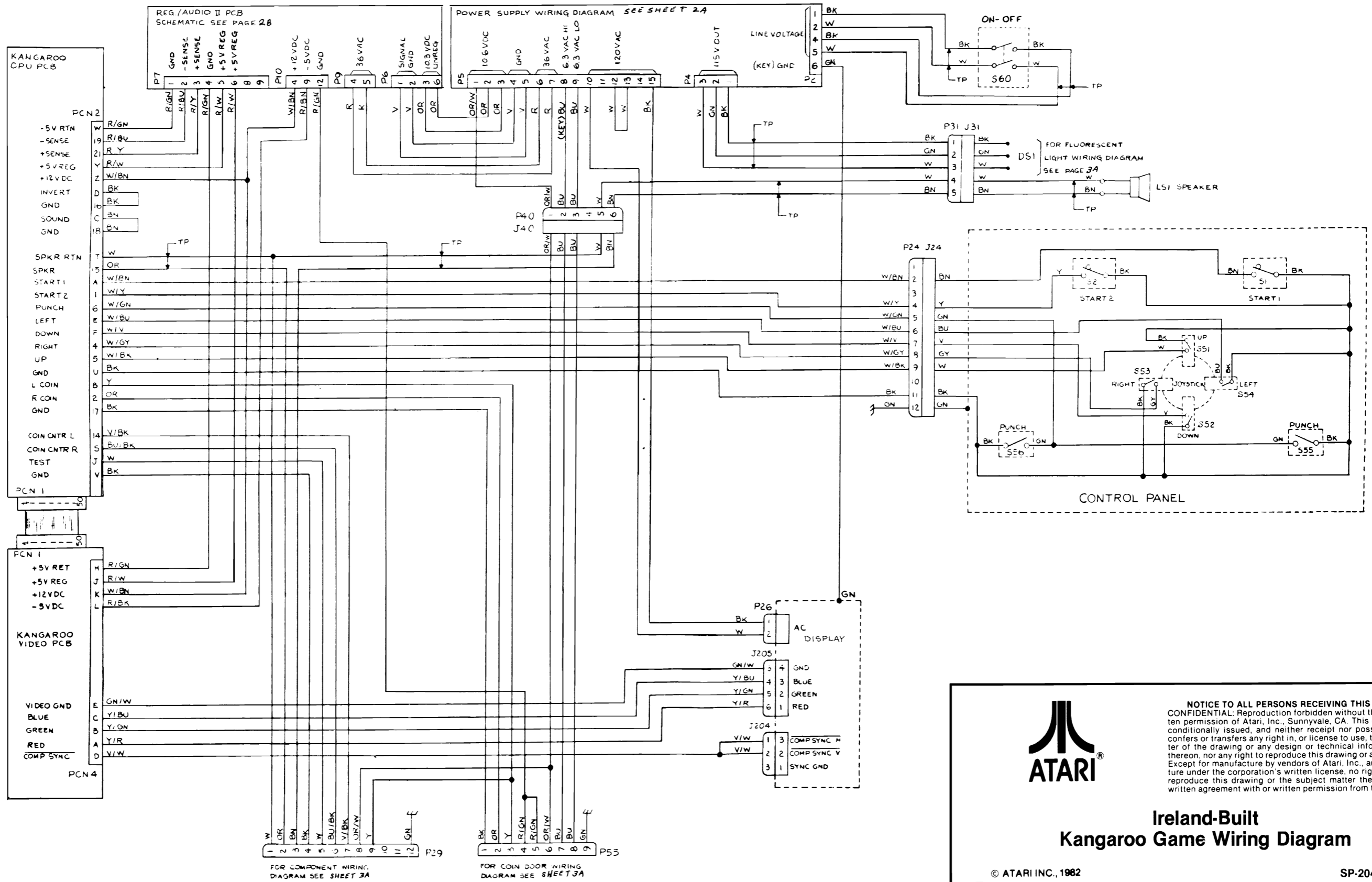
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**Kangaroo Upright Game Wiring Diagram**

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FOR COMPONENT WIRING DIAGRAM SEE SHEET 3A

FOR COIN DOOR WIRING DIAGRAM SEE SHEET 3A

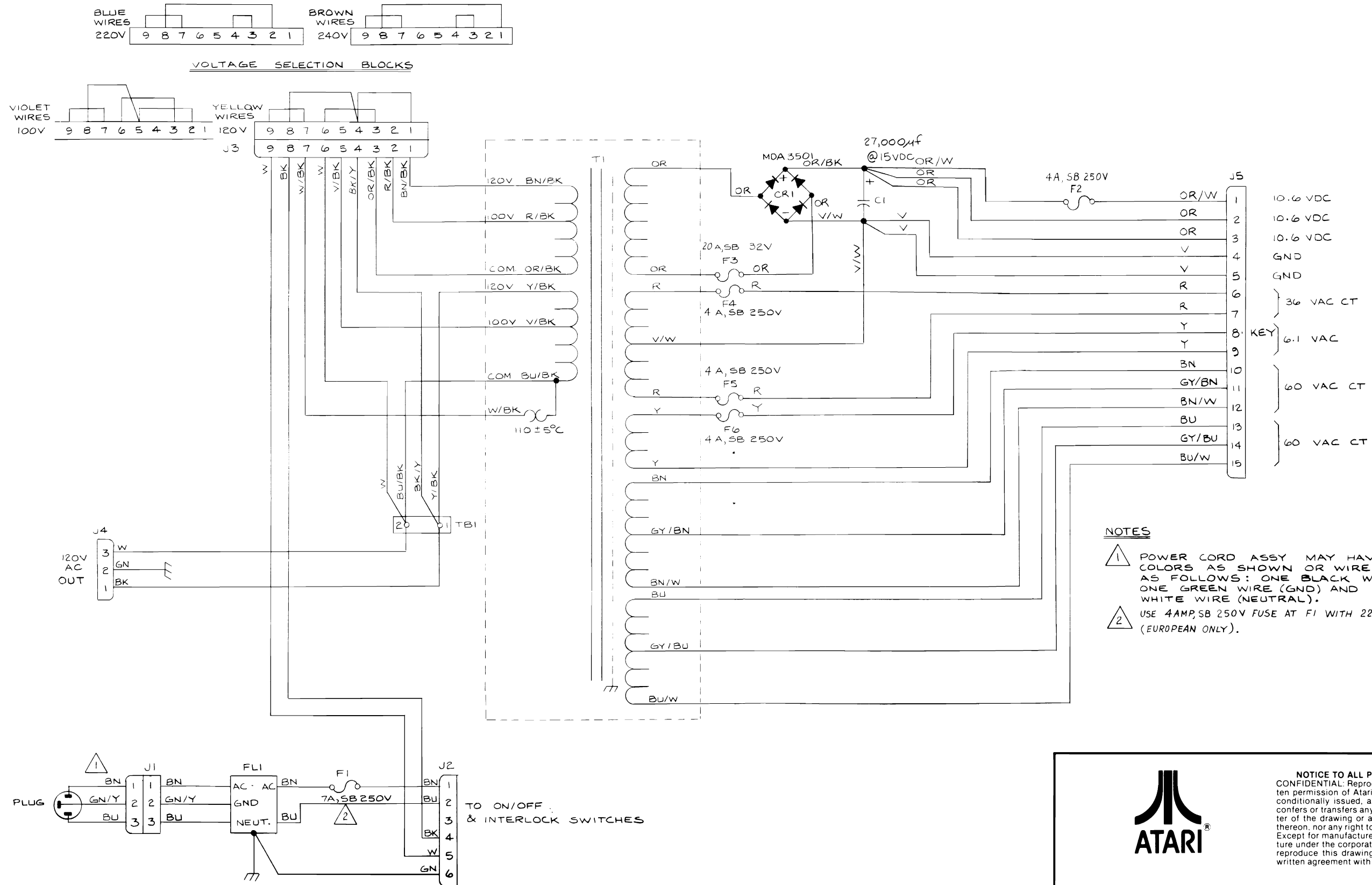


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### Ireland-Built Kangaroo Game Wiring Diagram

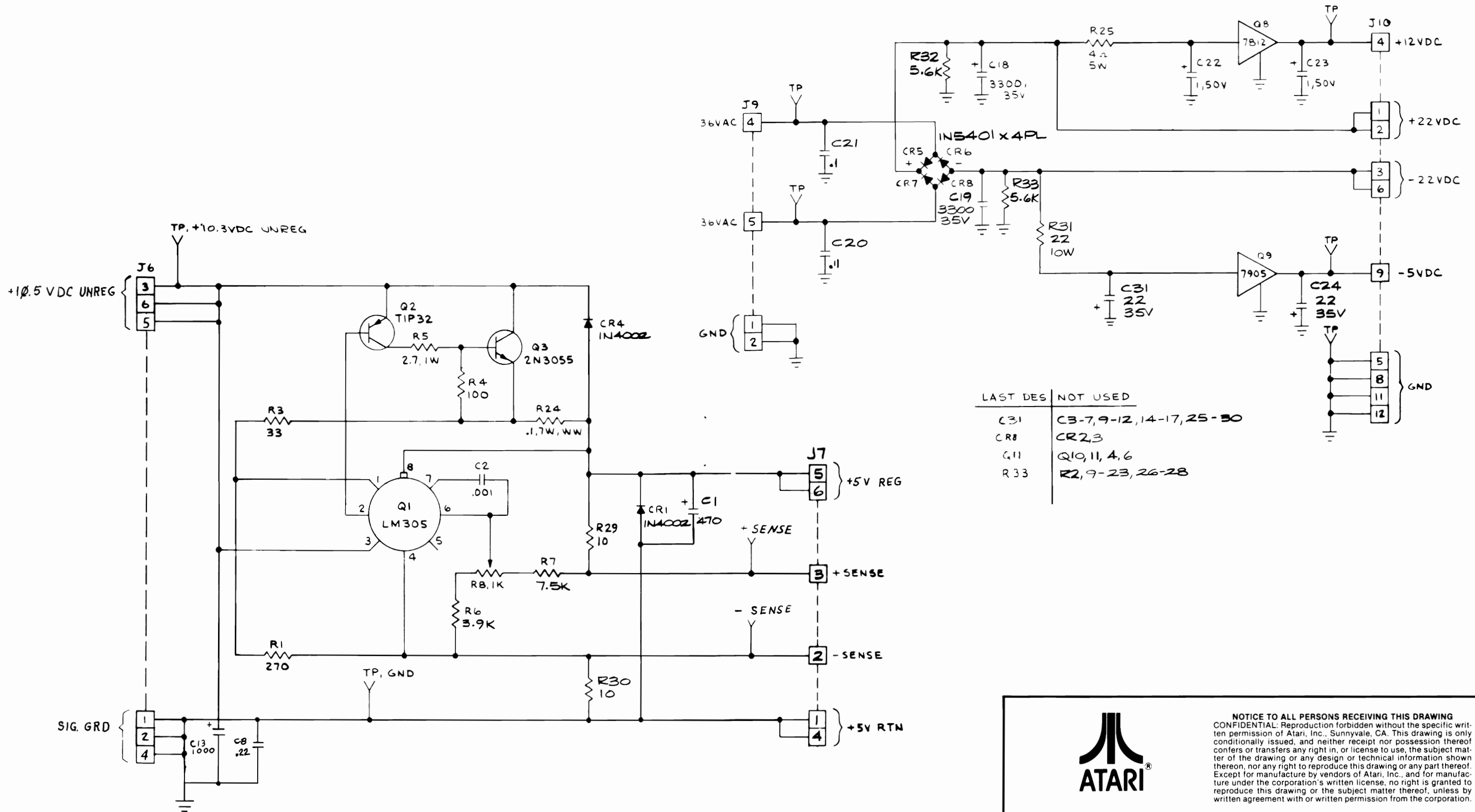
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**Kangaroo Power Supply**



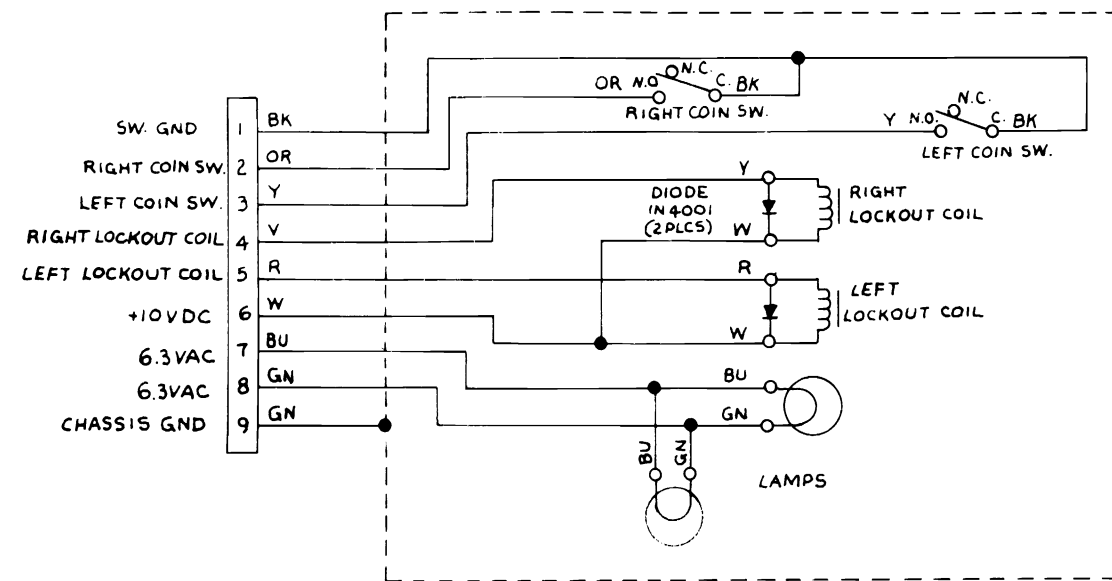
LAST DES	NOT USED
C31	C3-7, 9-12, 14-17, 25-30
CR8	CR2, 3
Q11	Q10, 11, 4, 6
R33	R2, 9-23, 26-28



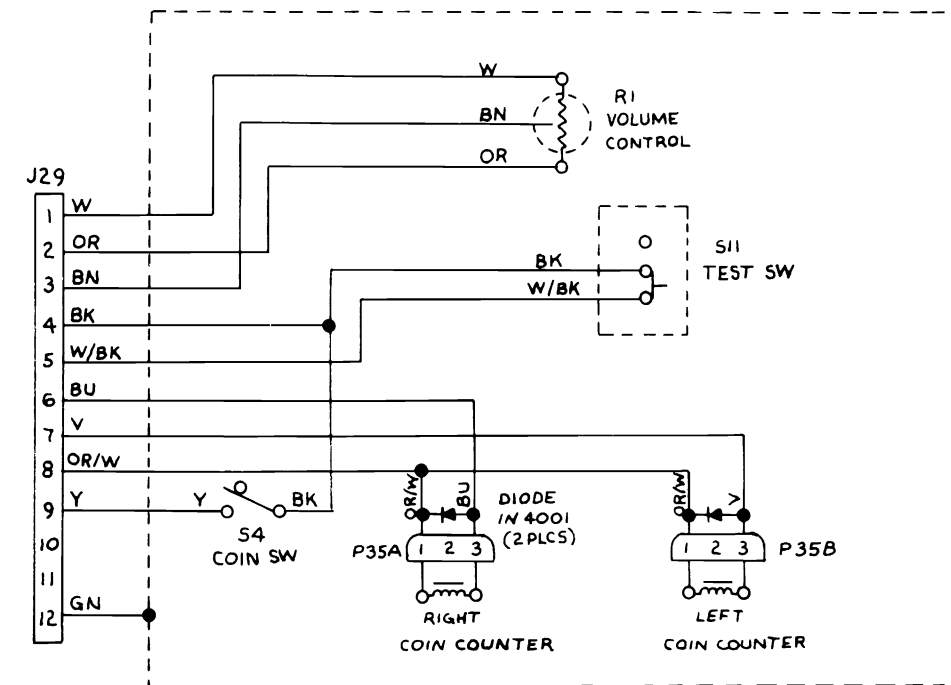
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### Kangaroo Reg/Audio II PCB Schematic Diagram

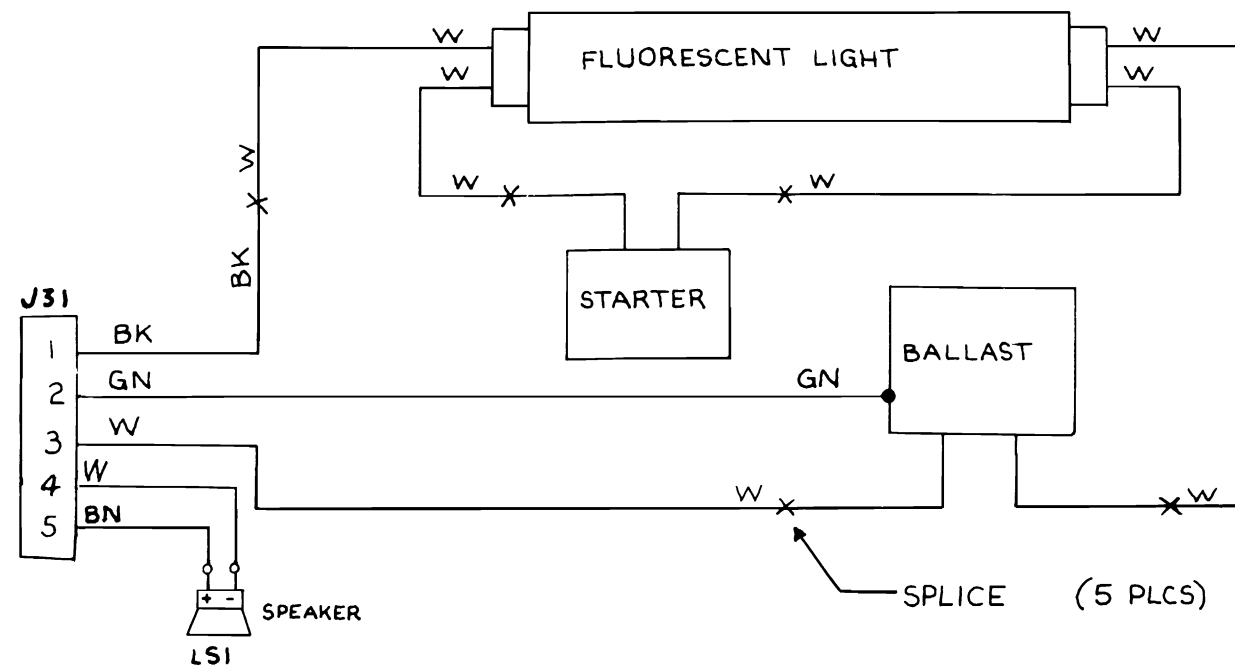
**Coin Door Wiring Diagram**



**Utility Panel Wiring Diagram**



**Fluorescent Light and Speaker Wiring Diagram**

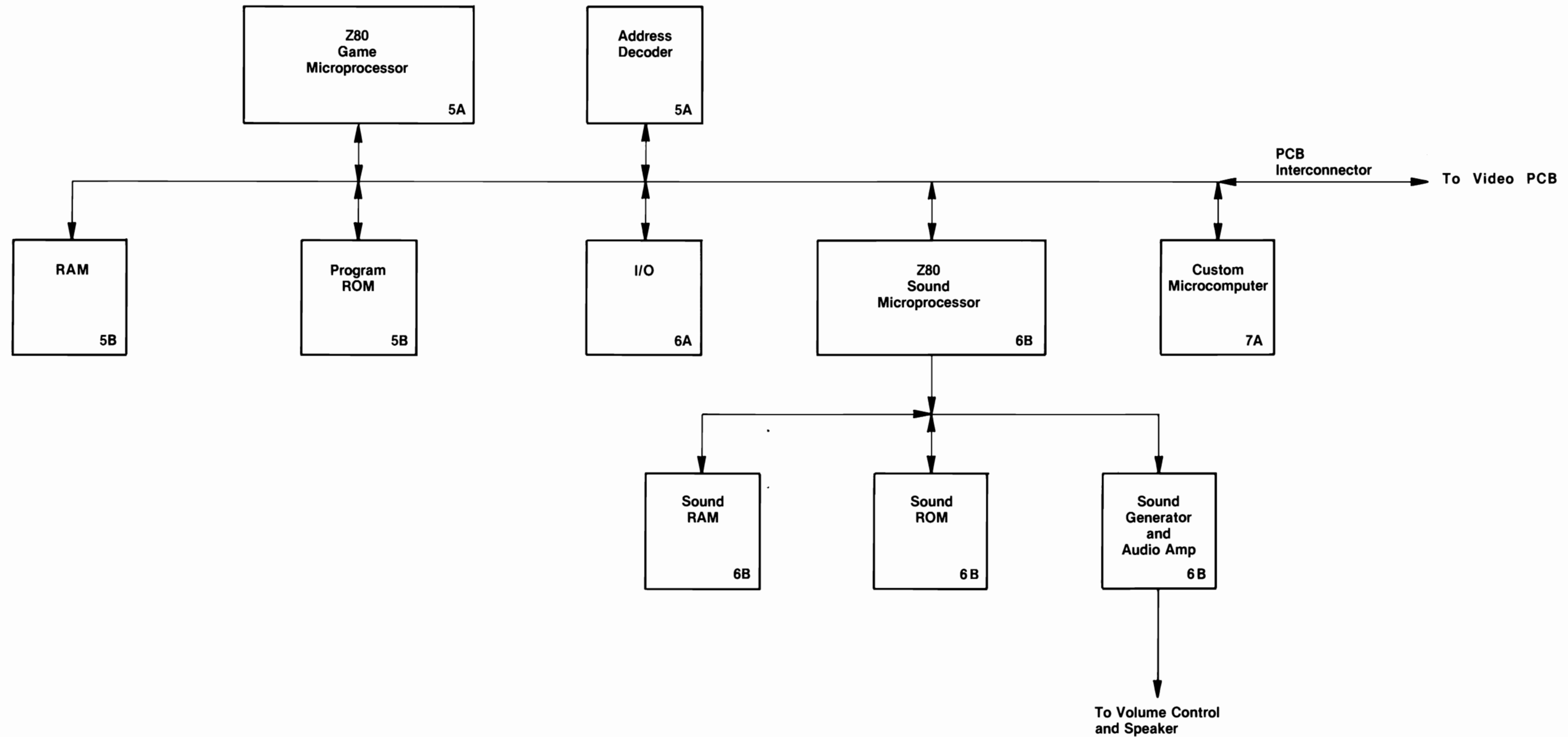



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**Kangaroo Game Wiring Interfaces**

# Block Diagram (CPU PCB)

**NOTE**  
 The **service switch**, located on the CPU PCB, allows you to enter credits without tripping the coin counter.





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## Kangaroo CPU PCB Schematic Diagram

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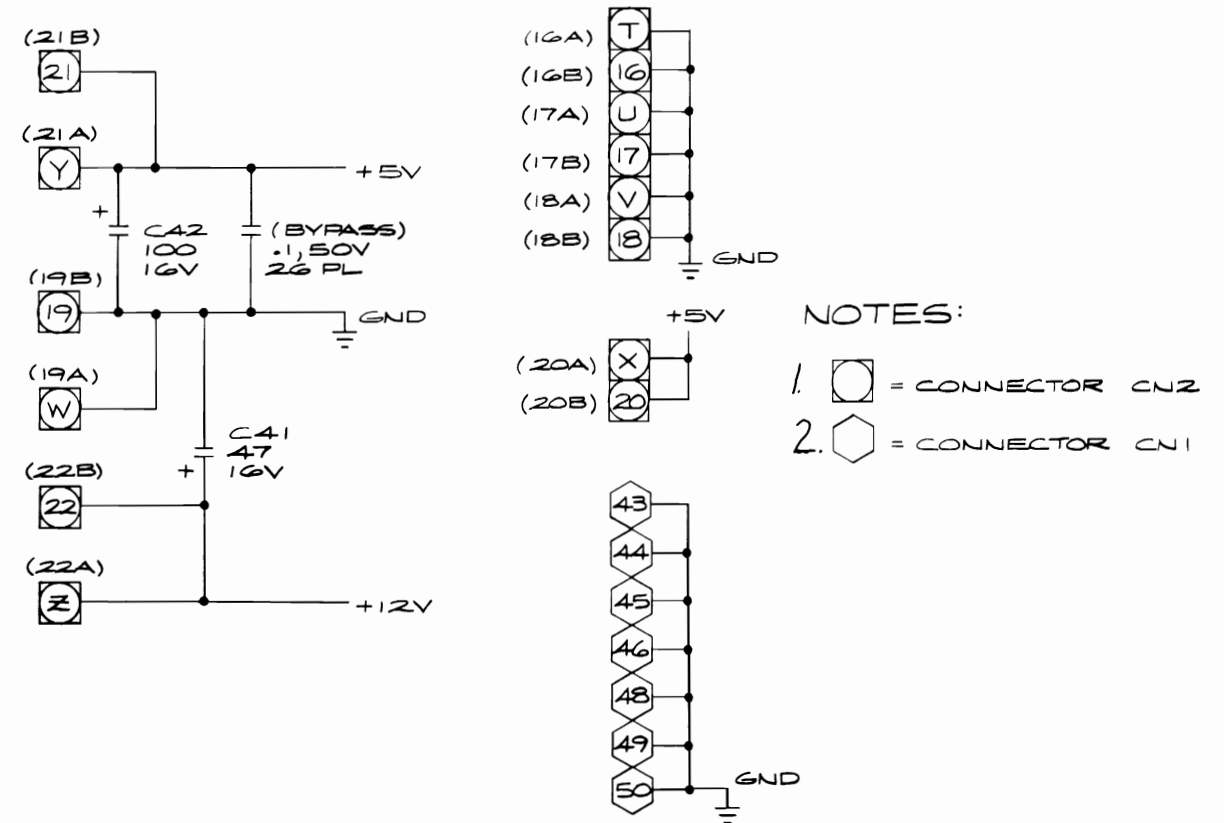
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## Memory Map

HEXA-DECIMAL ADDRESS	R/W	DATA								FUNCTION
		D7	D6	D5	D4	D3	D2	D1	D0	
<b>Game Microprocessor Memory Space (IC15)</b>										
0000-5FFF	R	D	D	D	D	D	D	D	D	Z80 24K Program ROM
E000-E3FF	R/W	D	D	D	D	D	D	D	D	1K Working RAM
E400	R	D	D	D	D	D	D	D	D	Option Switch
E800	W	D	D	D	D	D	D	D	D	Low Byte } Start Address of Data in Picture High Byte } ROM for DMA
E801	W	D	D	D	D	D	D	D	D	
E802	W	D	D	D	D	D	D	D	D	Low Byte } Start Address in Bit Map RAM (where High Byte } picture is to be written) During DMA
E803	W	D	D	D	D	D	D	D	D	
E804	W	D	D	D	D	D	D	D	D	Low Byte } Picture Size for DMA High Byte } and DMA Start
E805	W	D	D	D	D	D	D	D	D	
E806	W	D	D	D	D	D	D	D	D	Vertical Start Address in Bit Map
E807	W	D	D	D	D	D	D	D	D	Horizontal Start Address in Bit Map
E808	W							D	D	Bank Select Latch
E809	W			D	D	D	D	D	D	A & B Bit Map Control Latch (A = playfield, B = motion)
E80A	W			D	D	D	D	D	D	Color-Shading Latch
EC00	W	D	D	D	D	D	D	D	D	Sound DATA to Sound Microprocessor
EC00	R							D		Utility Coin Switch
EC00	R							D		1 Player Start
EC00	R							D		2 Player Start
EC00	R					D				Left Coin Input
EC00	R				D					Right Coin Input
ED00	W								D	Coin Counter 1
ED00	W							D		Coin Counter 2 (European games)
ED00	R							D		Player 1 Right
ED00	R							D		Player 1 Left
ED00	R						D			Player 1 Up
ED00	R					D				Player 1 Down
ED00	R				D					Player 1 Punch
EE00	R								D	Player 2 Right
EE00	R							D		Player 2 Left
EE00	R						D			Player 2 Up
EE00	R					D				Player 2 Down
EE00	R				D					Player 2 Punch
EFXX	W				D	D	D	D		Output to Custom Microcomputer
EFXX	R				D	D	D	D		Input from Custom Microcomputer
<b>Sound Microprocessor Memory Space (IC34)</b>										
0000-0FFF	R	D	D	D	D	D	D	D	D	4K Program ROM
4000-43FF	R/W	D	D	D	D	D	D	D	D	1K Working RAM
6000	R	D	D	D	D	D	D	D	D	Read DATA from Game Microprocessor
7000	W	D	D	D	D	D	D	D	D	Write to Sound Chip (GI-AY-3-8910)
8000	R	D	D	D	D	D	D	D	D	Read from Sound Chip

## CPU Power Input

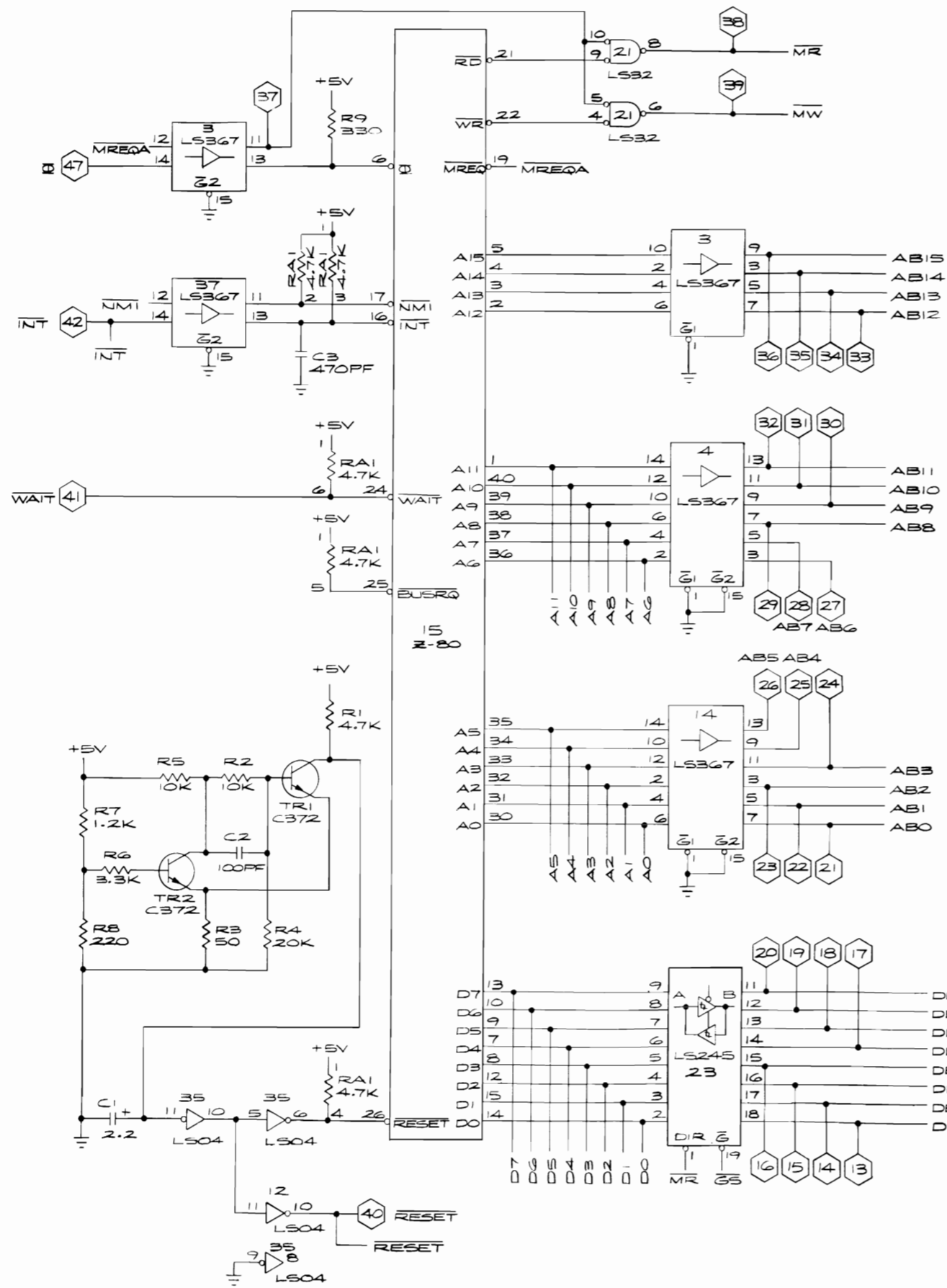


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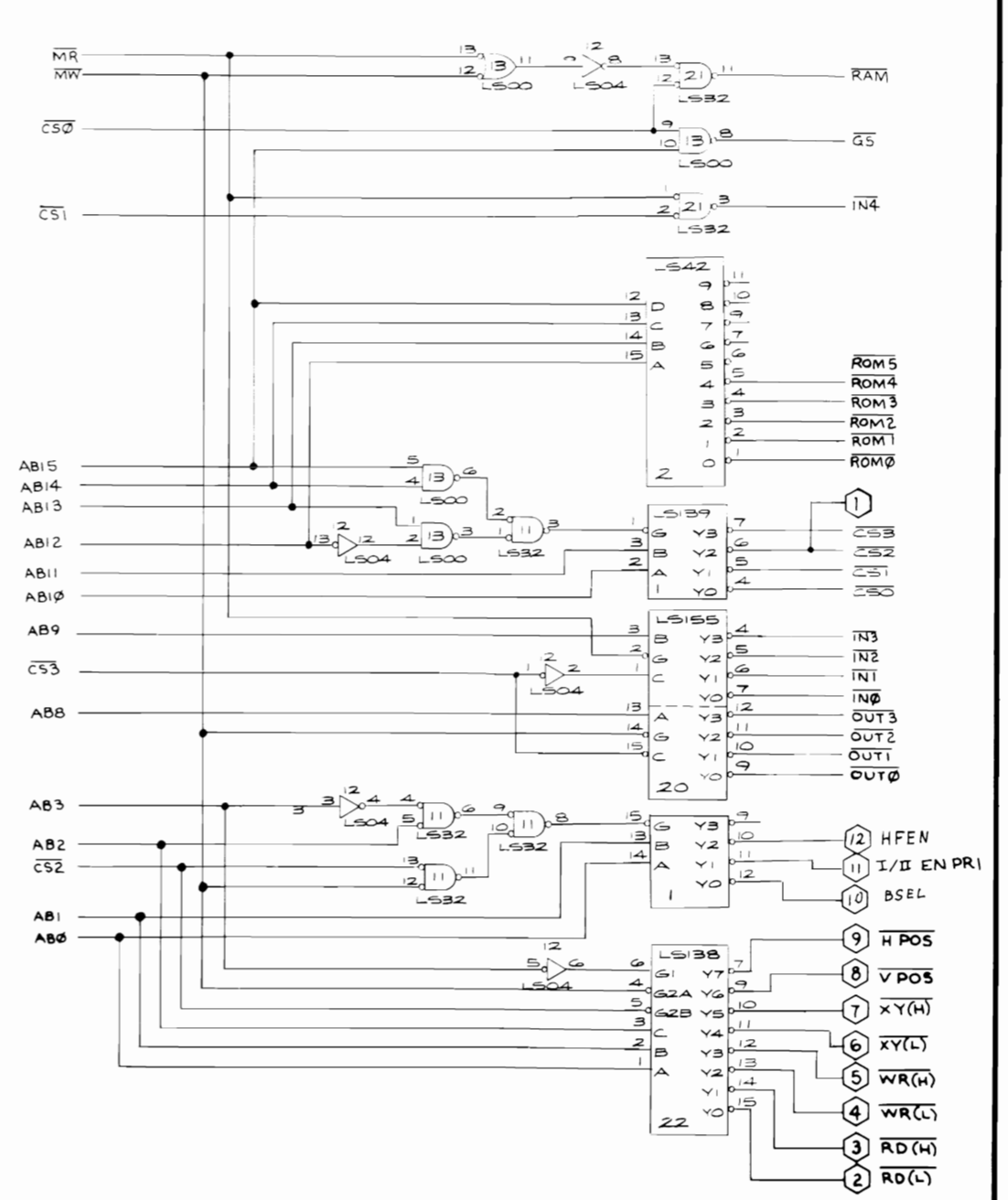
### Kangaroo CPU PCB Schematic Diagram



# Game Microprocessor



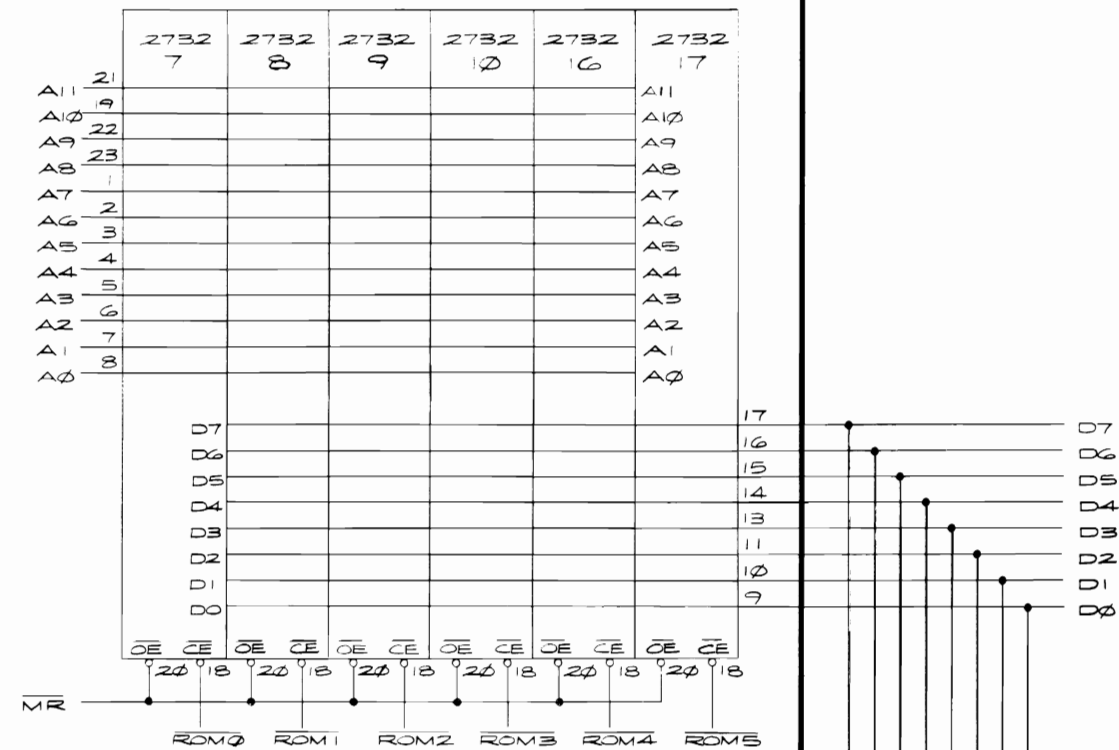
# Address Decoder



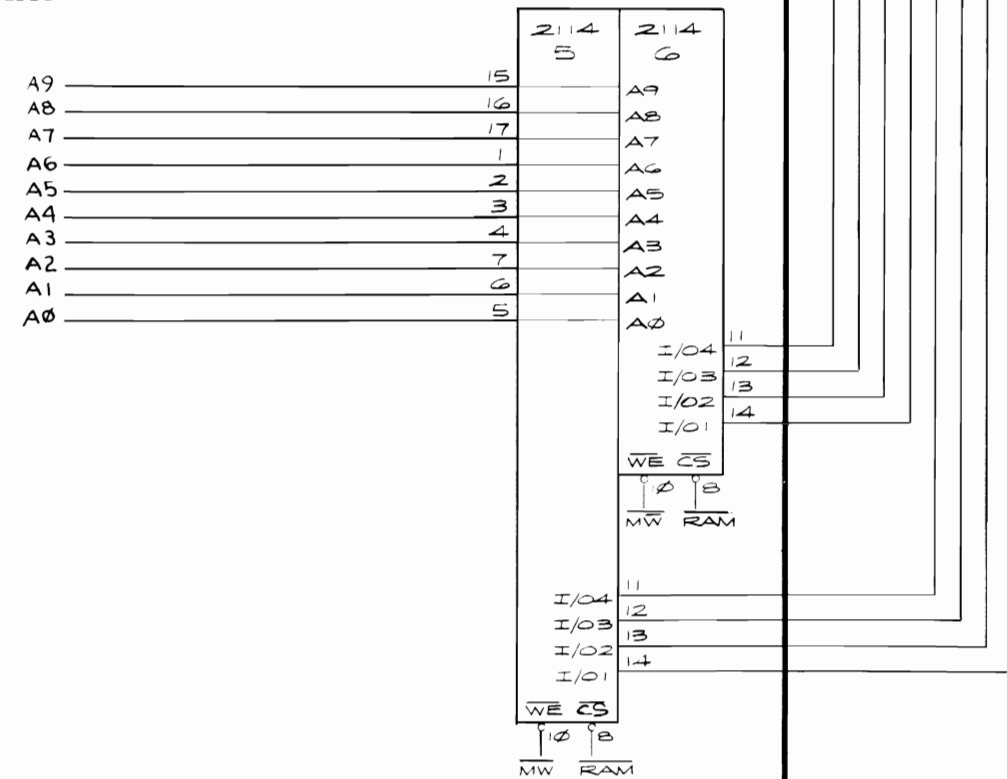
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## Kangaroo CPU PCB Schematic Diagram

# Program ROM



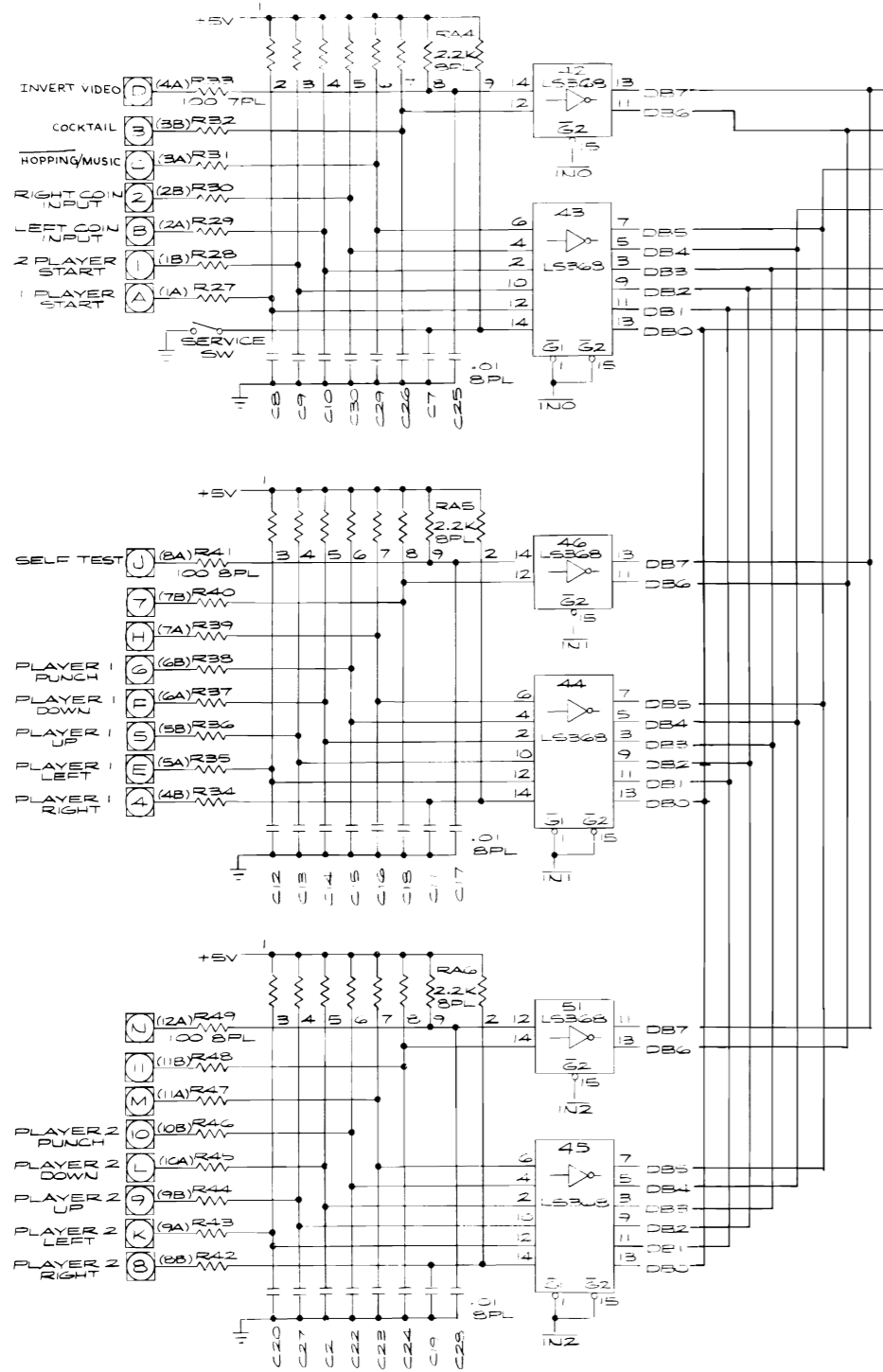
# RAM



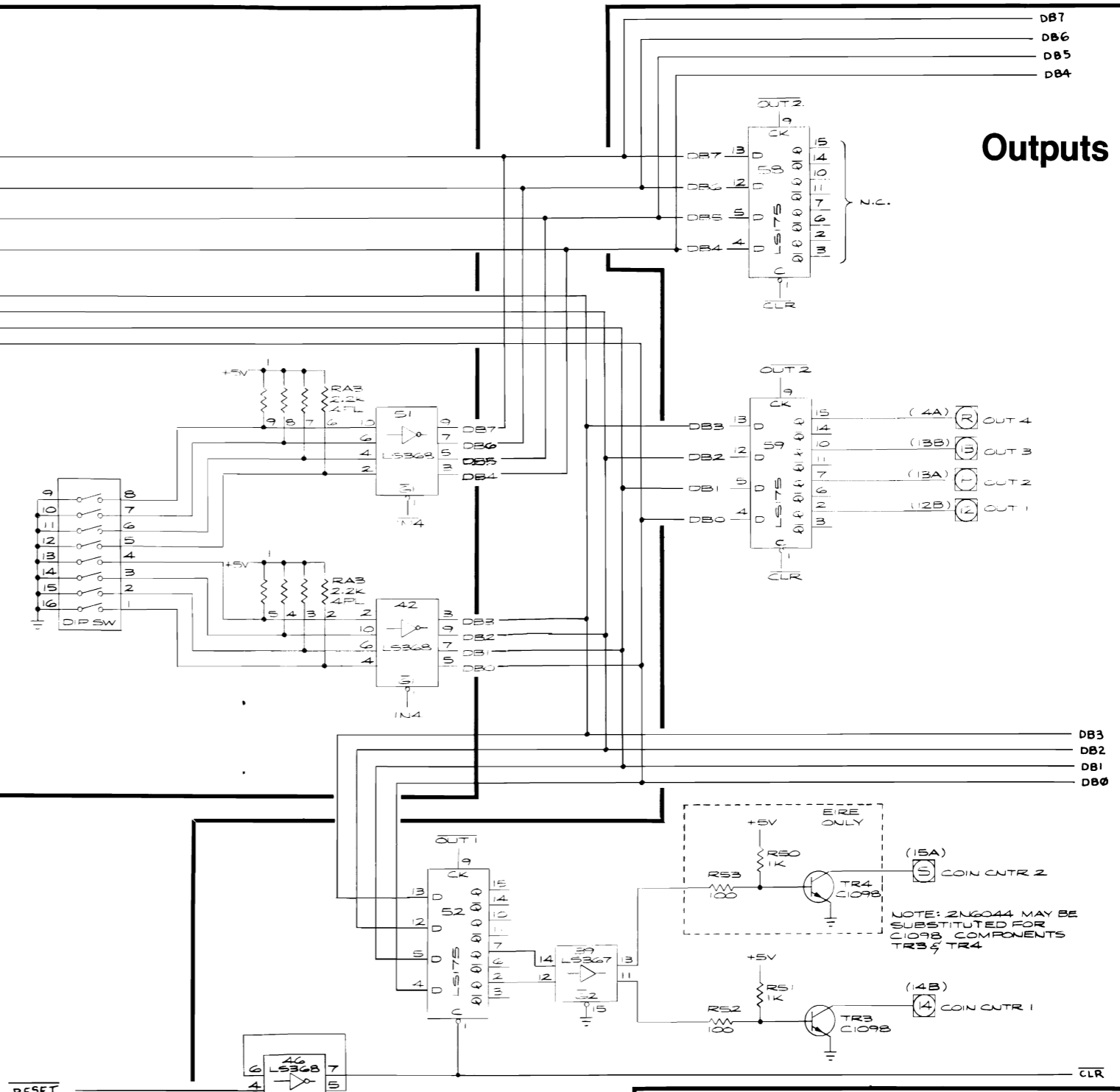
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## Kangaroo CPU PCB Schematic Diagram

# Inputs



# Outputs



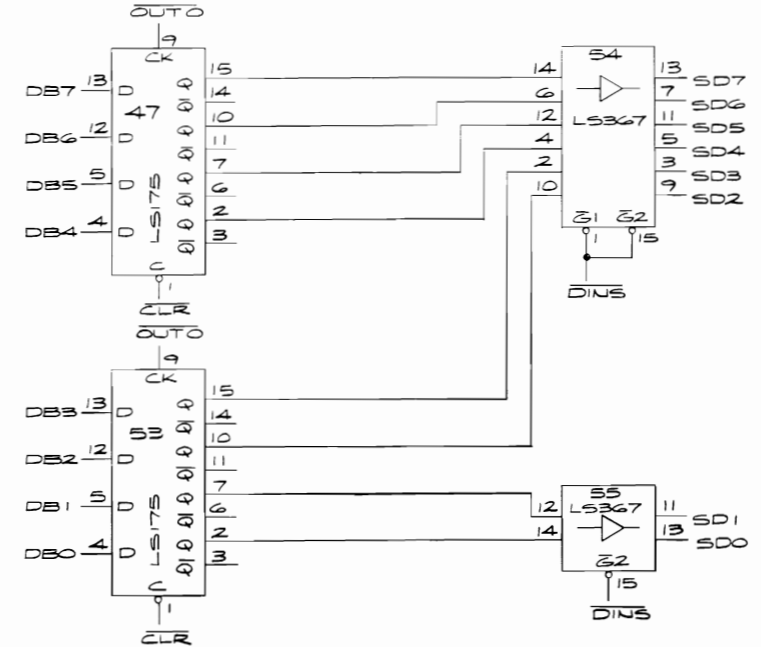
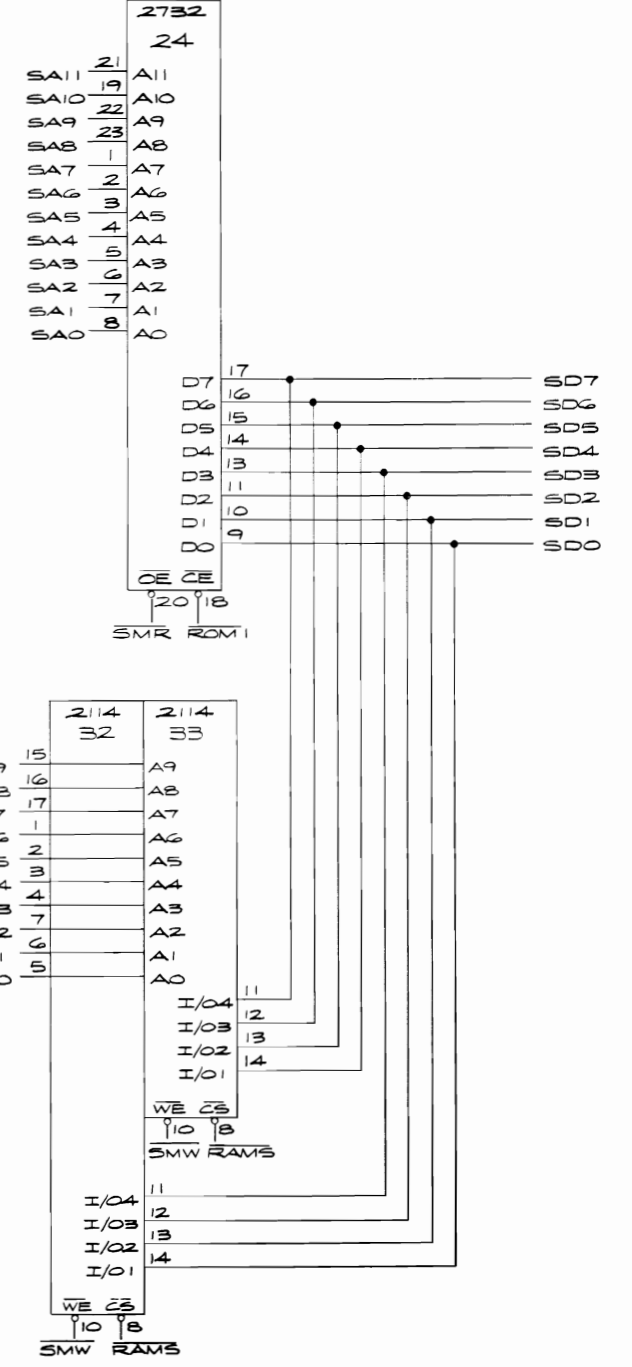
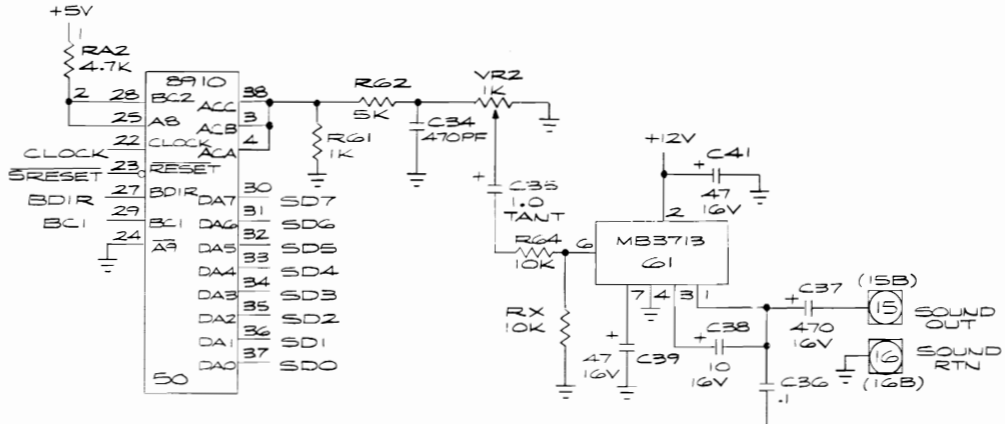
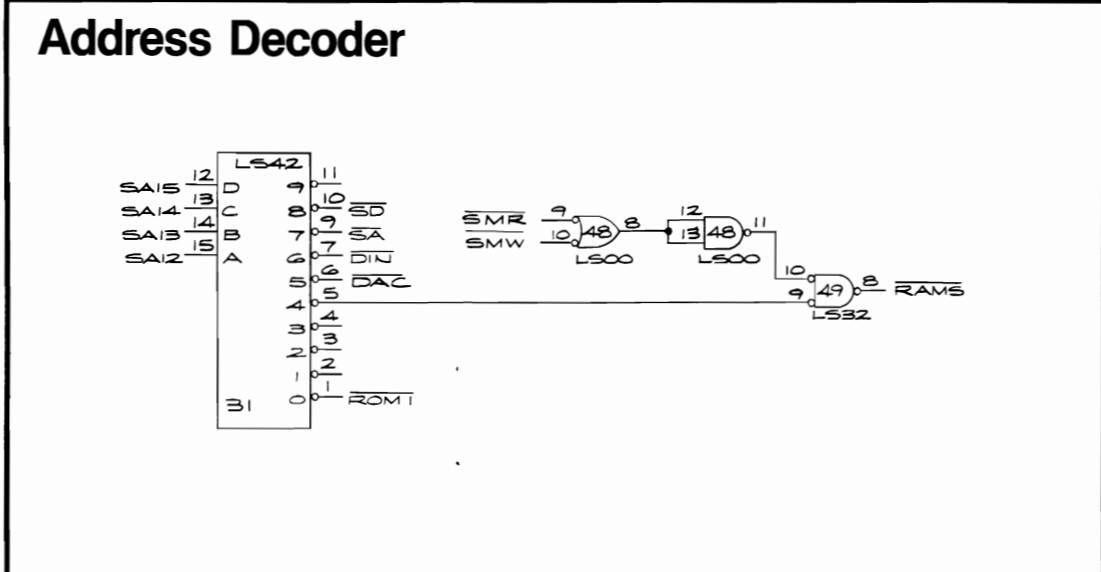
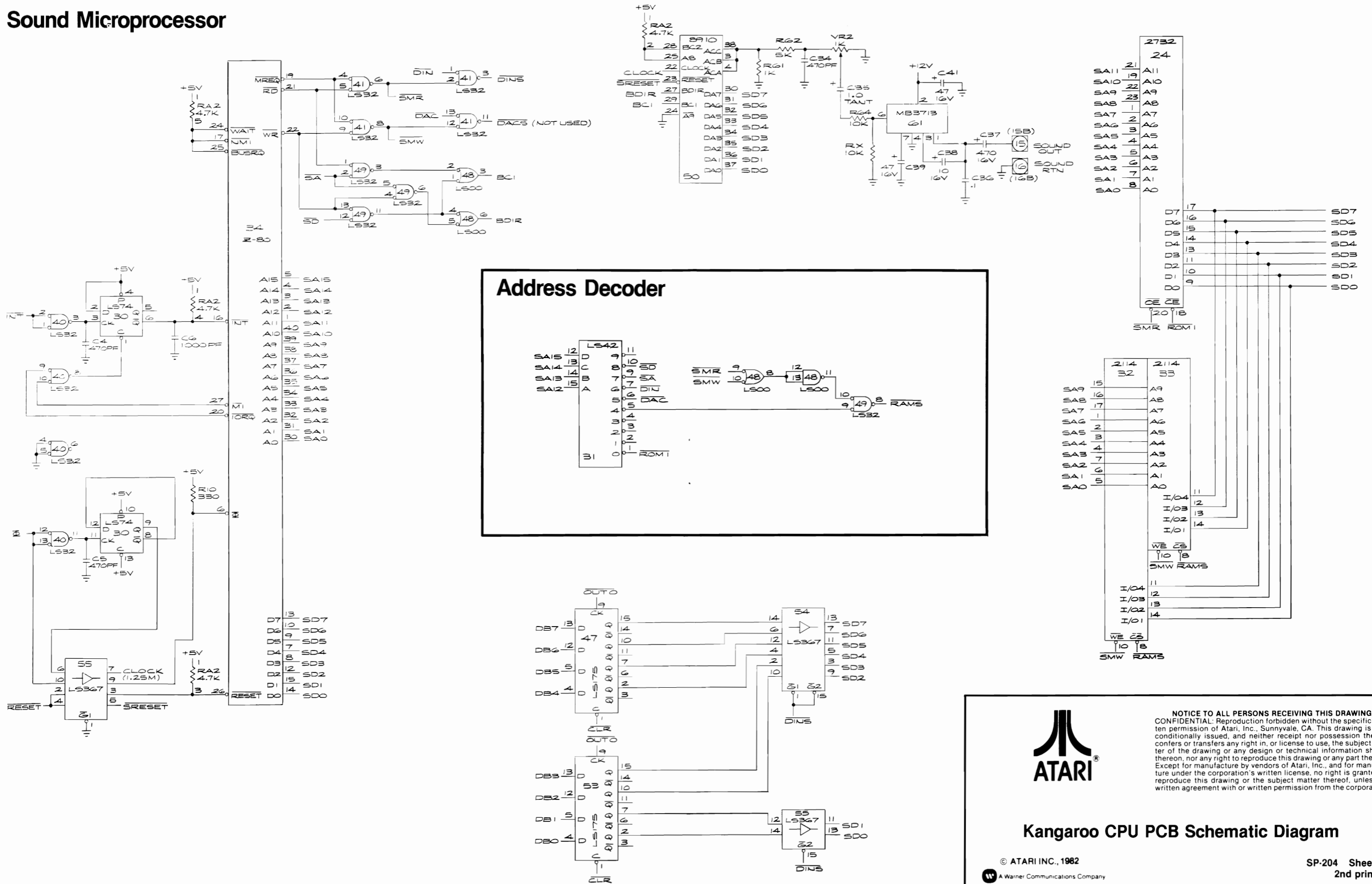
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## Kangaroo CPU PCB Schematic Diagram

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# Sound Microprocessor





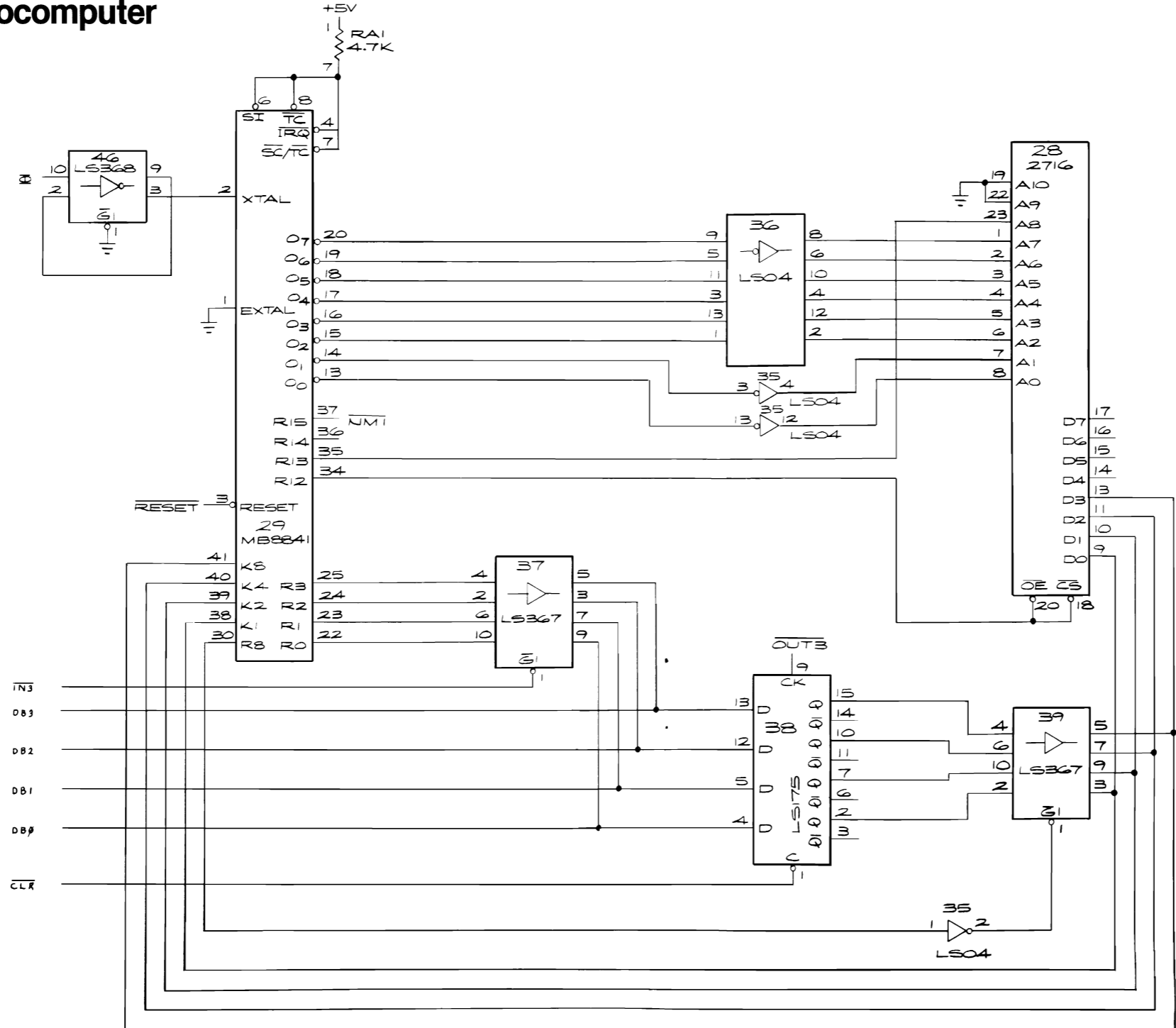
**Kangaroo CPU PCB Schematic Diagram**

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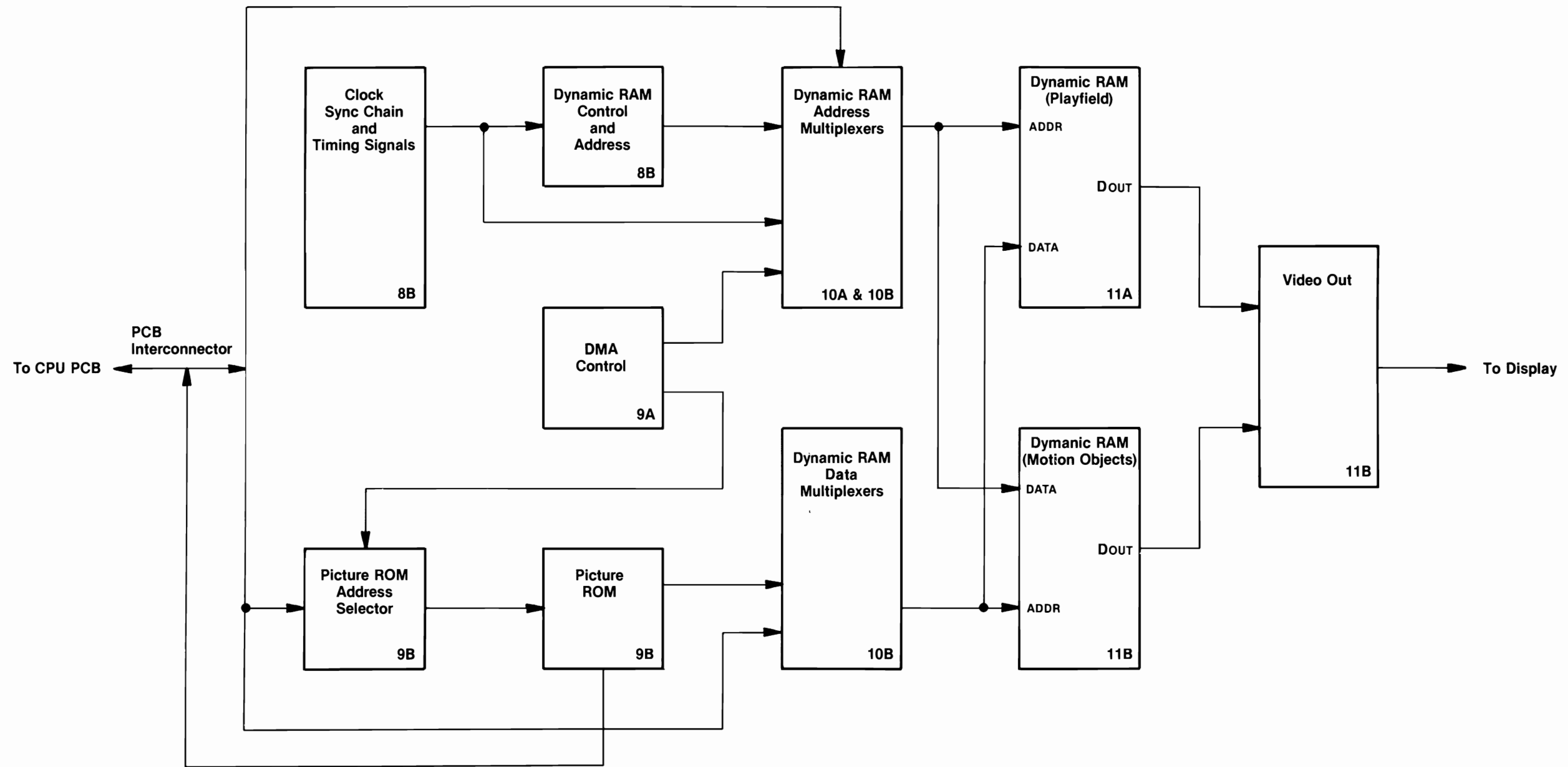
# Custom Microcomputer



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## Kangaroo CPU PCB Schematic Diagram

# Block Diagram (Video PCB)



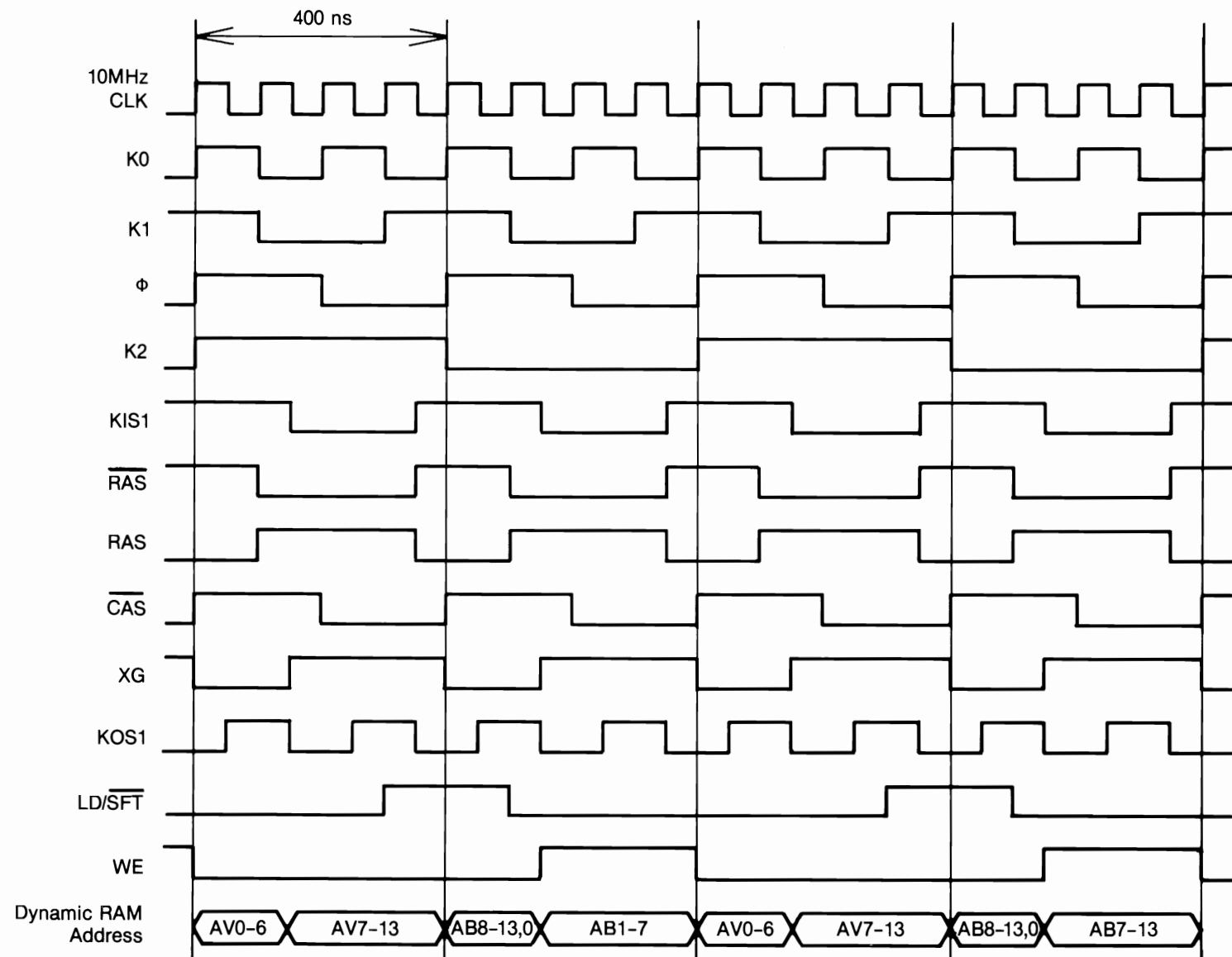
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## Kangaroo Video PCB Schematic Diagram

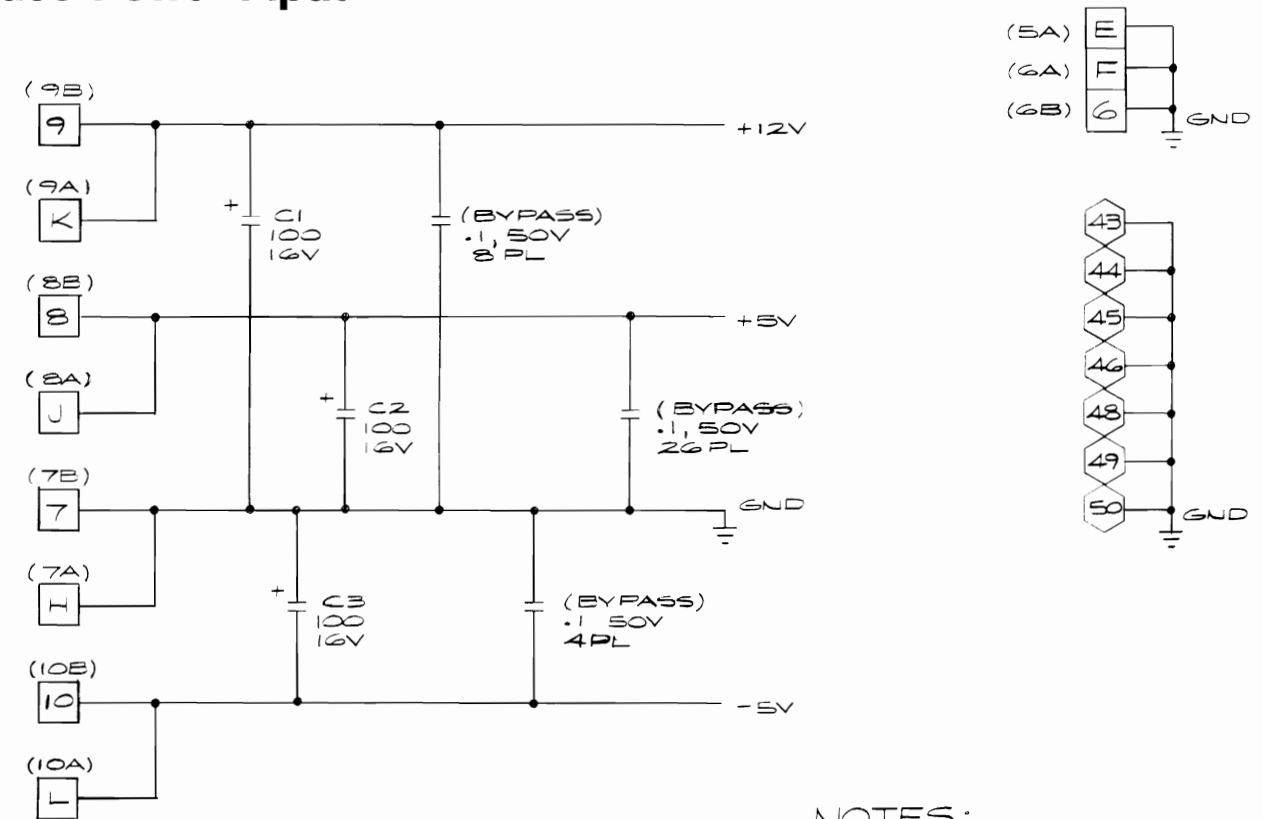
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# Dynamic RAM Timing Diagram (Video PCB)



## Video Power Input



### NOTES:

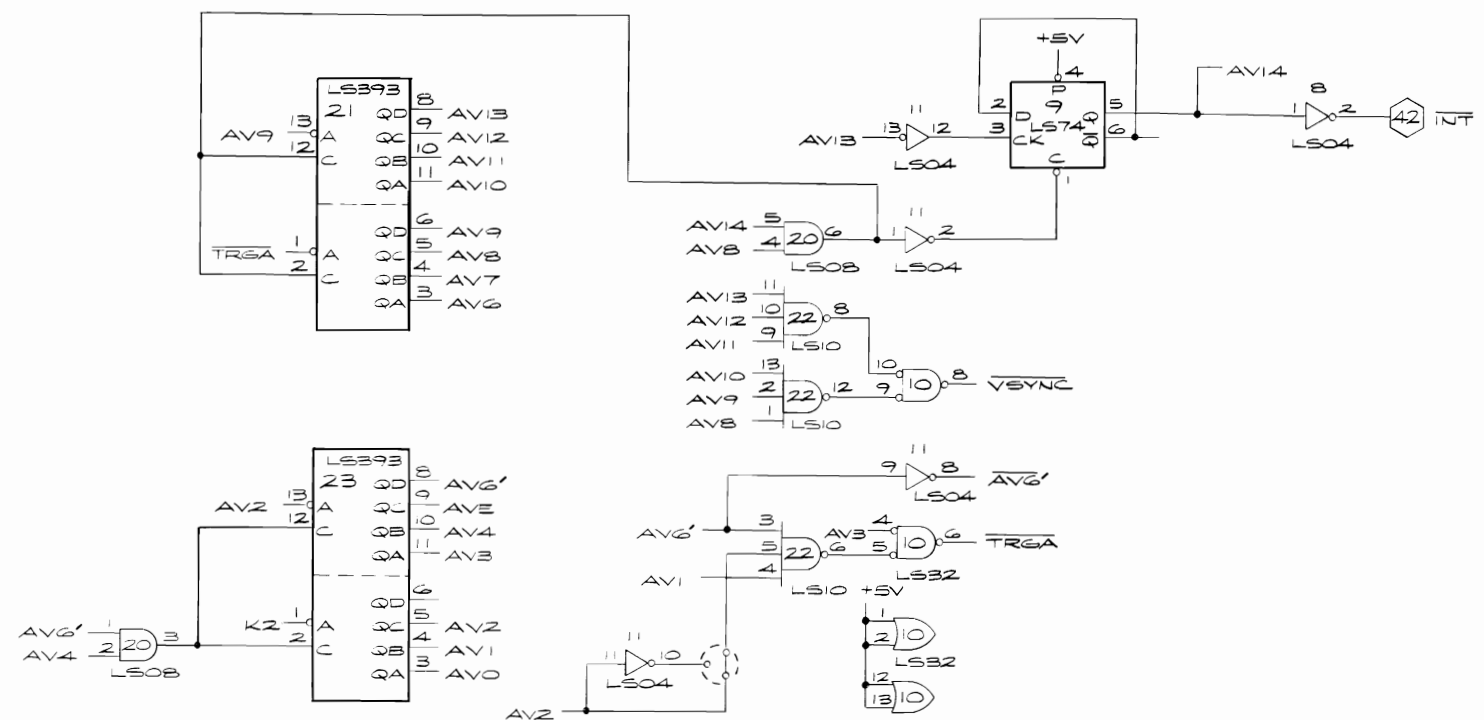
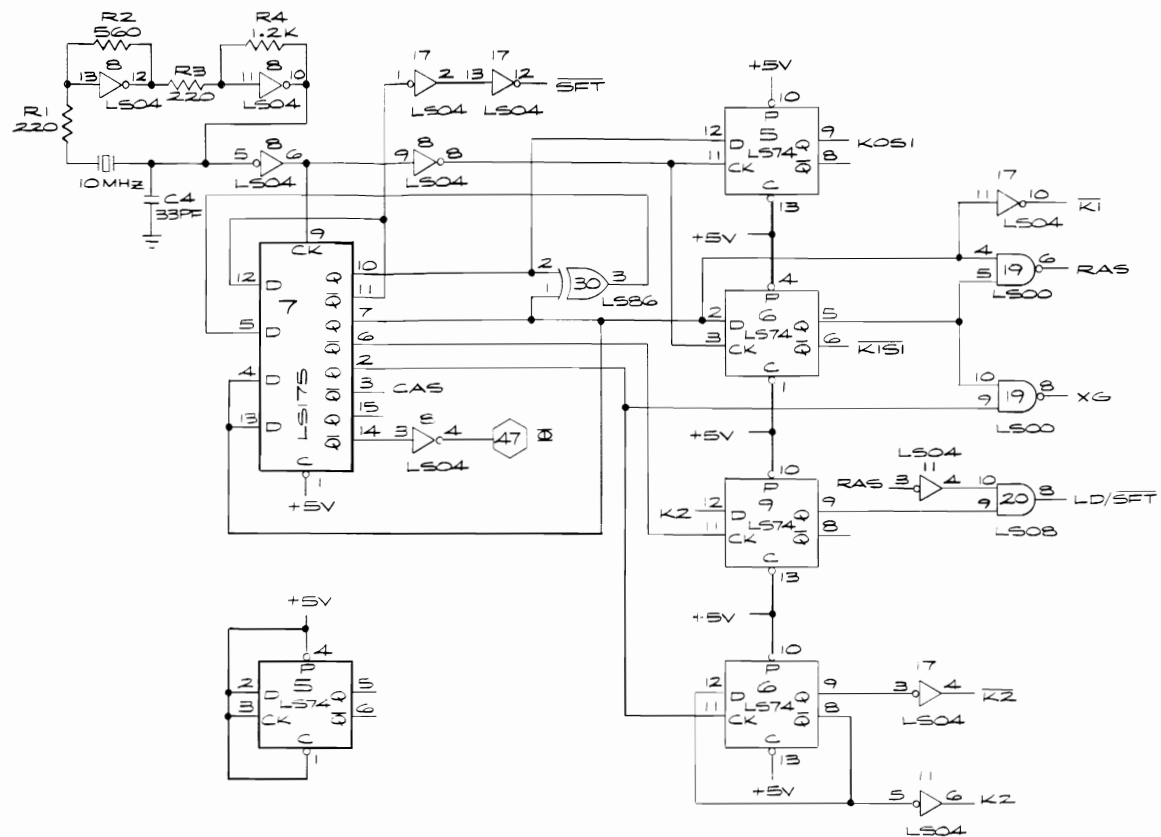
1. = CONNECTOR CN1
2. = CONNECTOR CN4



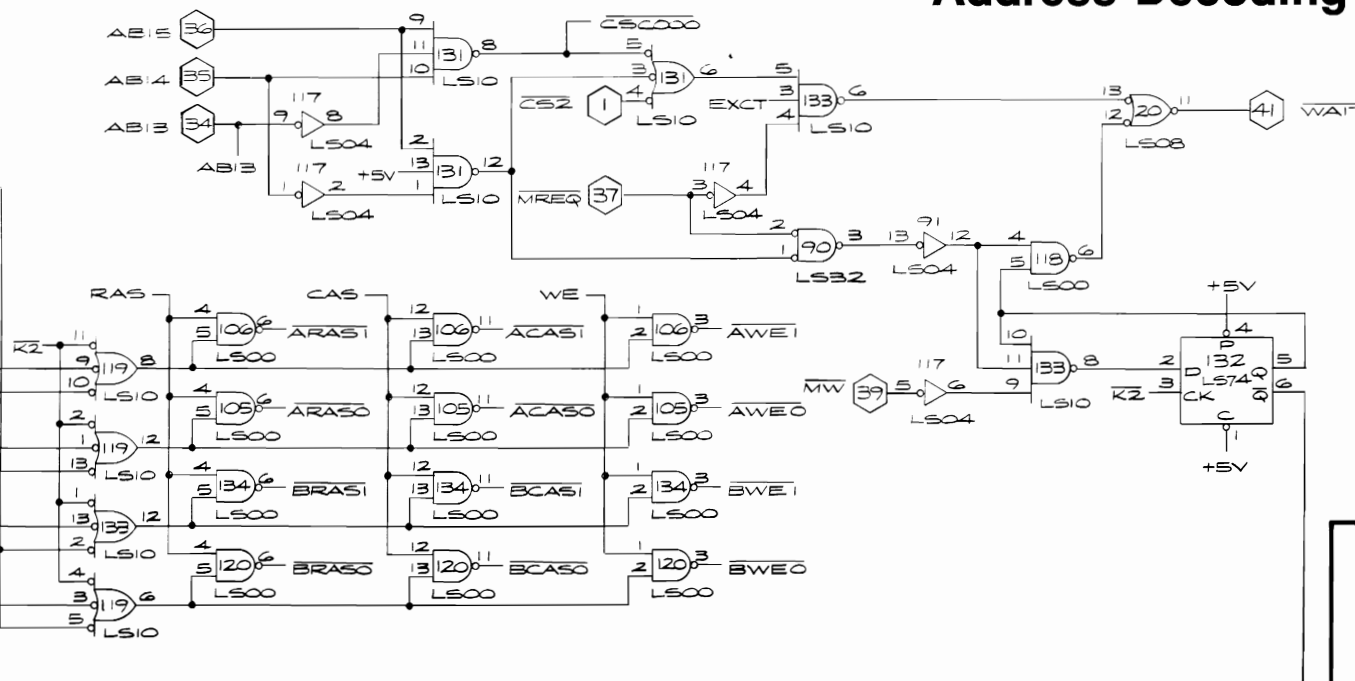
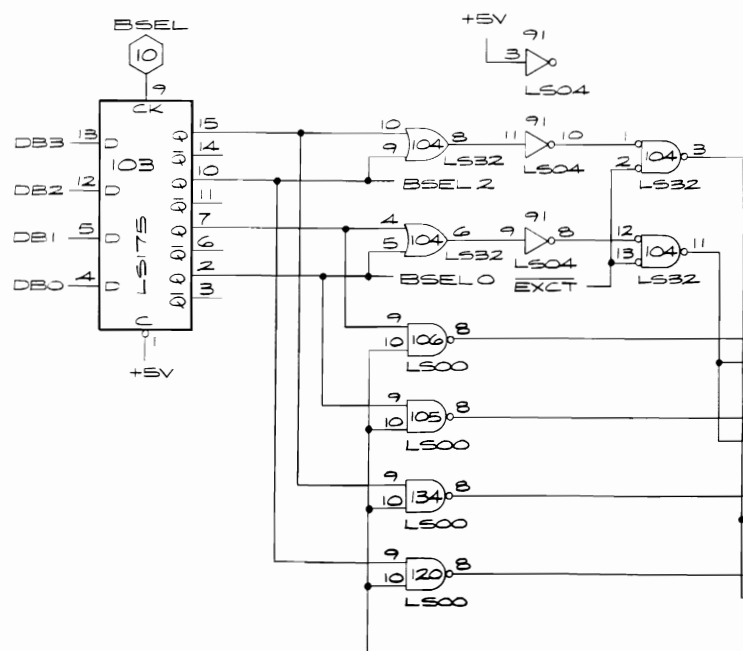
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## Kangaroo Video PCB Schematic Diagram

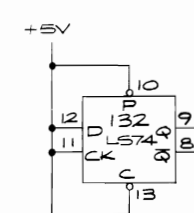
# Clock, Sync Chain, and Timing Signals



# Dynamic RAM Control



# Address Decoding

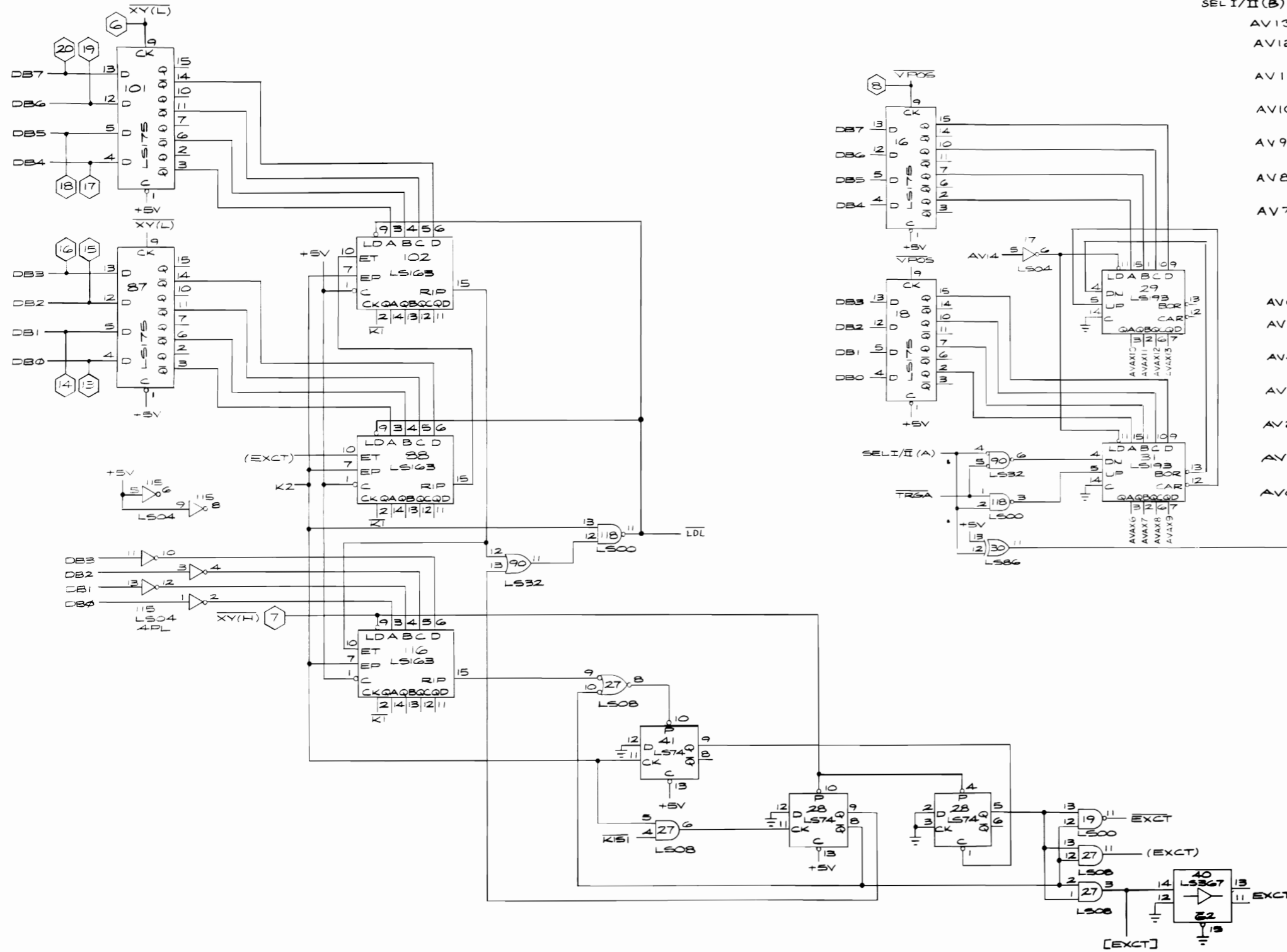


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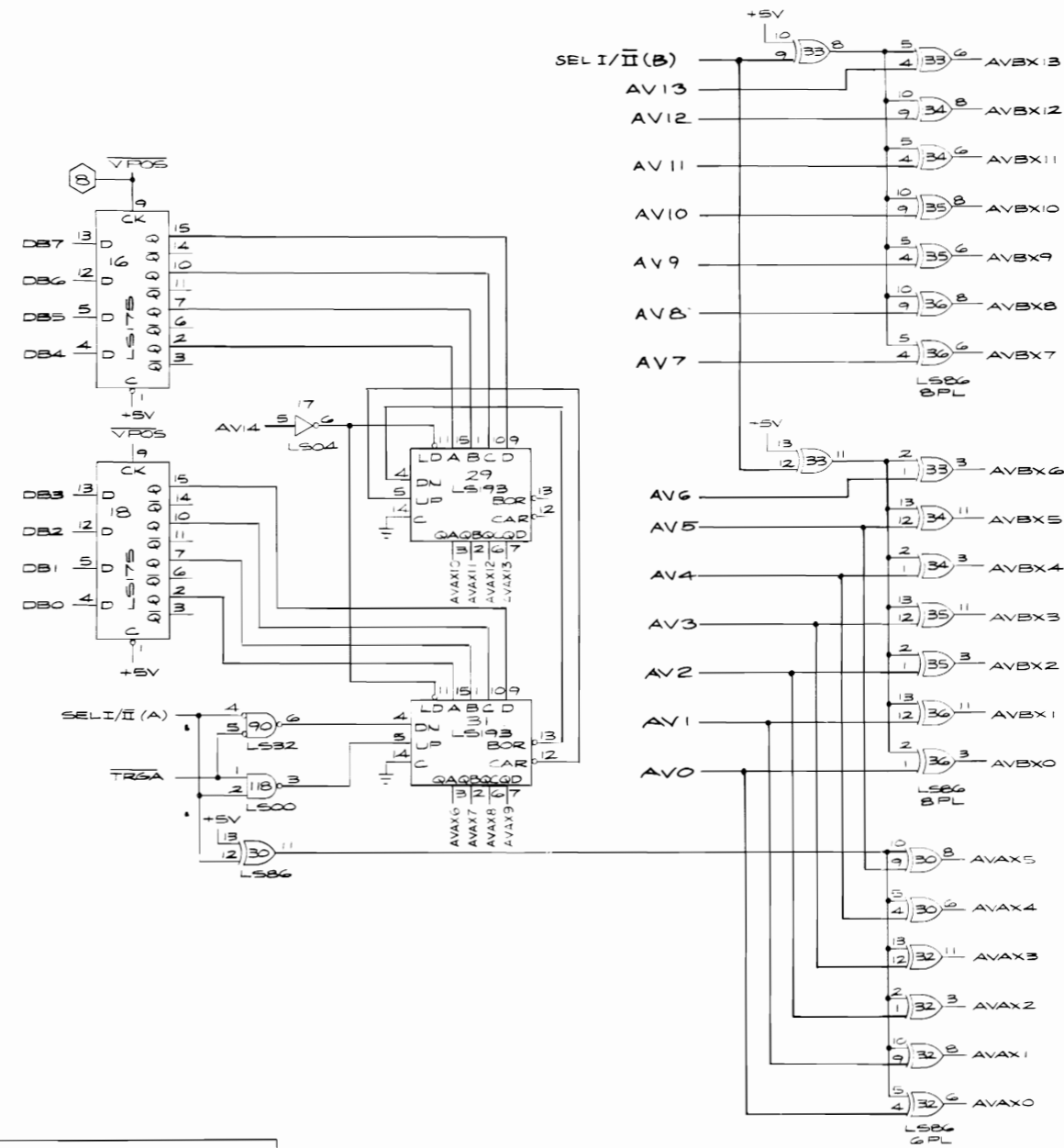
## Kangaroo Video PCB Schematic Diagram




# DMA Control



# Dynamic RAM Video Address and Flip





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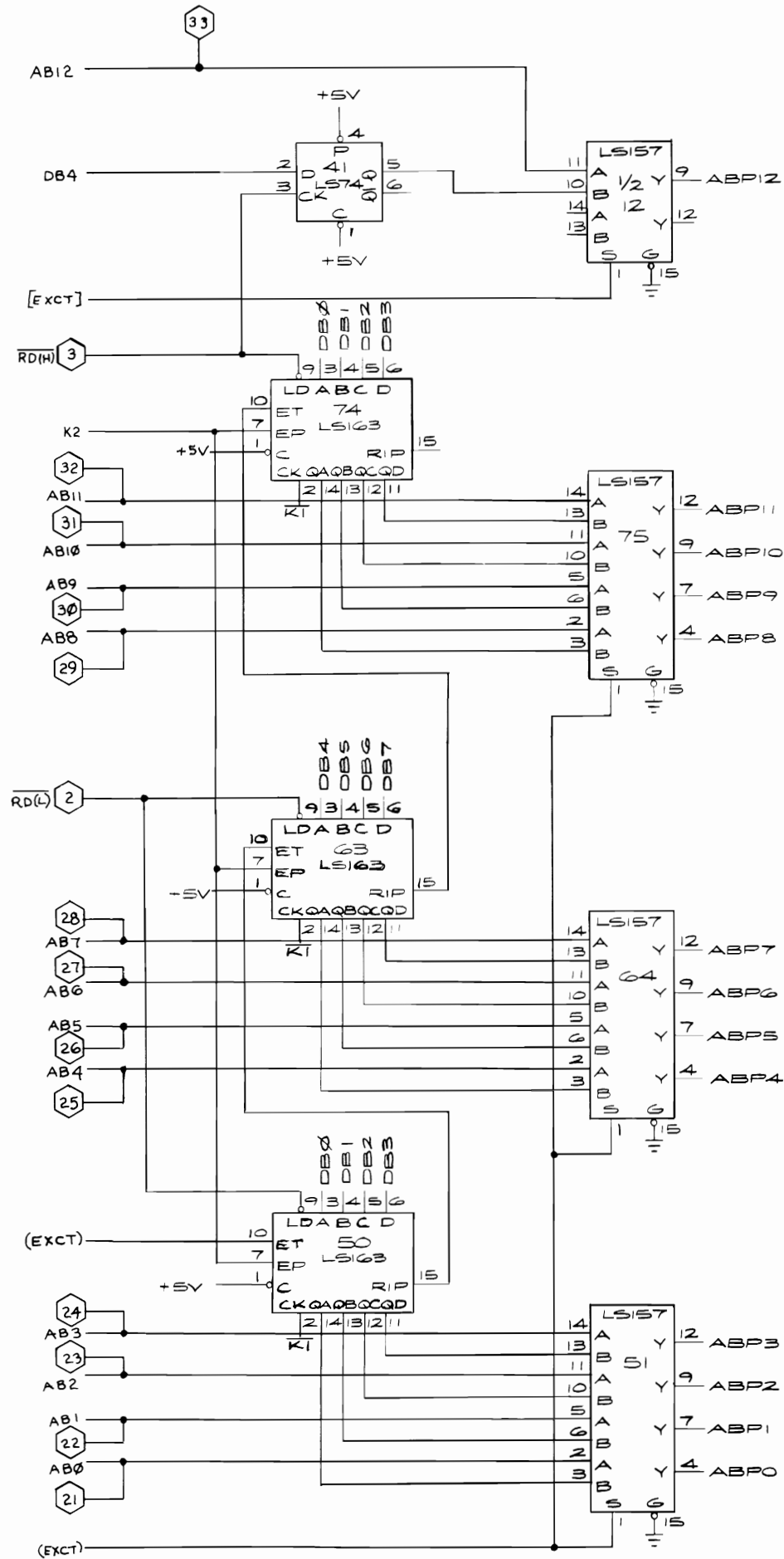
**Kangaroo Video PCB Schematic Diagram**

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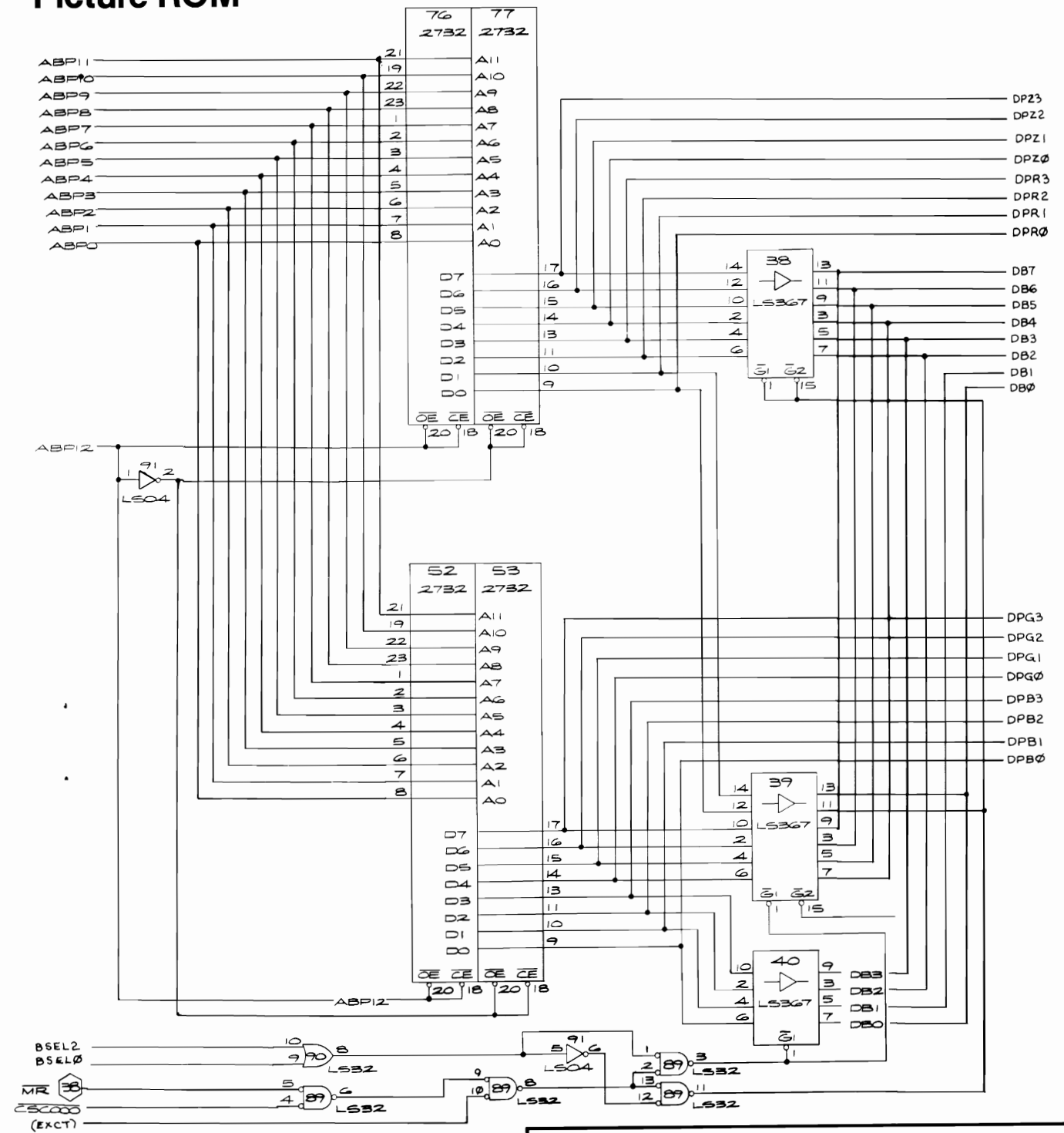
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# Picture ROM Address Selector



# Picture ROM



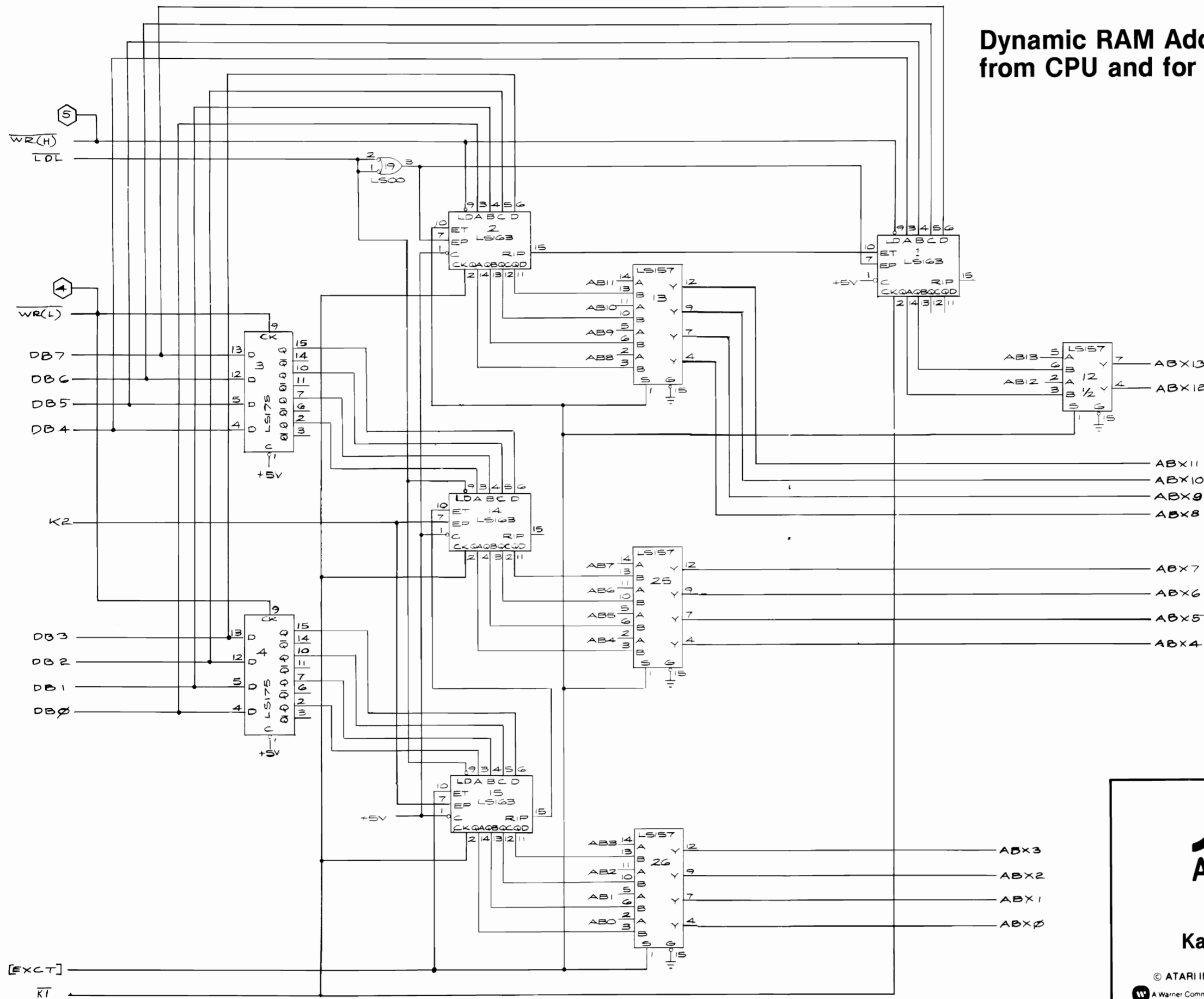
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## Kangaroo Video PCB Schematic Diagram

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# Dynamic RAM Address from CPU and for DMA



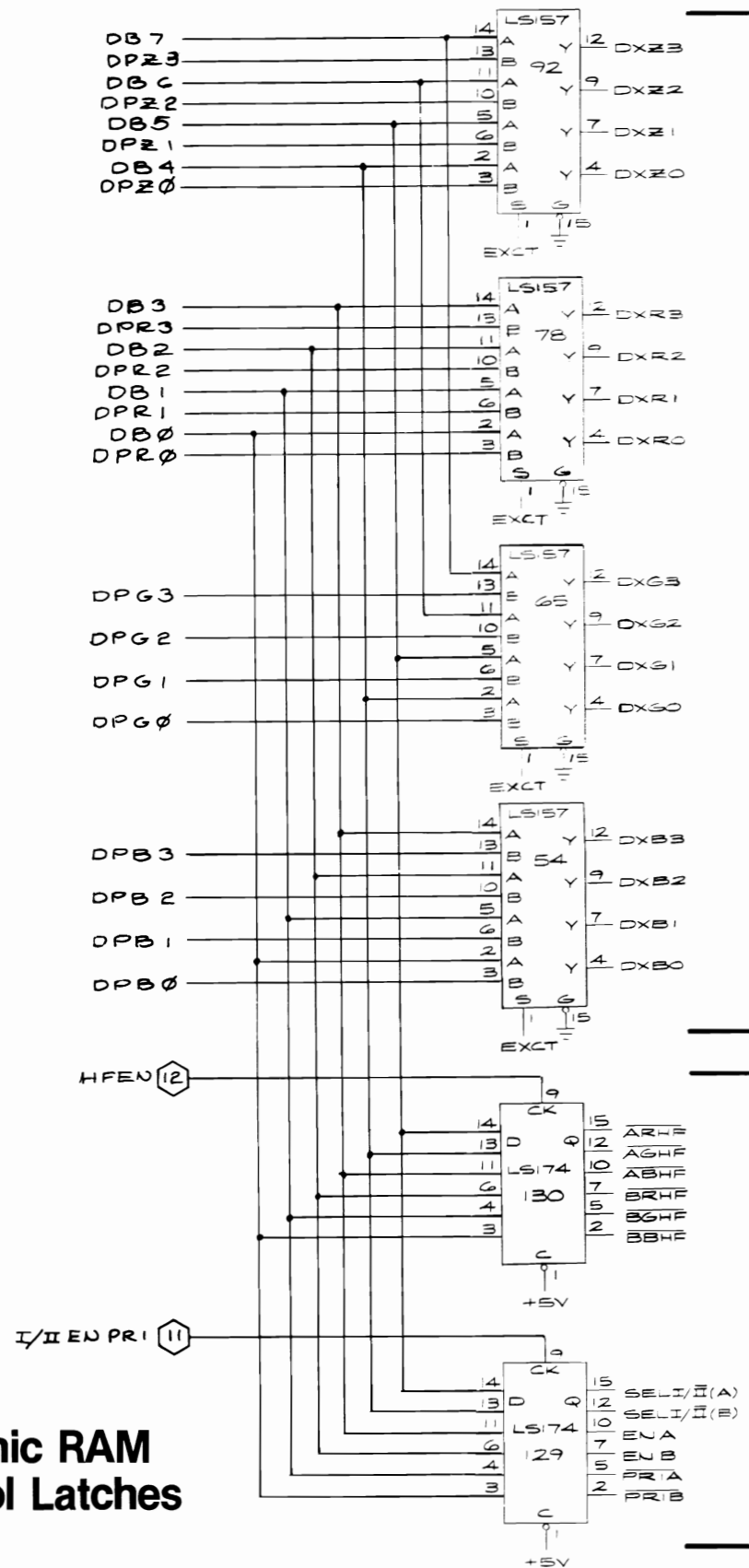
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## Kangaroo Video PCB Schematic Diagram

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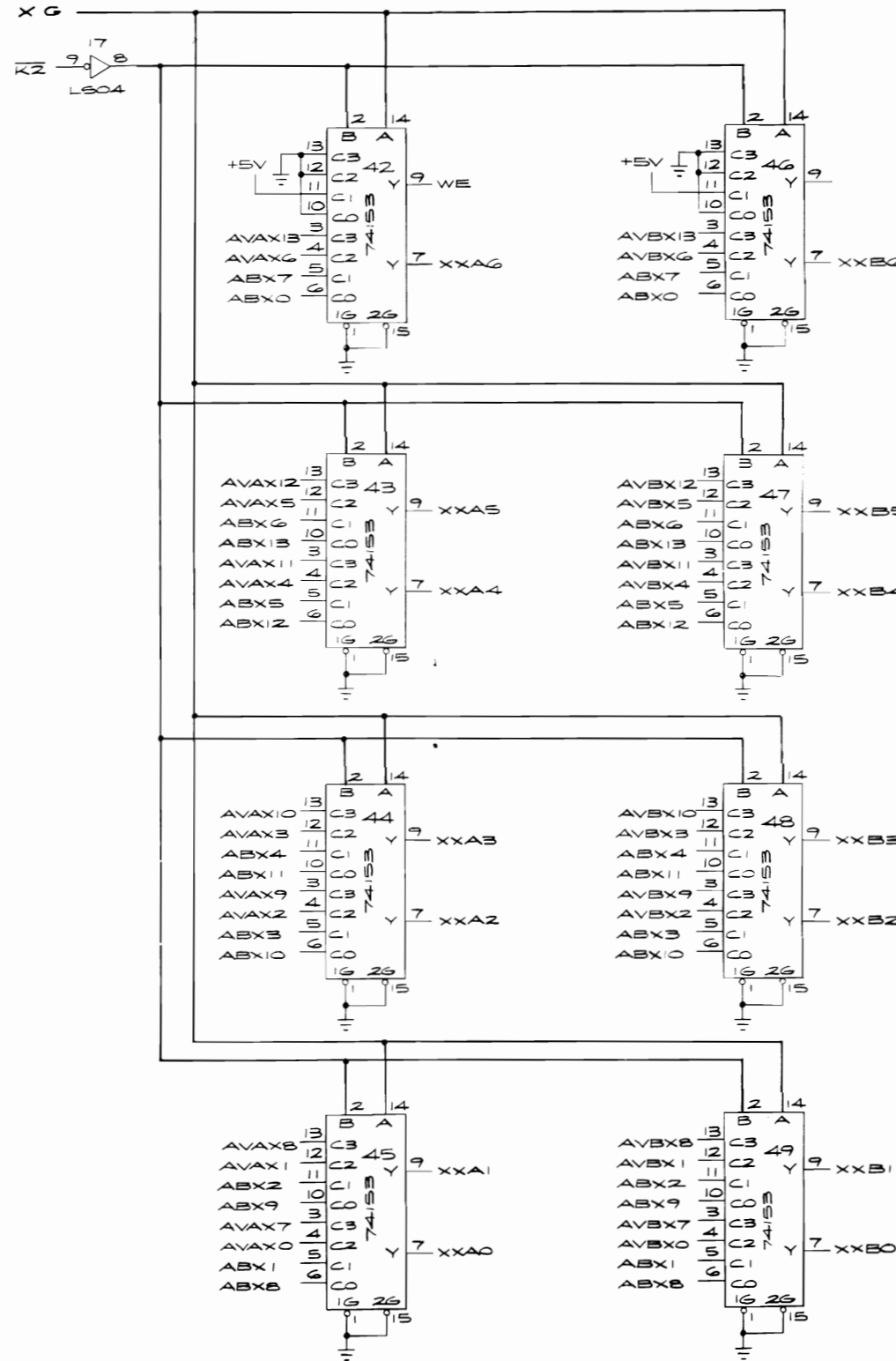
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## Dynamic RAM Data Selector



## Dynamic RAM Control Latches

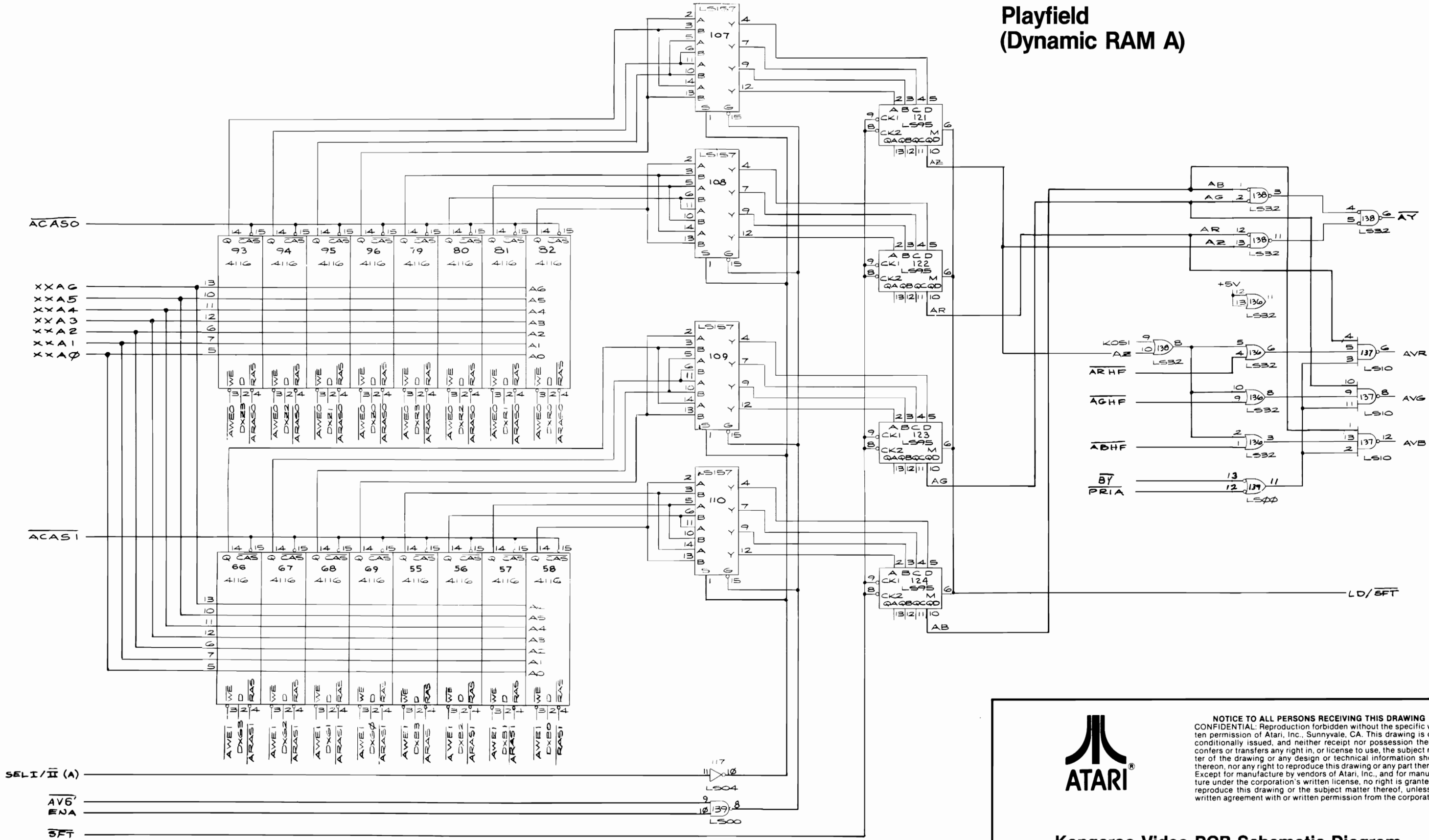
## Dynamic RAM Address Selector



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## Kangaroo Video PCB Schematic Diagram

# Playfield (Dynamic RAM A)



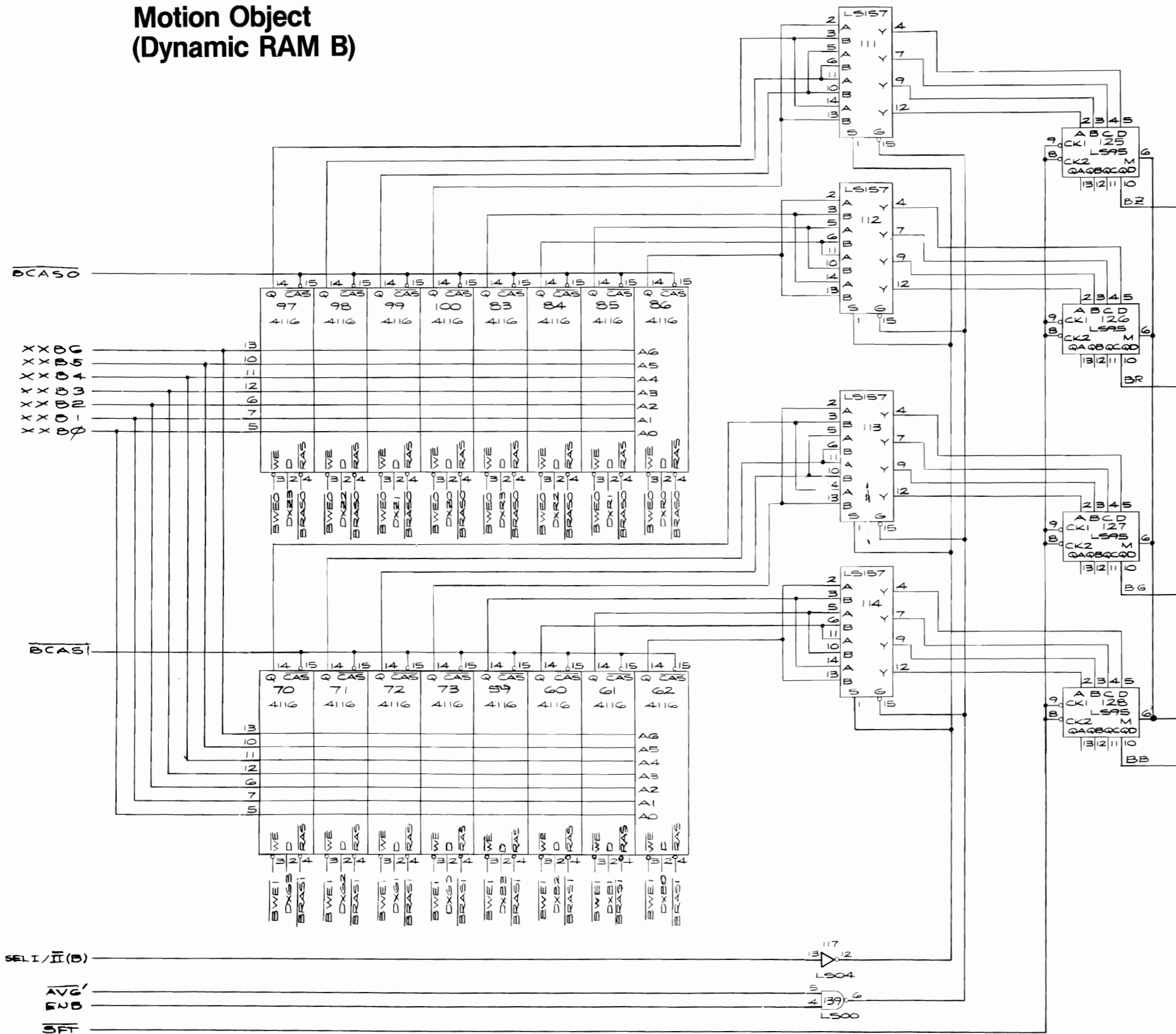
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## Kangaroo Video PCB Schematic Diagram

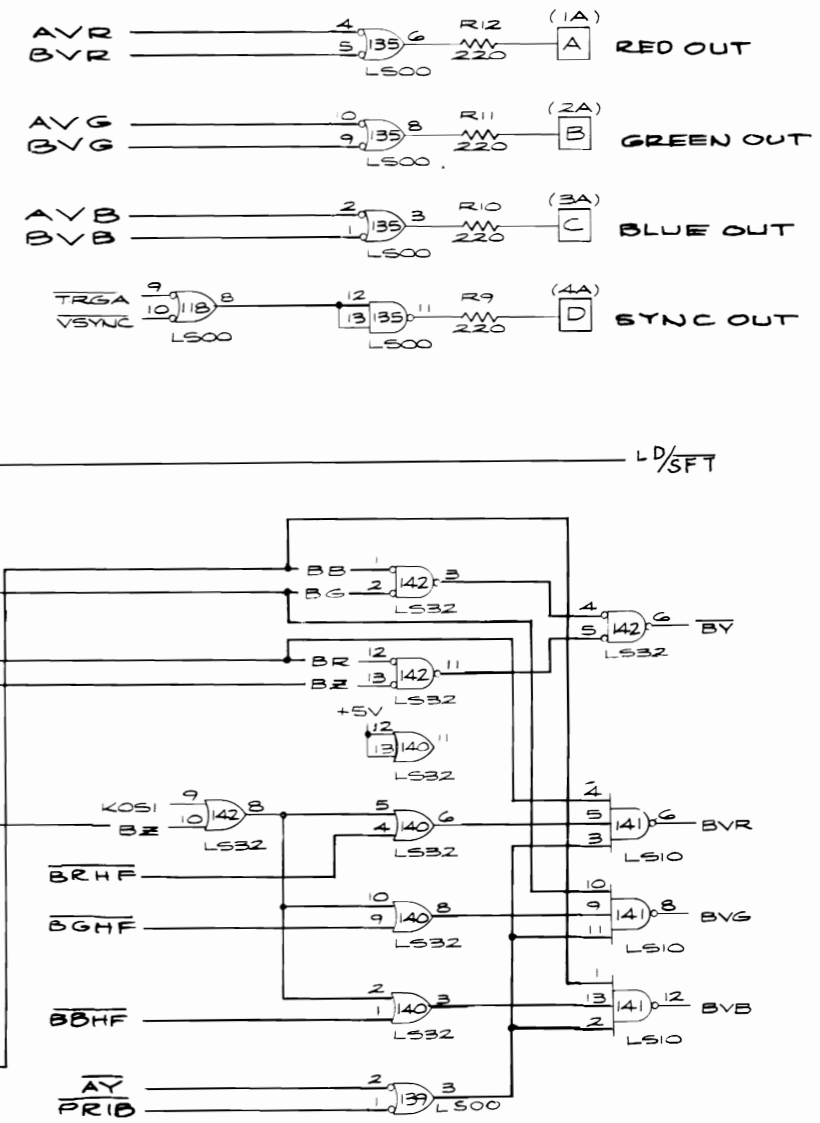
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# Motion Object (Dynamic RAM B)



# Video Output

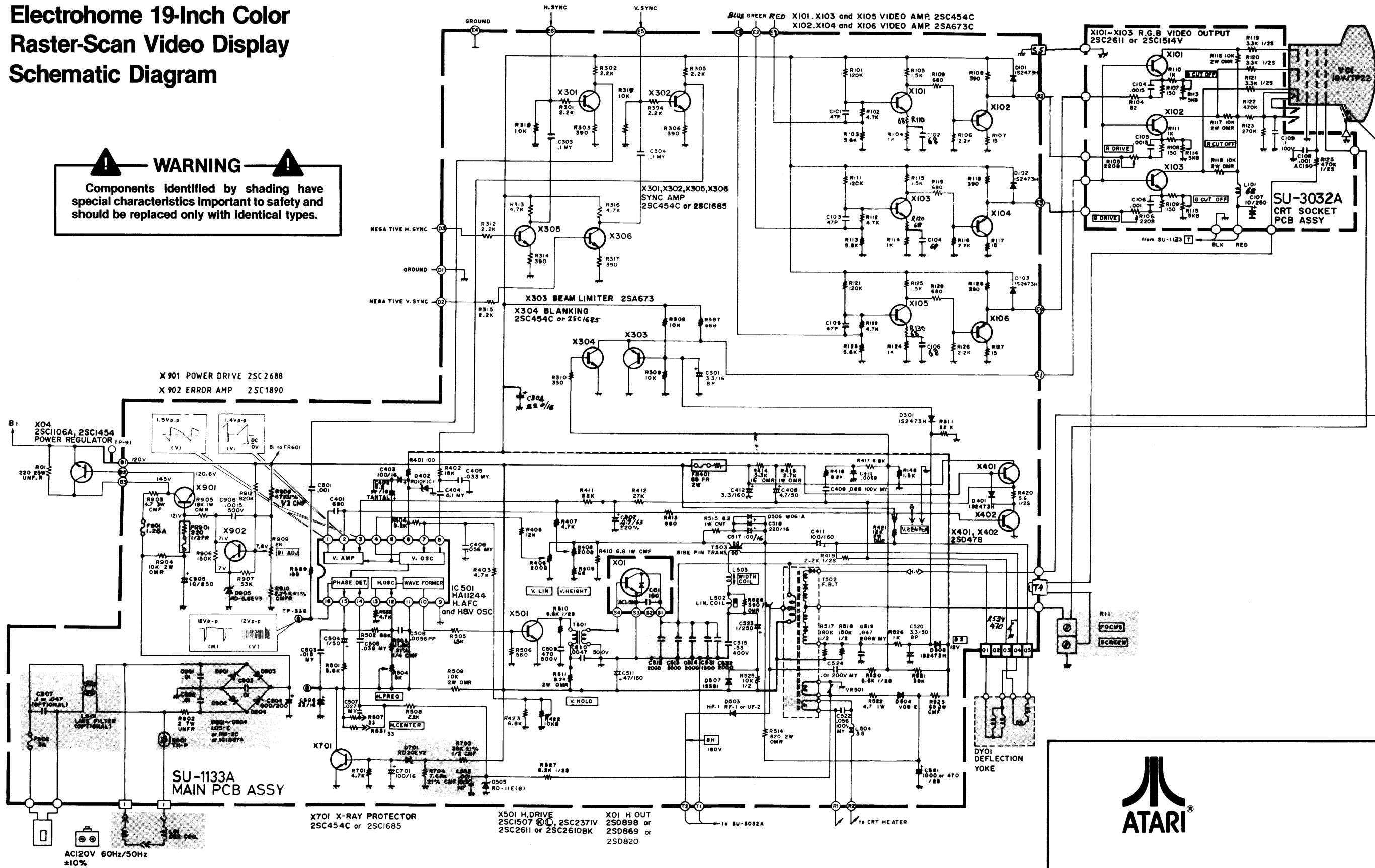


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## Kangaroo Video PCB Schematic Diagram

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

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



  
**Kangaroo Color Display Schematic Diagram**  
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