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### NOTE

An Arabian Troubleshooting Guide is included as part of this Schematic Package Supplement. The Arabian Troubleshooting Guide contains Atari CAT Box<sup>®</sup> troubleshooting procedures and signal name descriptions.



**NOTE**  
Remove this staple to separate  
the schematic diagrams from  
the Troubleshooting Guide.

## Schematic Package Supplement to

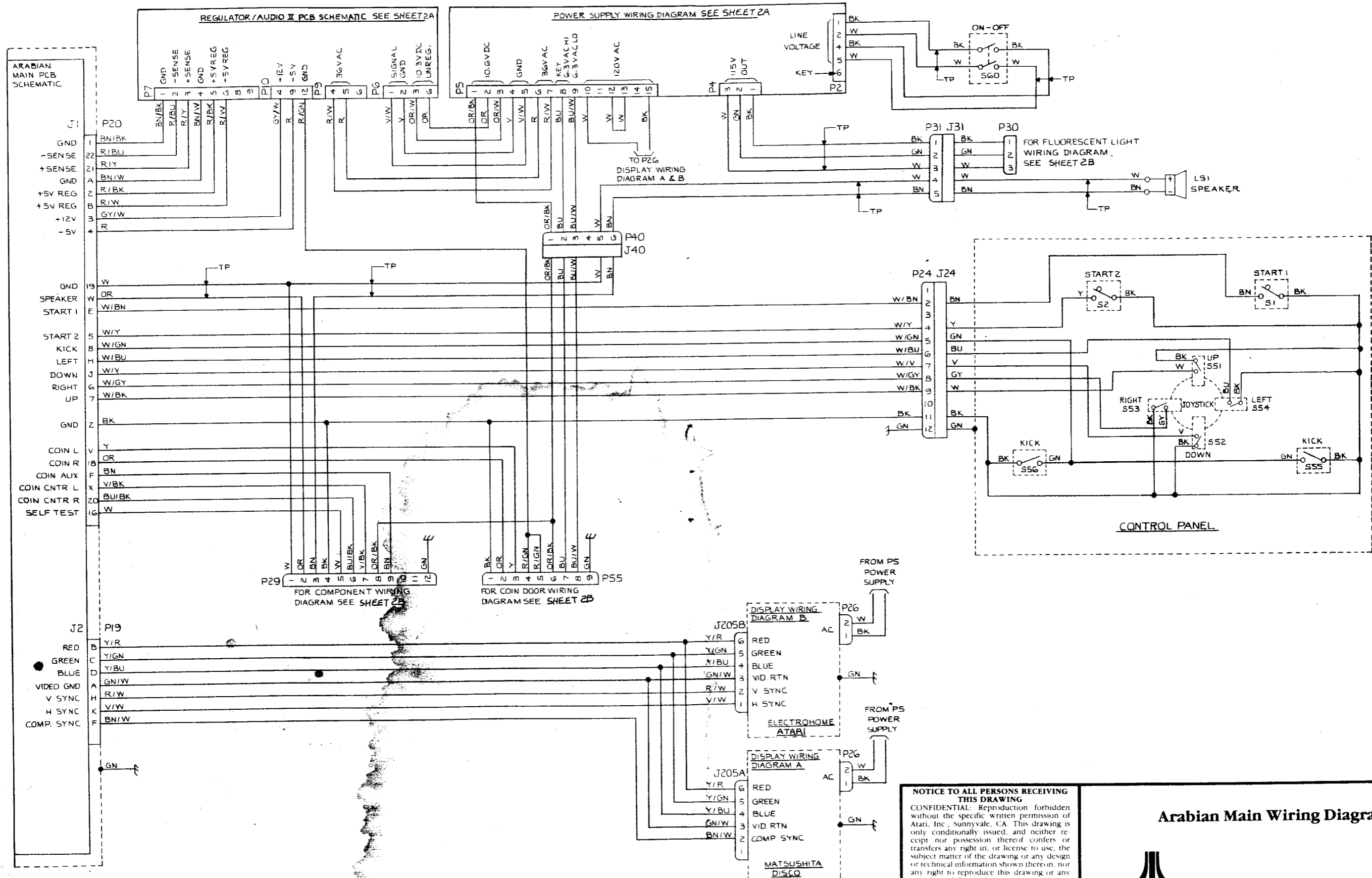
# ARABIAN<sup>TM</sup>

## Operators Manual

Includes  
Troubleshooting Guide

\*Manufactured under license from Sun Electronics Corporation.

ATM



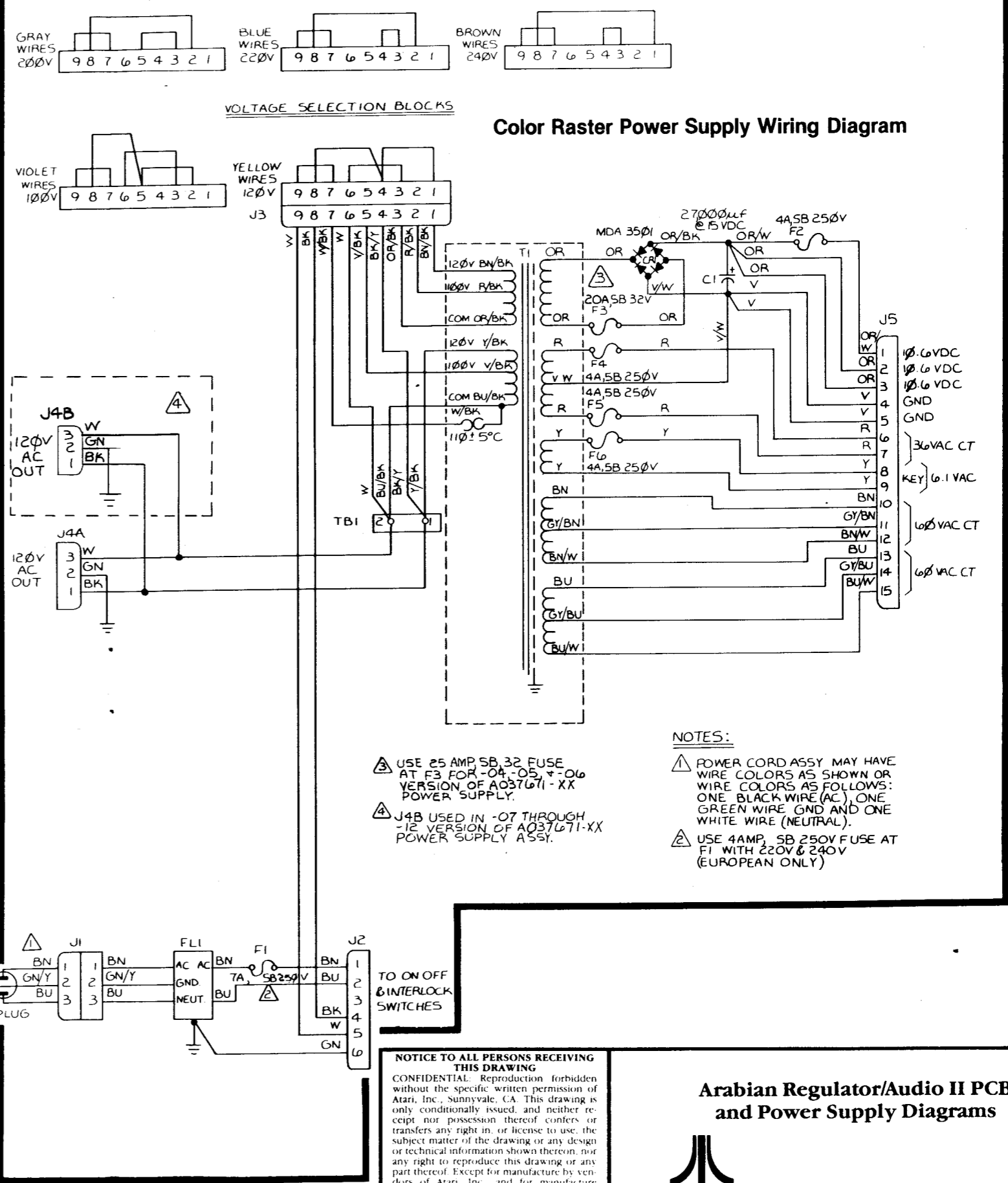
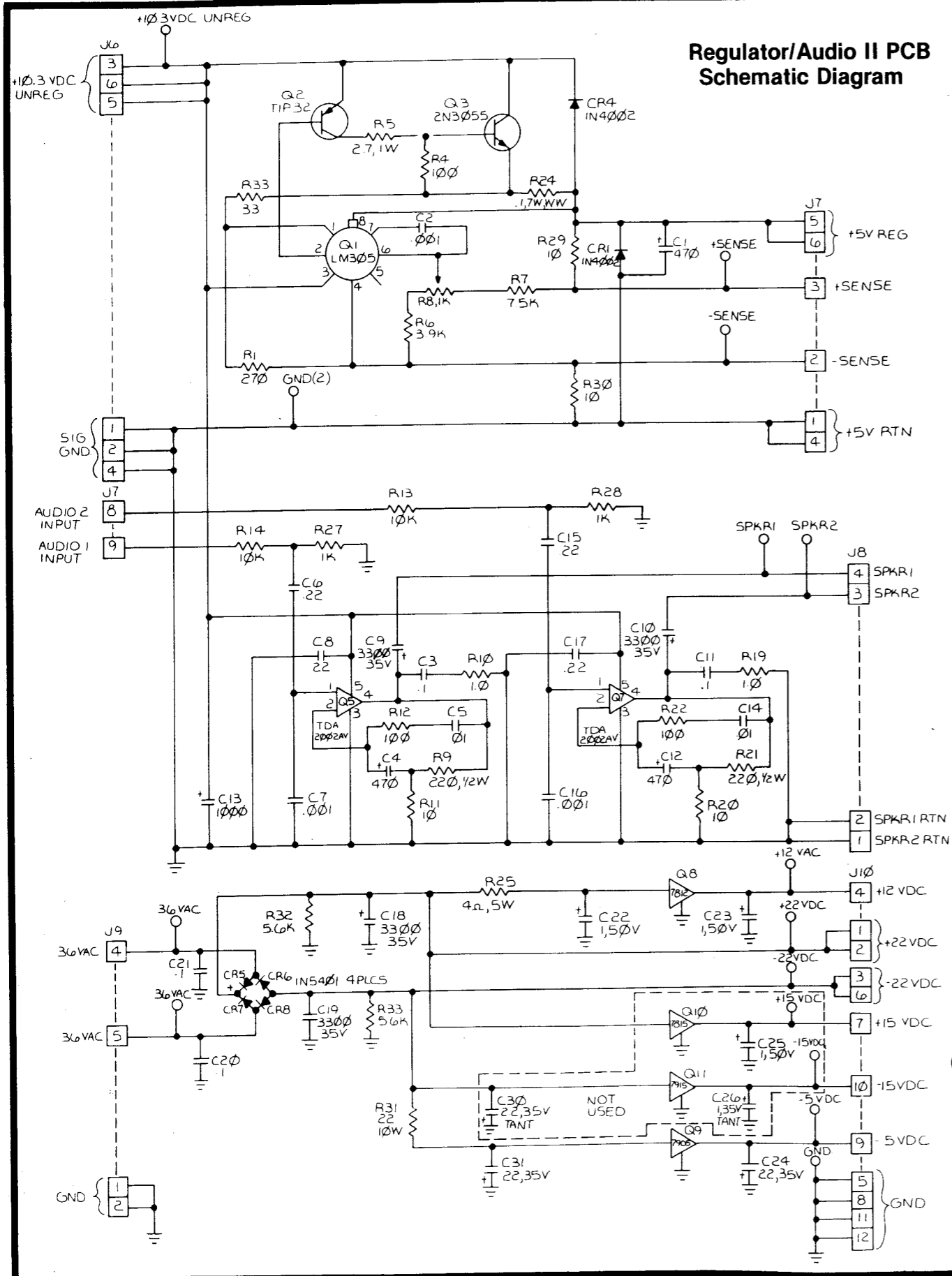
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**Arabian Main Wiring Diagram**

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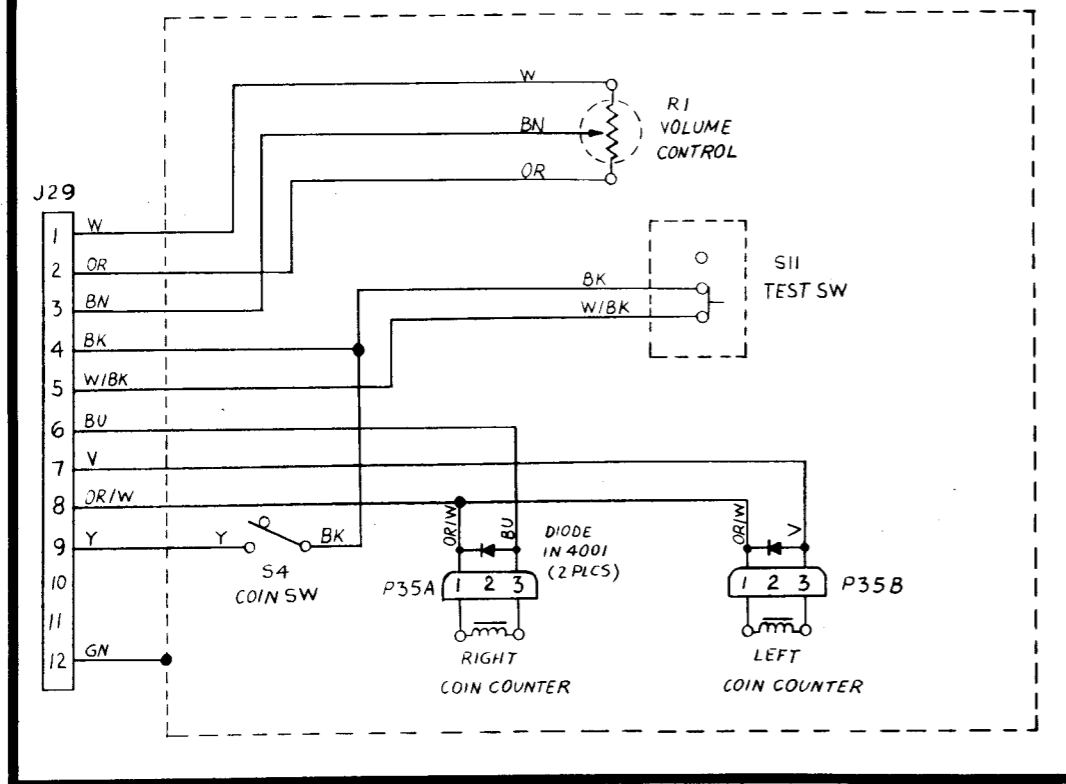
## Arabian Regulator/Audio II PCB and Power Supply Diagrams



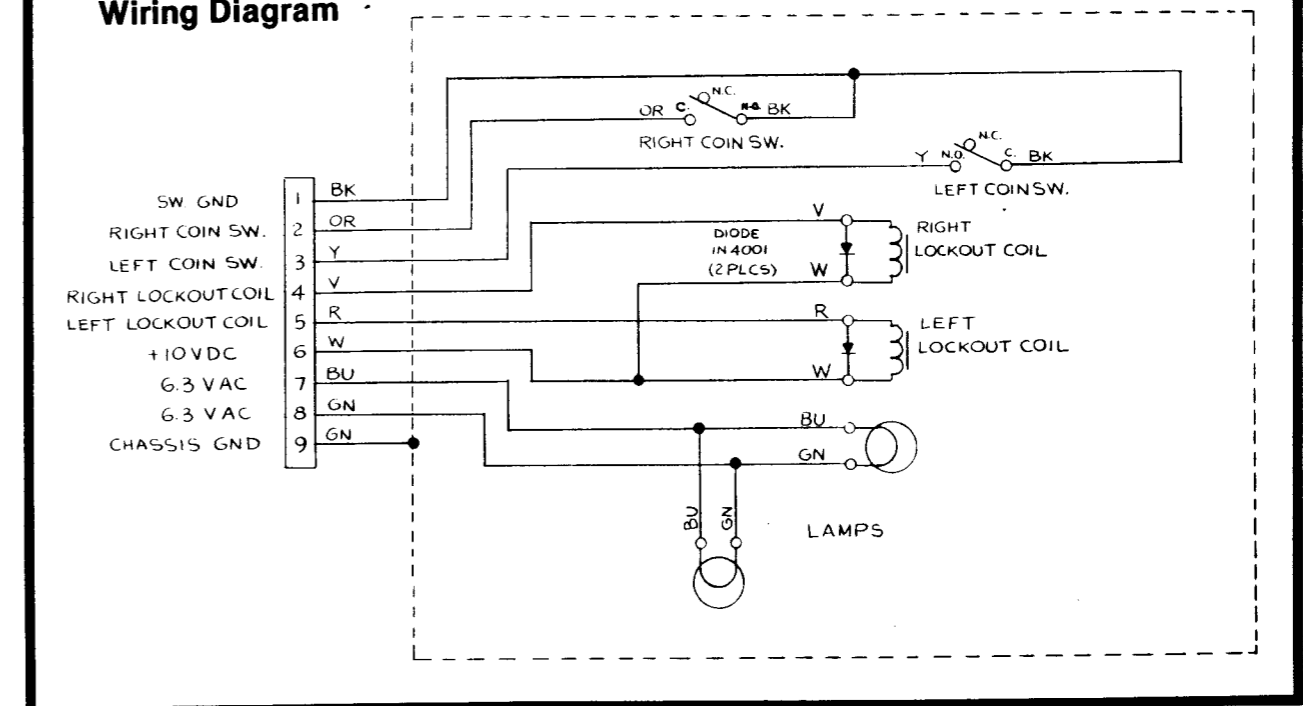
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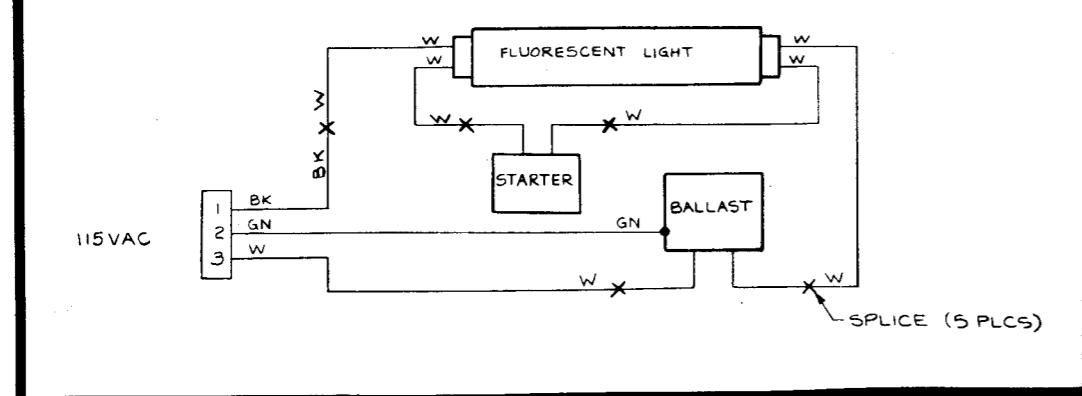
**Utility Panel Wiring Diagram**



**Coin Door Wiring Diagram**



**Fluorescent Light Wiring Diagram**



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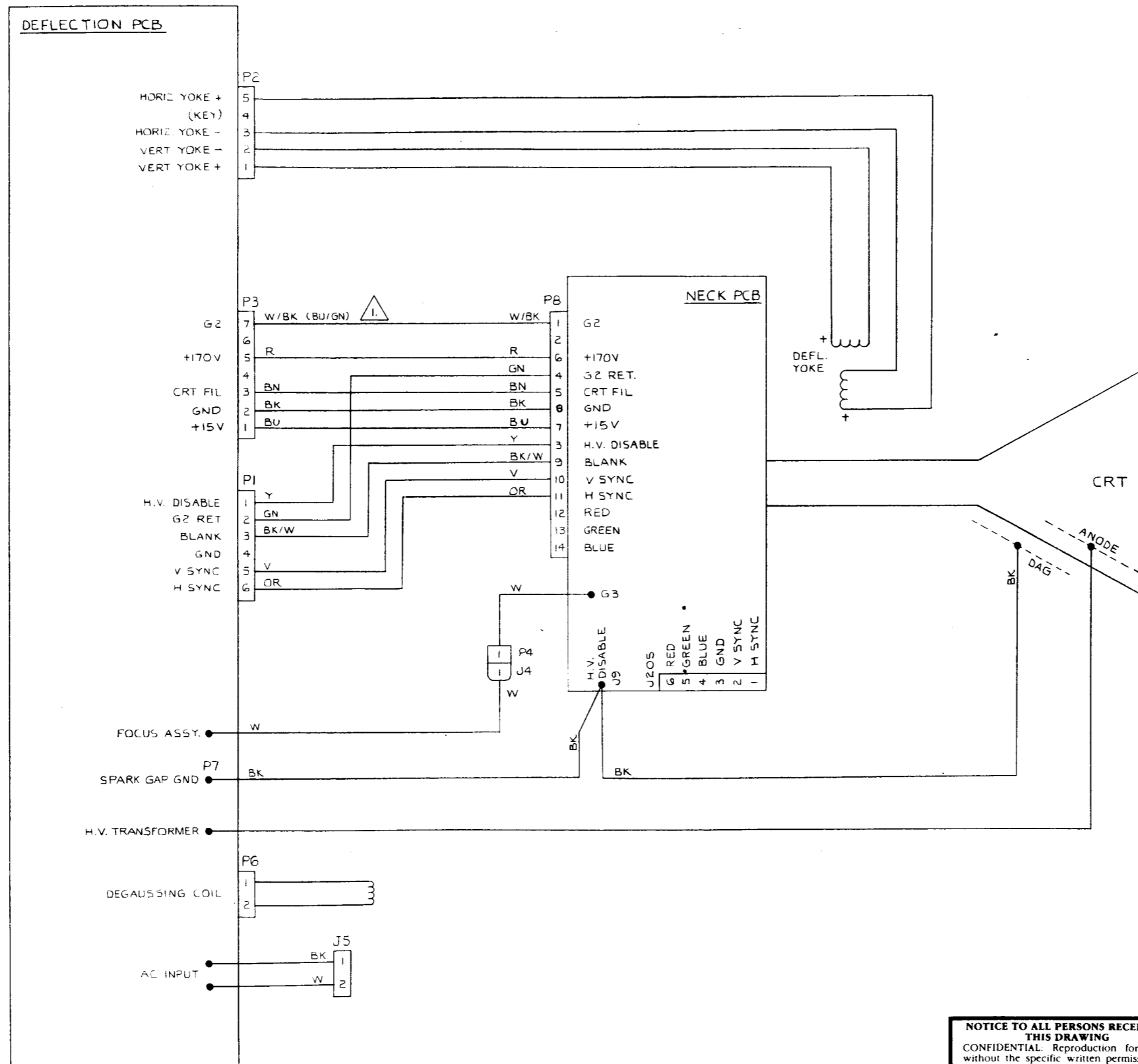
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**Arabian Game Interfaces**



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NOTE:  
<sup>1.</sup> ALTERNATE COLOR IN PARENTHESES ( ).

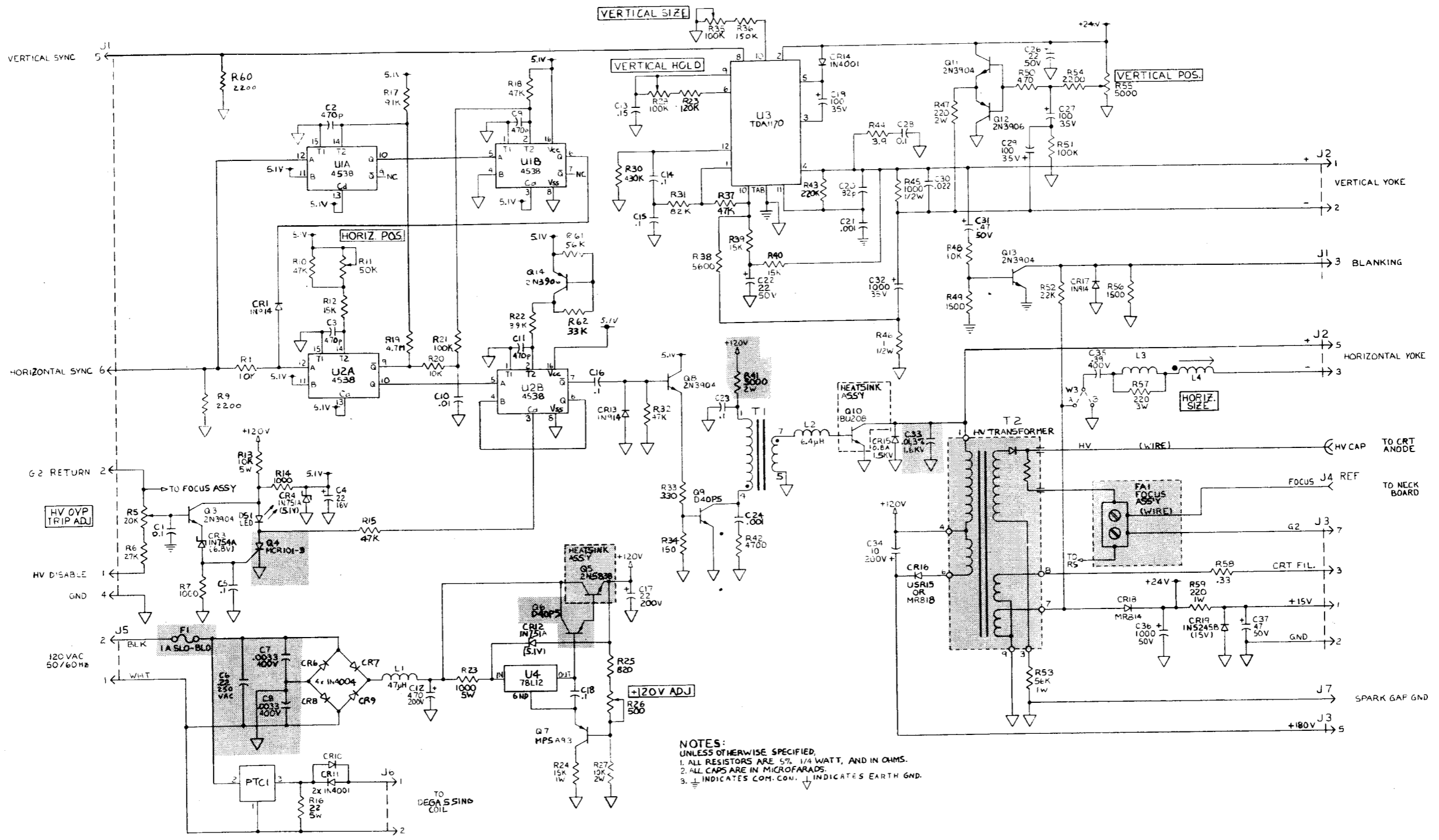
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**Atari Color Raster Display Wiring Diagram**



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NOTES:  
 UNLESS OTHERWISE SPECIFIED,  
 1. ALL RESISTORS ARE 5% 1/4 WATT, AND IN OHMS.  
 2. ALL CAPS ARE IN MICROFARADS.  
 3. ⊕ INDICATES COM. CON. ⊥ INDICATES EARTH GND.

**PRODUCT SAFETY NOTICE**

The shaded areas of this schematic indicate components whose values are of special significance to product safety. Should any component in the shaded areas need to be replaced, use only the value given in the parts lists. Do not deviate from the resistance, wattage, and voltage values shown.

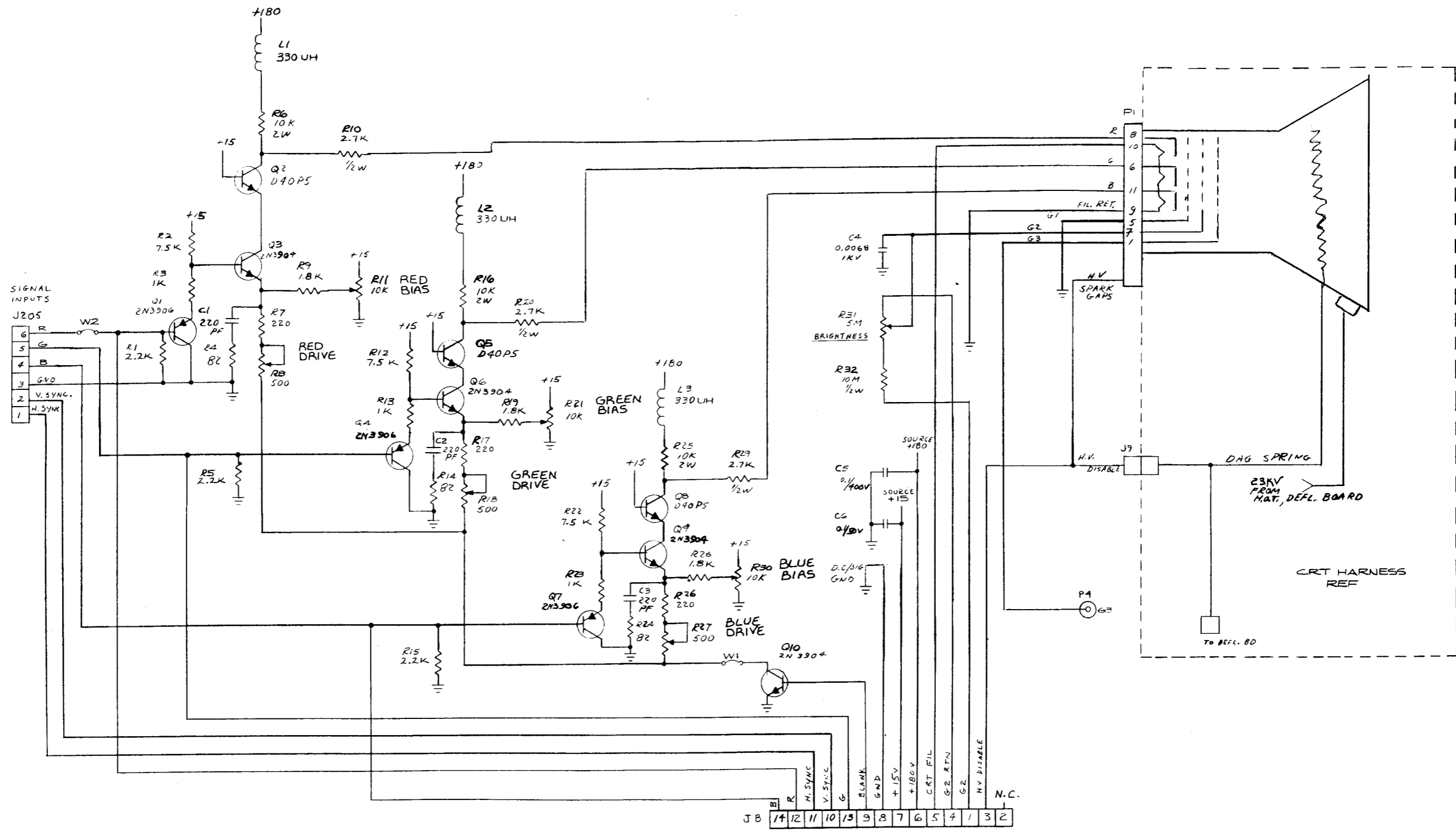
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**Atari Color Raster Display Deflection PCB Schematic Diagram**




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**Atari Color Raster Display Neck PCB Schematic Diagram**

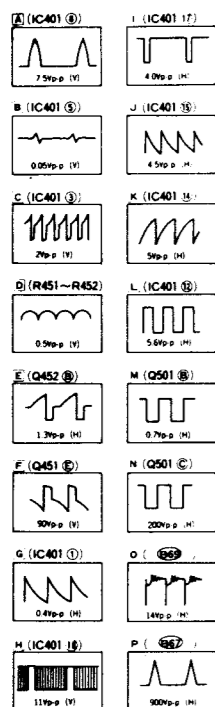
  
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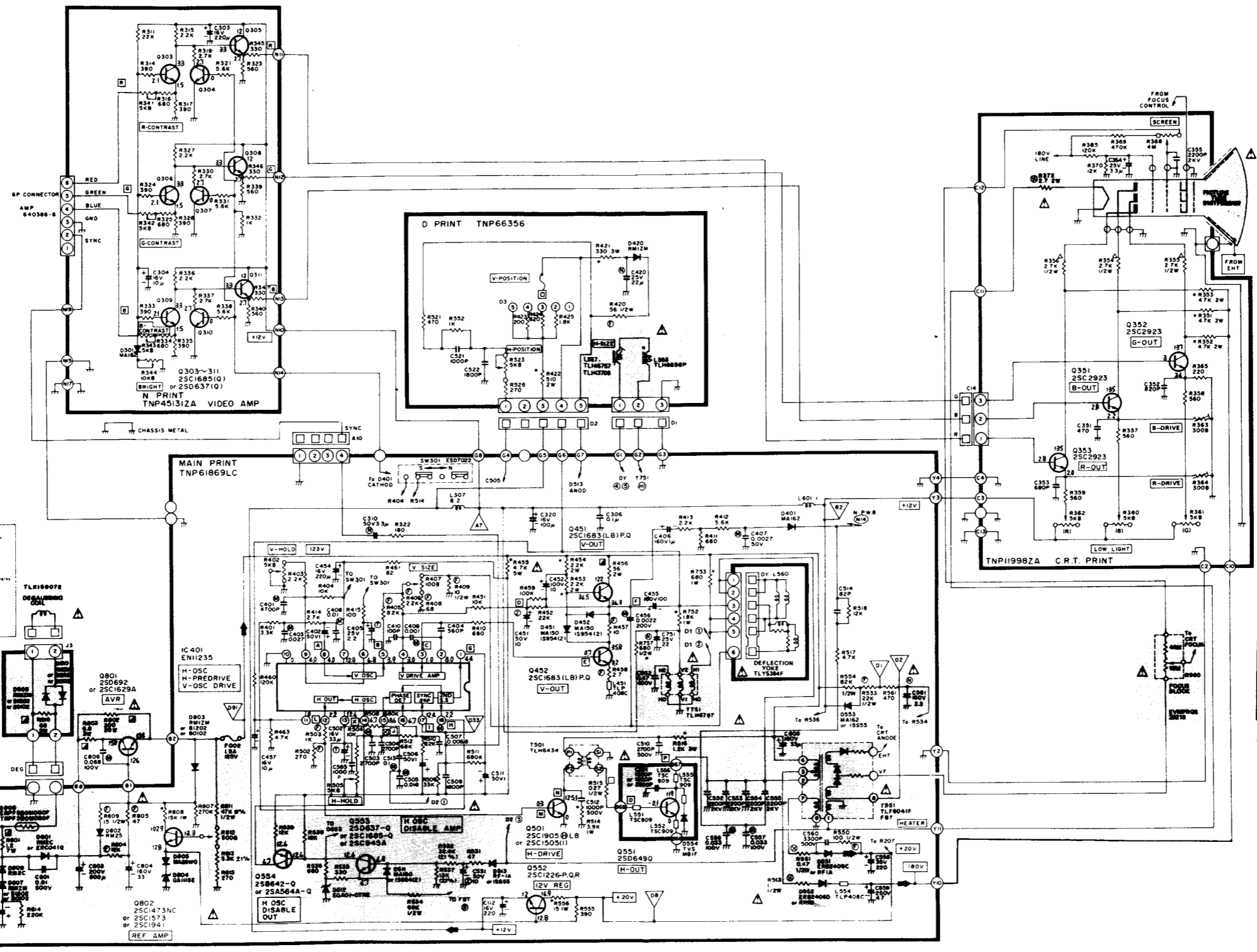
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**Waveform**



**NOTE**  
 1. RESISTOR  
 All resistors are carbon 1/8W unless otherwise noted. The following marks:  
 Unit of resistance is OHM (Ω), K = 1,000, M = 1,000,000.  
 □ Solid      \* Wire Wound      △ Thermistor  
 ○ Non-Flammable      † Fuse  
 2. CAPACITOR  
 All capacitors are ceramic 50V dielectric unless otherwise noted. The following marks:  
 Unit of capacitance is µF unless otherwise noted.  
 □ Electrolytic      △ Safety Vent      † Polyethylene  
 † Bead      † Titanium Oxide      † Polyester  
 † Zener      † Temp. Compensation      † Mica  
 3. COIL  
 Level of inductance in µH.  
 4. TEST POINT  
 † Test point position.



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

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**Matsushita Color Raster Display Schematic Diagram**

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## Arabian Memory Map

HEXA- DECIMAL ADDRESS	ADDRESS BUS SIGNAL LINES															READ/ WRITE	DATA BUS SIGNAL LINES								FUNCTION			
	A15	A14	A13	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1		A0	D7	D6	D5	D4	D3	D2	D1		D0		
E006	1	1	1	0	A	A	A	A	A	A	A	A	A	1	1	0	W	D	D	D	D	D	D	D	D	$\overline{XY}$ (H)	Picture Size and DMA Start	
E005	1	1	1	0	A	A	A	A	A	A	A	A	A	1	0	1	W	D	D	D	D	D	D	D	D	$\overline{XY}$ (L)		
E004	1	1	1	0	A	A	A	A	A	A	A	A	A	1	0	0	W	D	D	D	D	D	D	D	D	$\overline{WR}$ (H)	DMA RAM Start Address	
E003	1	1	1	0	A	A	A	A	A	A	A	A	A	0	1	1	W	D	D	D	D	D	D	D	D	$\overline{WR}$ (L)		
E002	1	1	1	0	A	A	A	A	A	A	A	A	A	0	1	0	W	D	D	D	D	D	D	D	D	$\overline{RD}$ (H)	DMA ROM Start Address	
E001	1	1	1	0	A	A	A	A	A	A	A	A	A	0	0	1	W	D	D	D	D	D	D	D	D	$\overline{RD}$ (L)		
E000	1	1	1	0	A	A	A	A	A	A	A	A	A	0	0	0	W									D D D D	BSEL Bank Select	
DFFF-D000	1	1	0	1	A	A	A	A	A	A	A	A	A	A	A	A	R/W	D	D	D	D	D	D	D	D		Custom Microprocessor RAM	
CA00	1	1	0	0	1	0	1	0	A	A	A	A	A	A	A	A	R/W	D	D	D	D	D	D	D	D		Sound Chip Data	
C800	1	1	0	0	1	0	0	0	A	A	A	A	A	A	A	A	W	D	D	D	D	D	D	D	D		Sound Chip Address	
C200	1	1	0	0	0	0	1	0	A	A	A	A	A	A	A	A	R								D D D D		Option Switches	
C000	1	1	0	0	0	0	0	0	A	A	A	A	A	A	A	A	R								D D D D		Coin Inputs	
BFFF-8000	1	0	1	1	A	A	A	A	A	A	A	A	A	A	A	A	R/W	D	D	D	D	D	D	D	D		Bit Map RAM	
6000-7FFF	0	1	1	A	A	A	A	A	A	A	A	A	A	A	A	A	R	D	D	D	D	D	D	D	D	$\overline{ROM 3}$	Program ROM (Z-80)	
4000-5FFF	0	1	0	A	A	A	A	A	A	A	A	A	A	A	A	A	R	D	D	D	D	D	D	D	D	$\overline{ROM 2}$		
2000-3FFF	0	0	1	A	A	A	A	A	A	A	A	A	A	A	A	A	R	D	D	D	D	D	D	D	D	$\overline{ROM 1}$		
0000-1FFF	0	0	0	A	A	A	A	A	A	A	A	A	A	A	A	A	R	D	D	D	D	D	D	D	D	$\overline{ROM 0}$		

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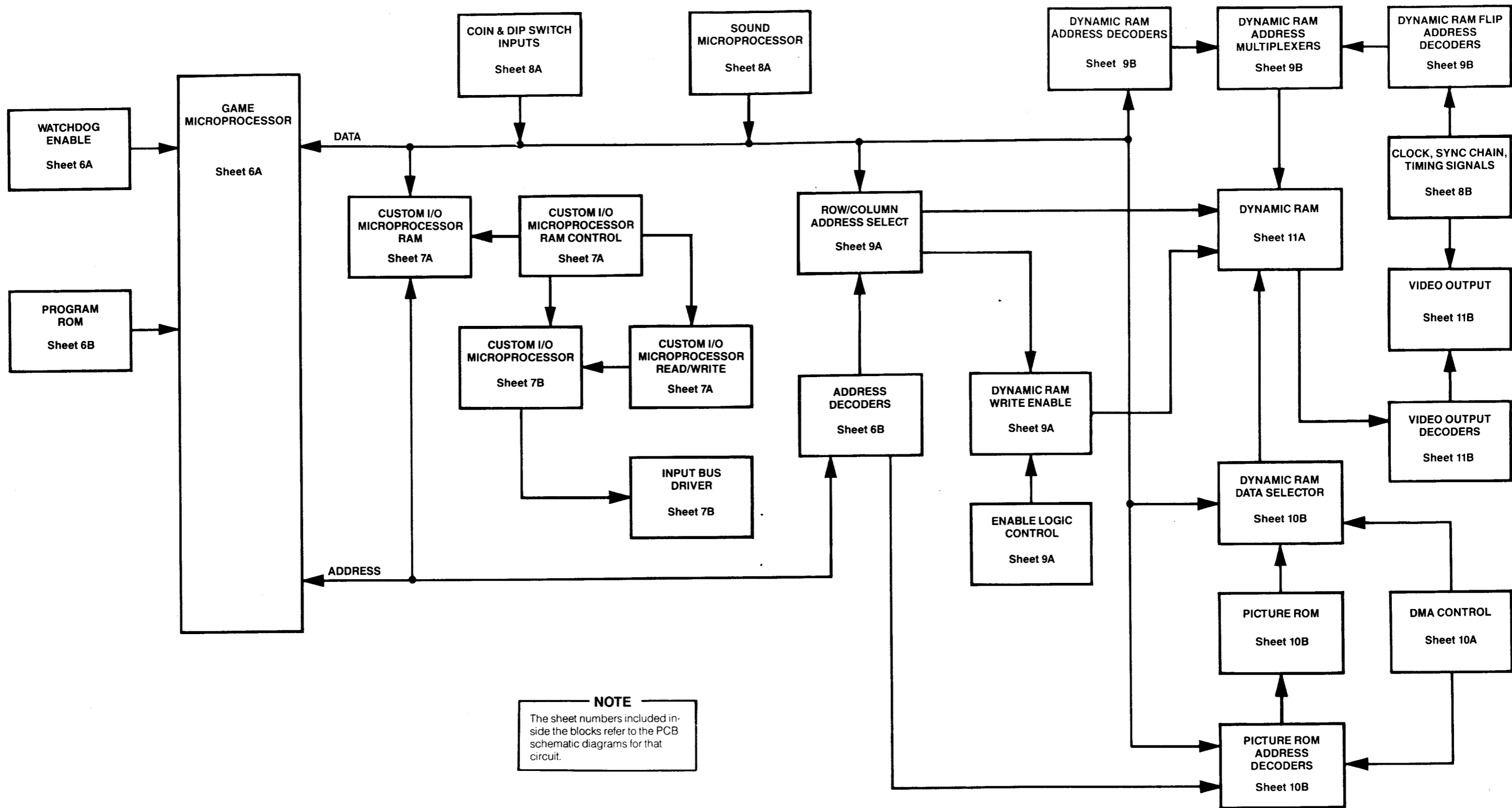
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**Arabian Memory Map**



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**NOTE**  
The sheet numbers included inside the blocks refer to the PCB schematic diagrams for that circuit.

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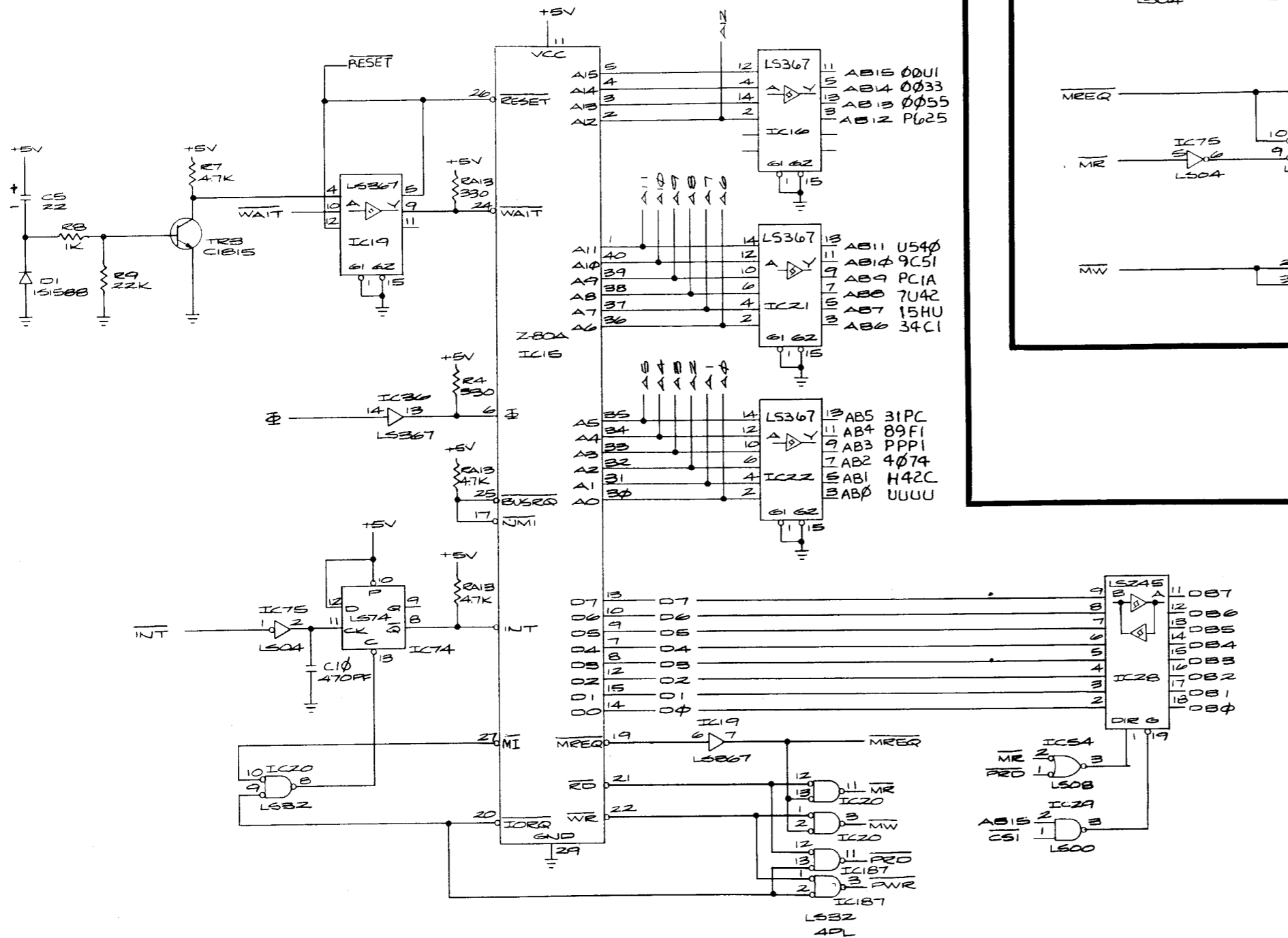
**Arabian Block Diagram/Guide to PCB Schematics**



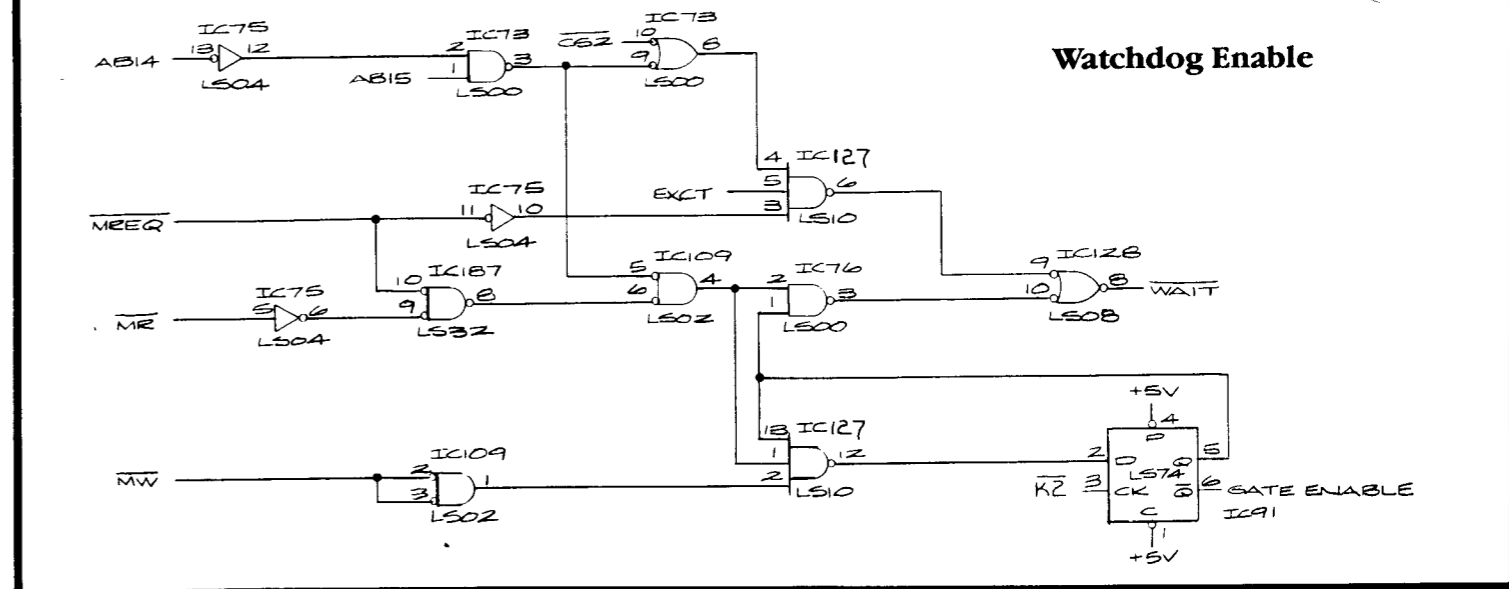
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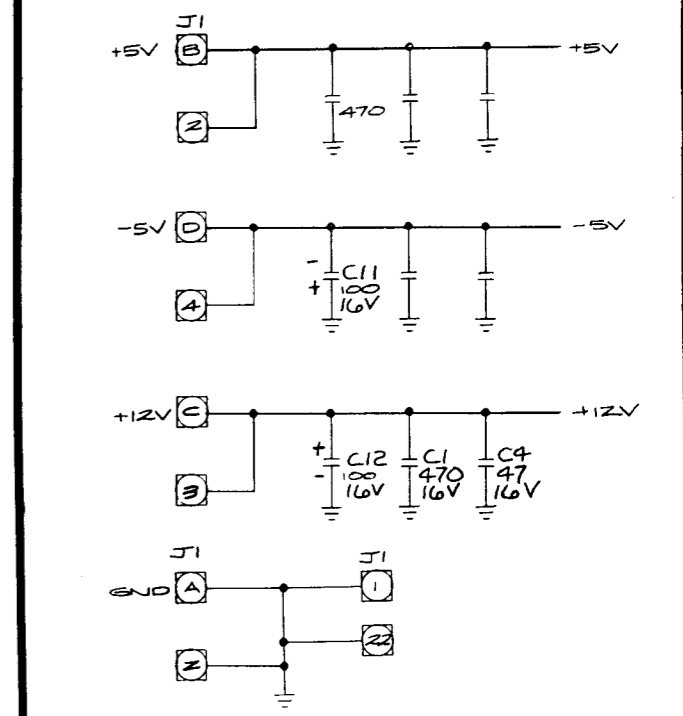
### Game Microprocessor



### Watchdog Enable



### Game Power Input



- NOTES:
- DENOTES J1 CONNECTOR
  - DENOTES J2 CONNECTOR

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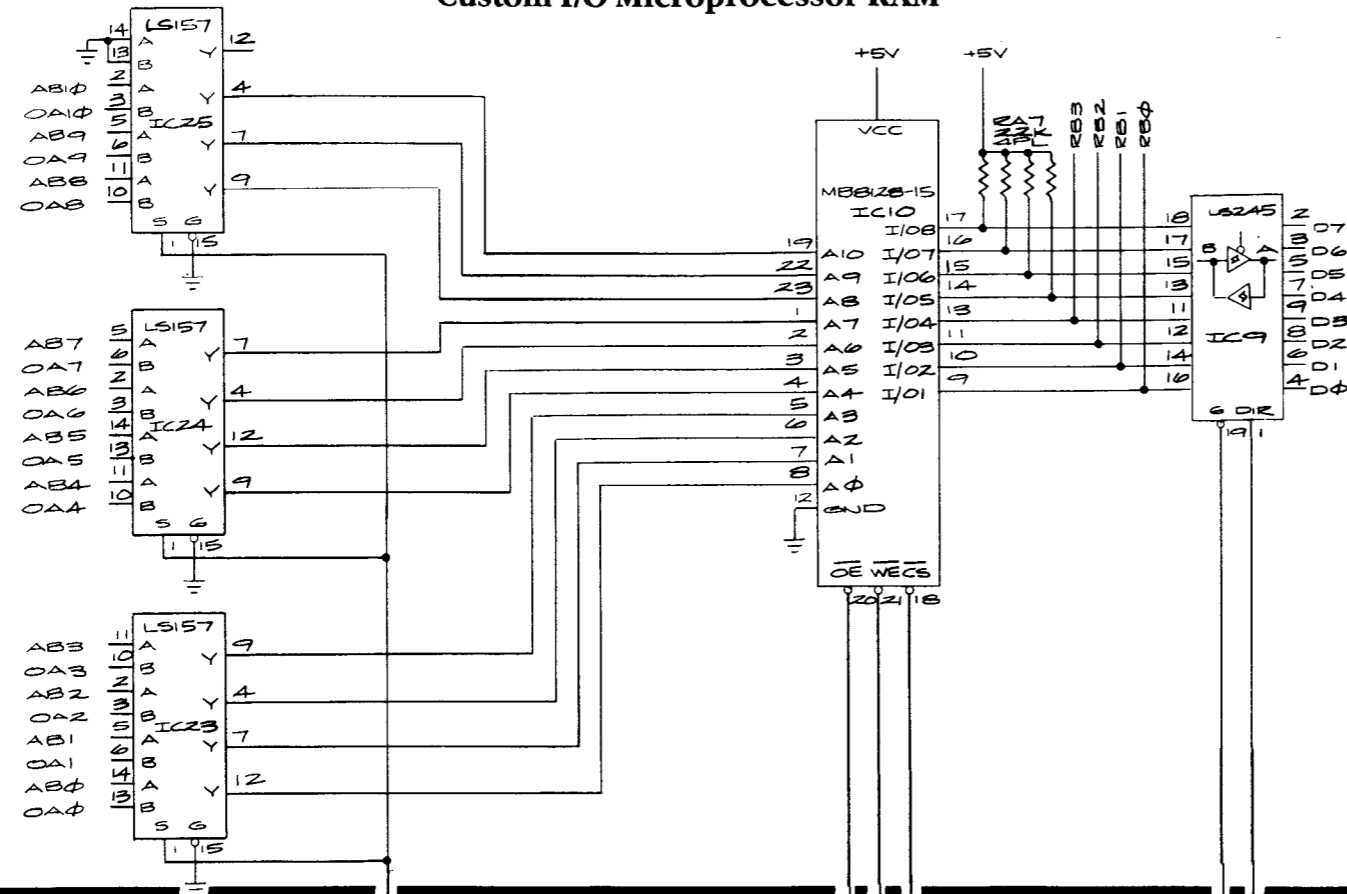
### Arabian PCB Schematic Diagram



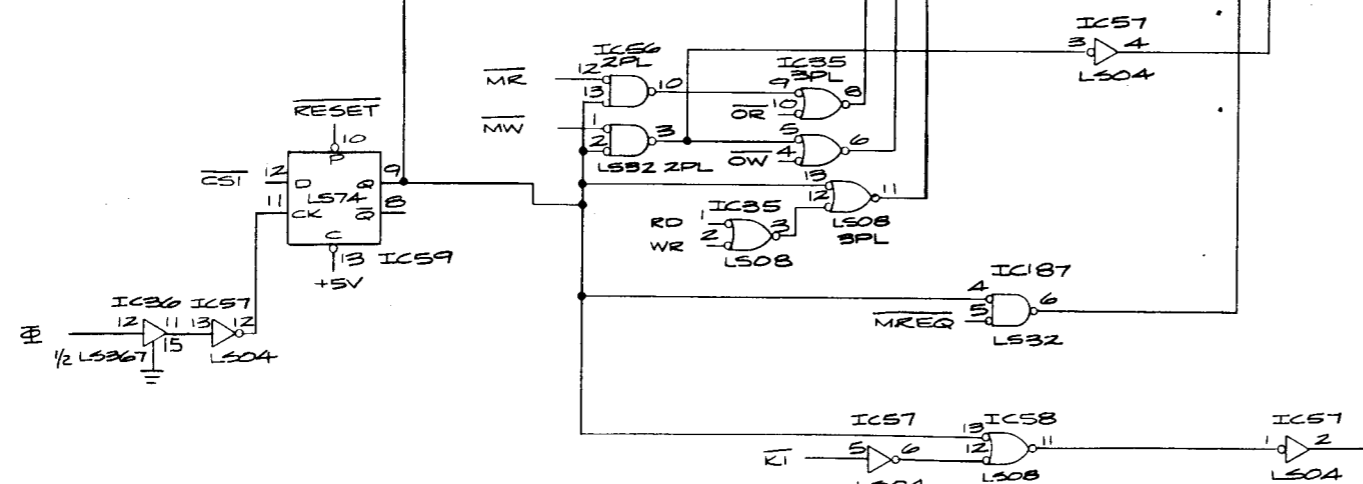
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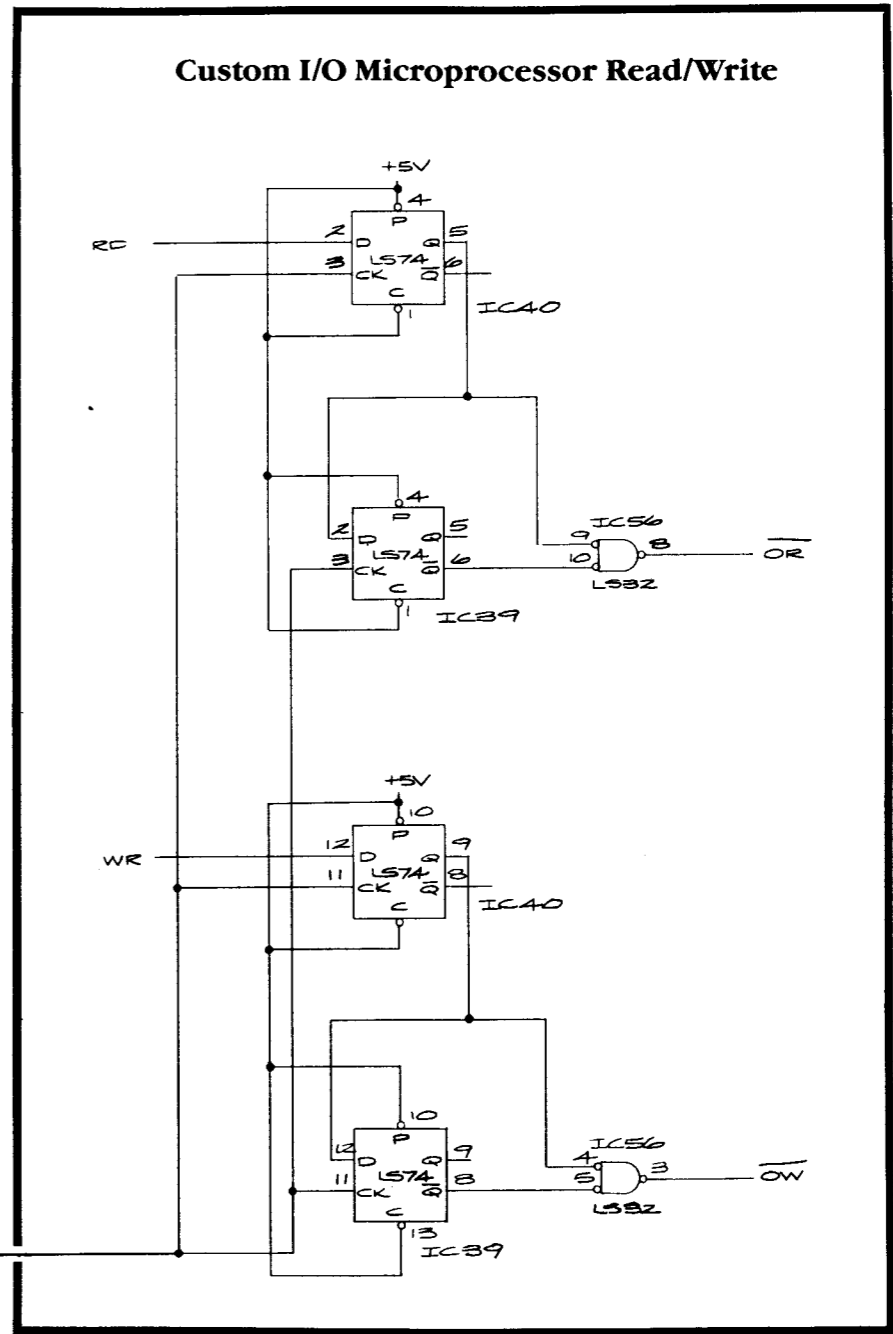
Custom I/O Microprocessor RAM



Custom I/O Microprocessor RAM Control



Custom I/O Microprocessor Read/Write



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Arabian PCB Schematic Diagram

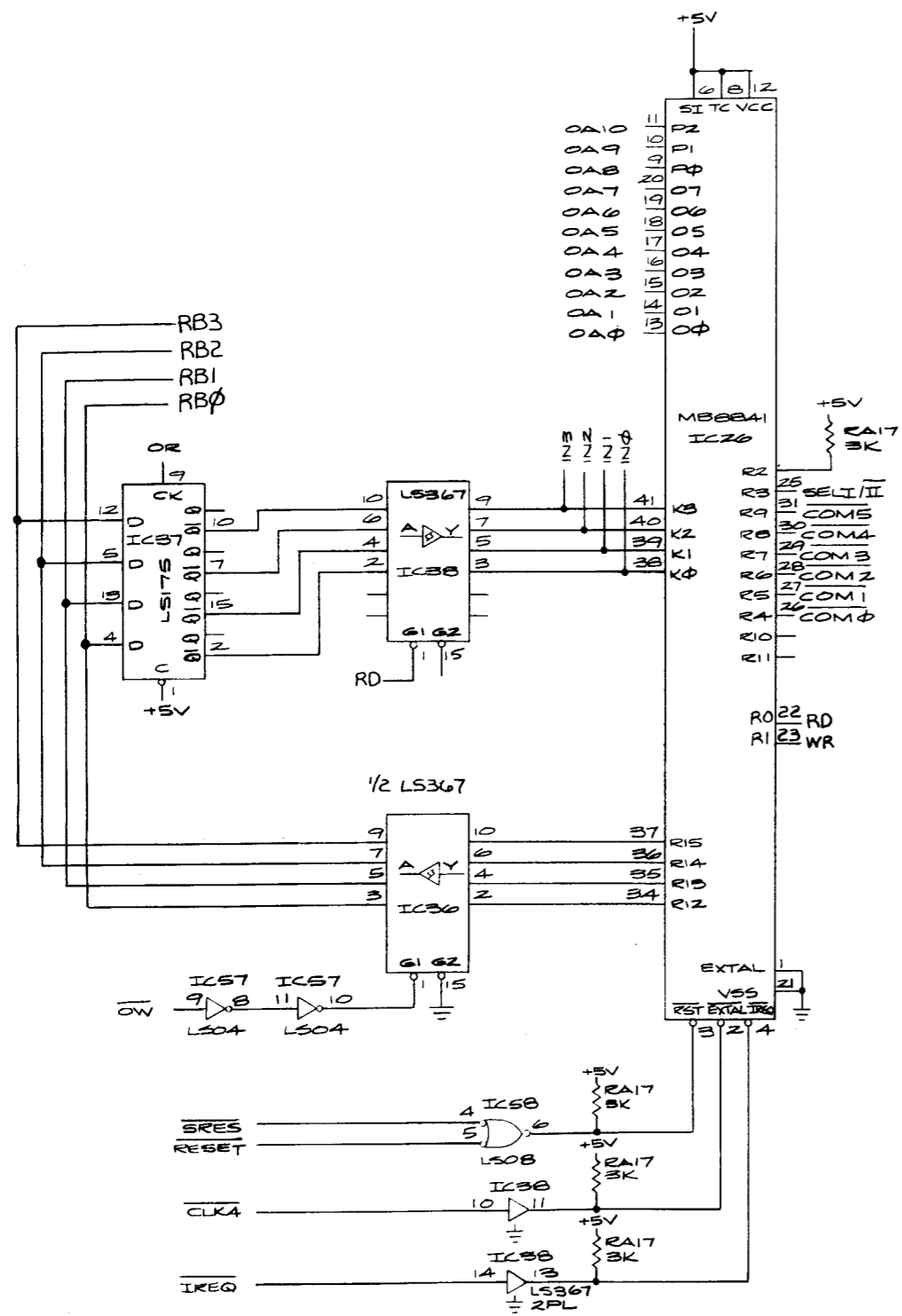


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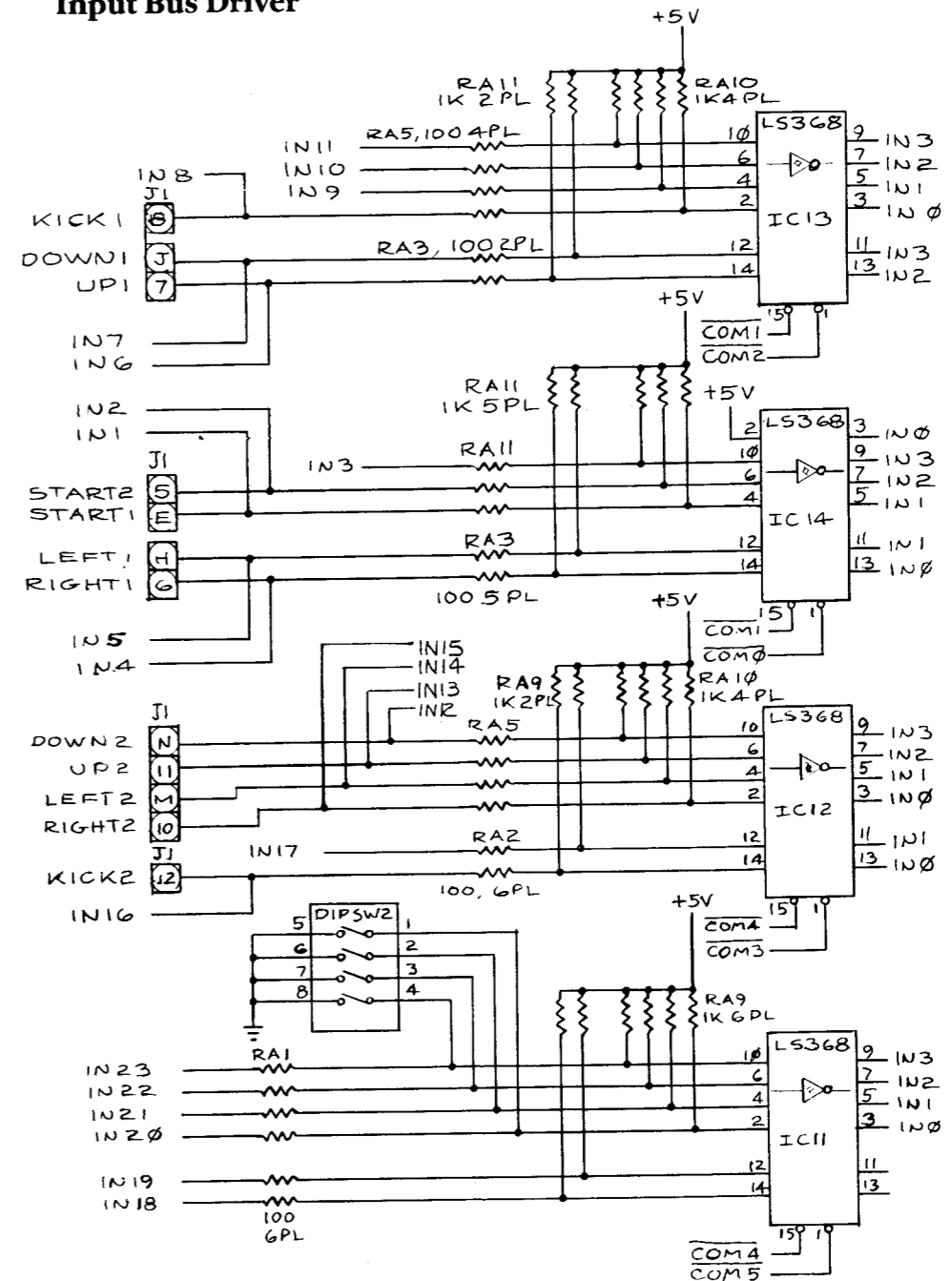
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### Custom I/O Microprocessor



### Input Bus Driver



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### Arabian PCB Schematic Diagram

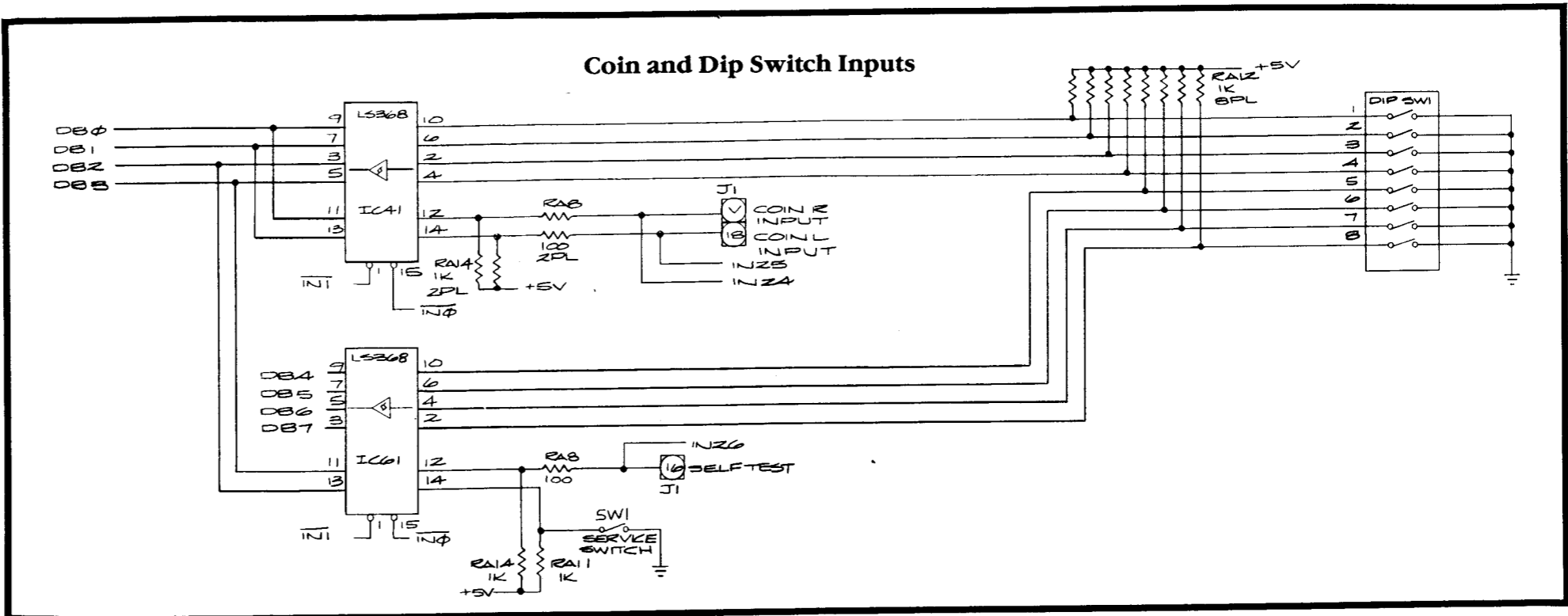


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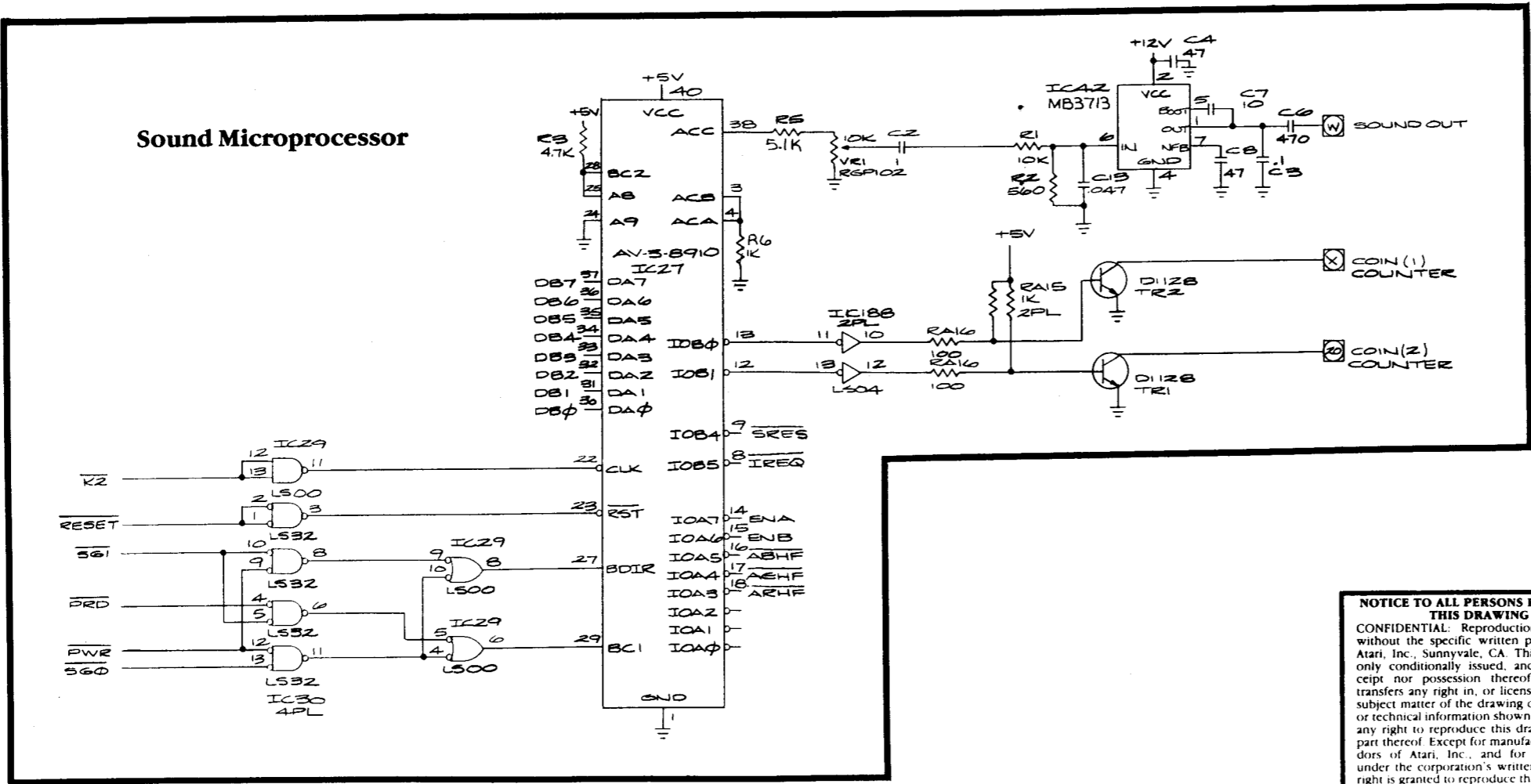
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### Coin and Dip Switch Inputs



### Sound Microprocessor



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### Arabian PCB Schematic Diagram

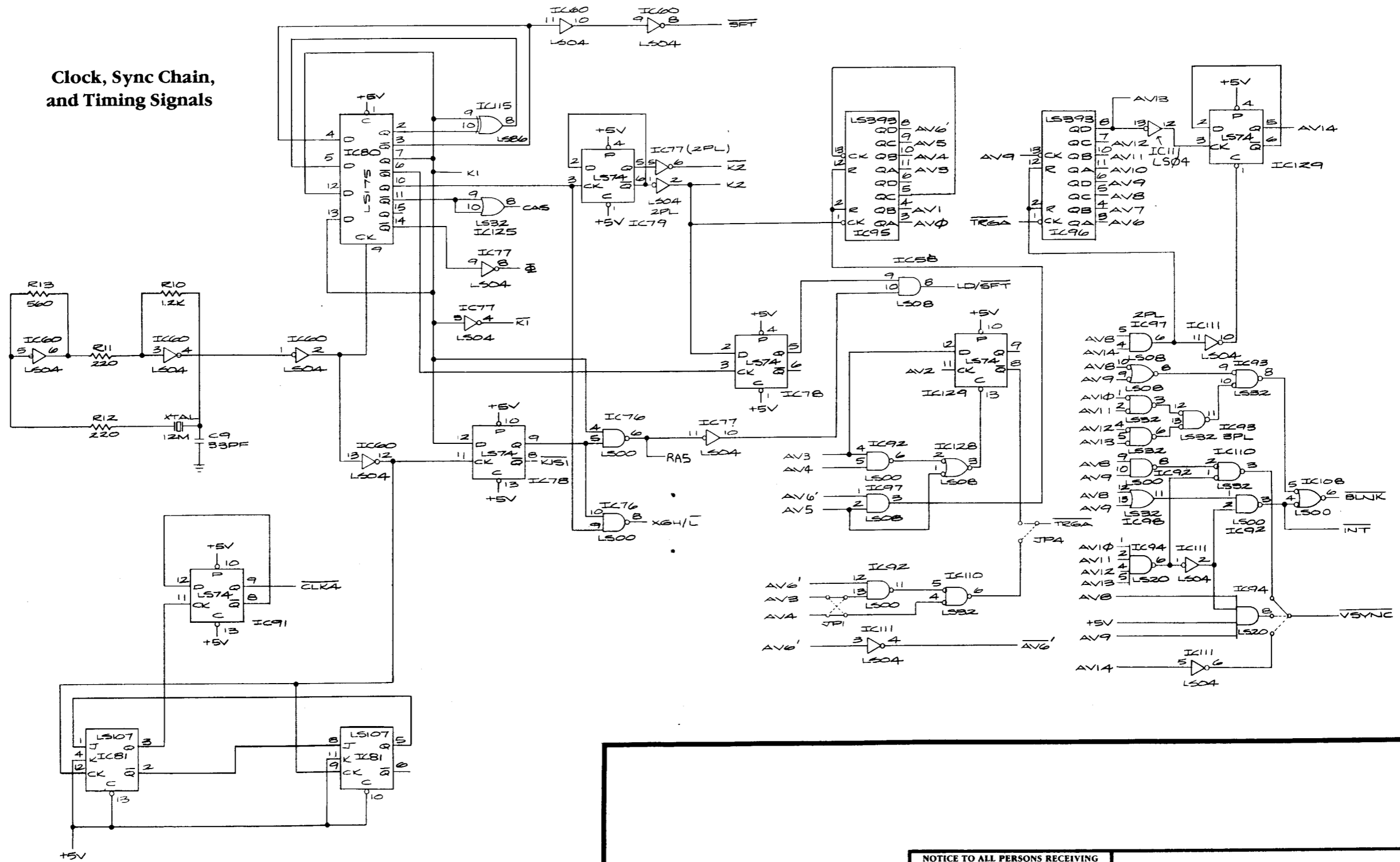


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**Clock, Sync Chain,  
and Timing Signals**



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**Arabic PCB Schematic Diagram**



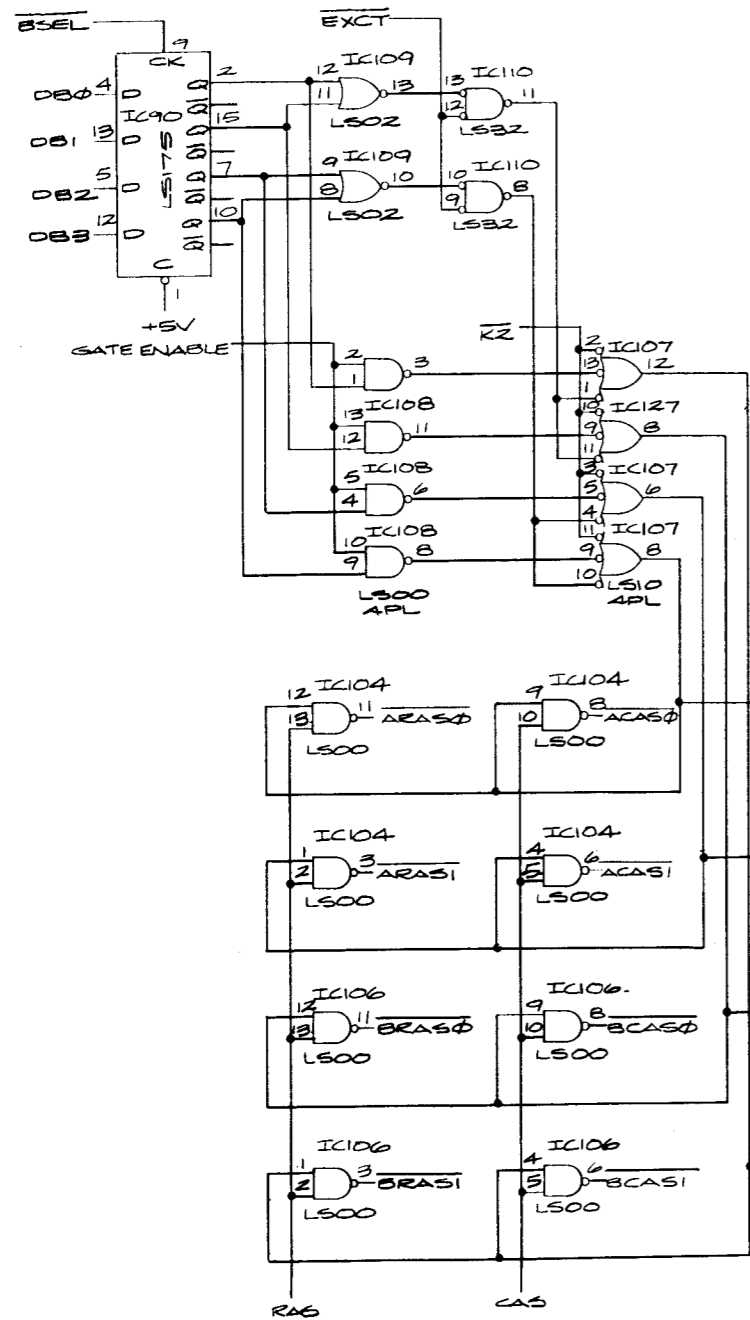
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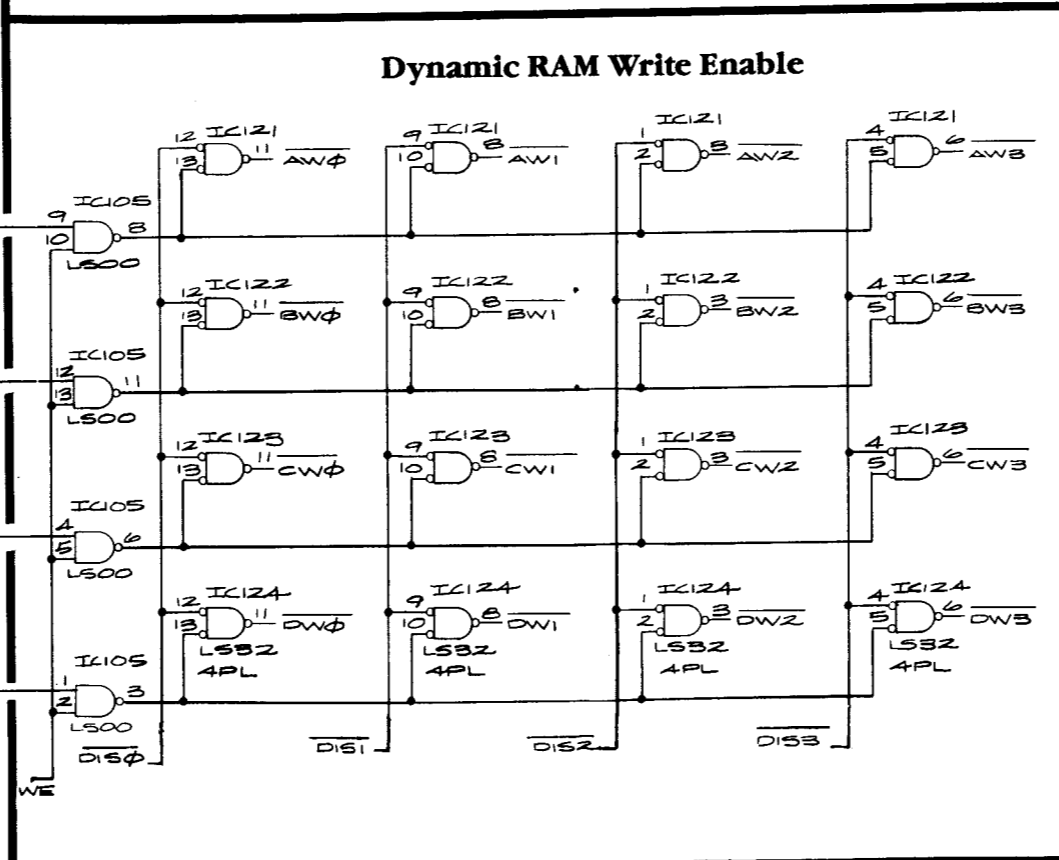
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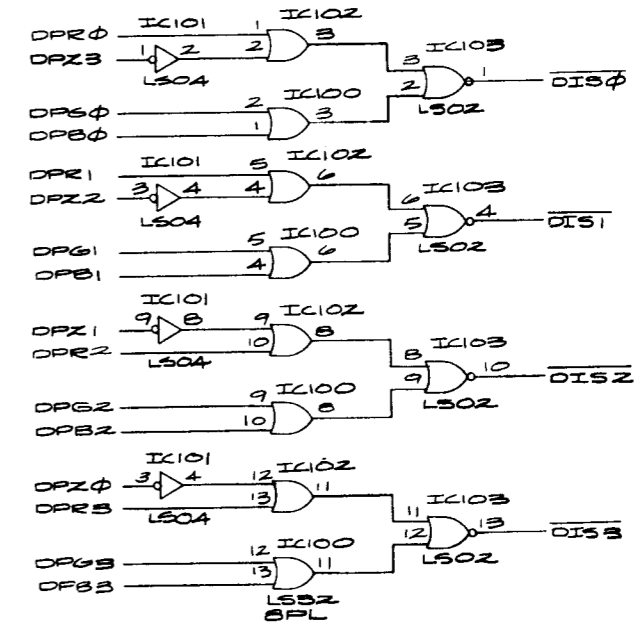
### Row/Column Address Select



### Dynamic RAM Write Enable



### Enable Logic Control



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### Arabian PCB Schematic Diagram

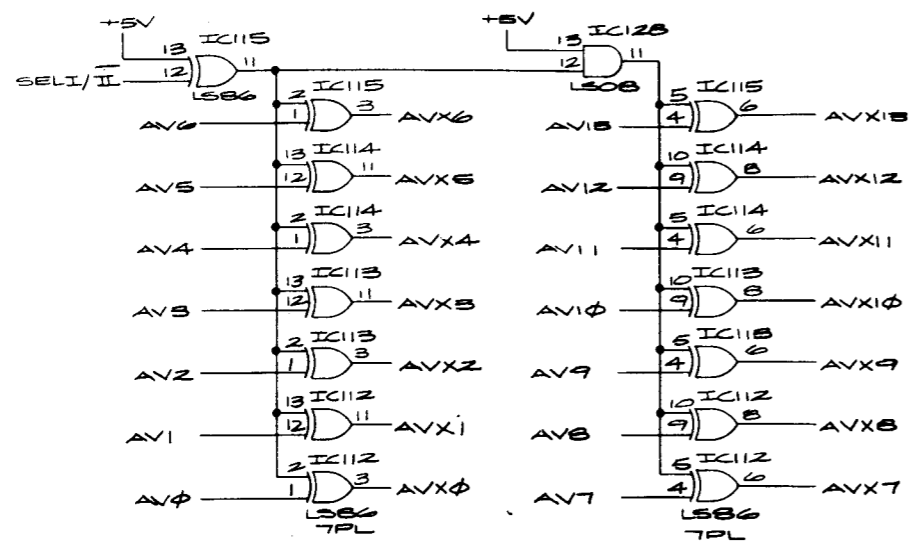


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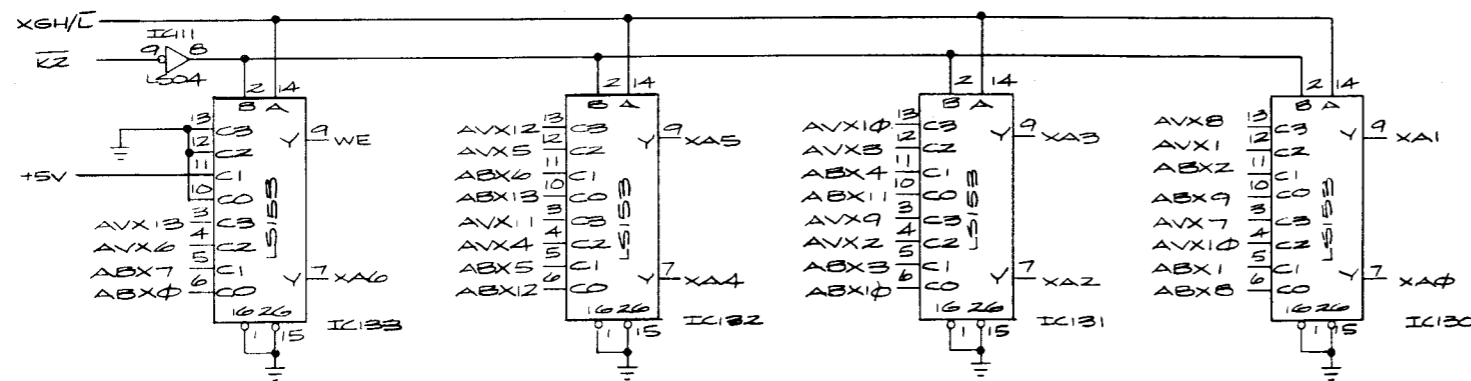
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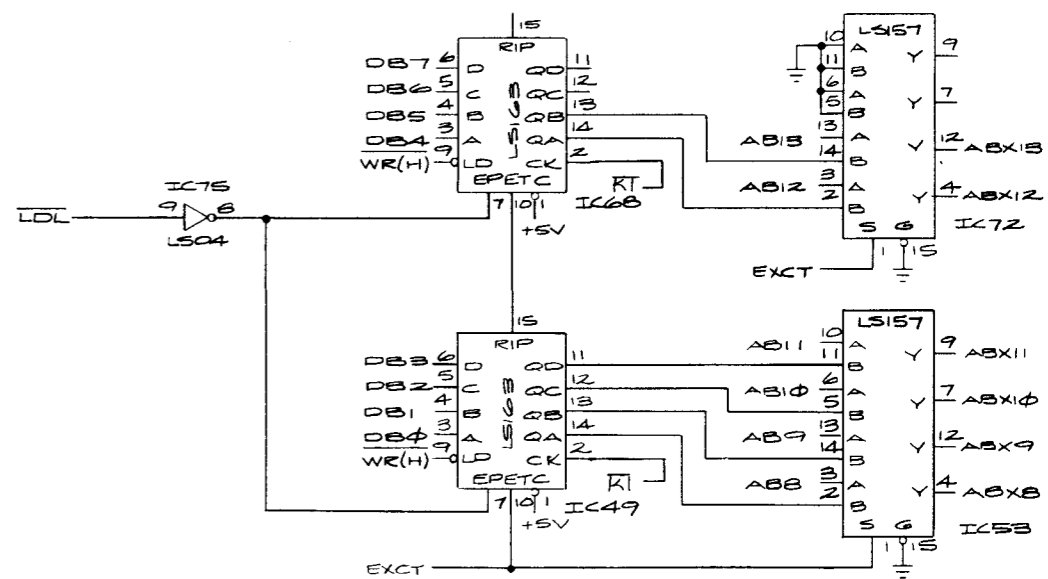
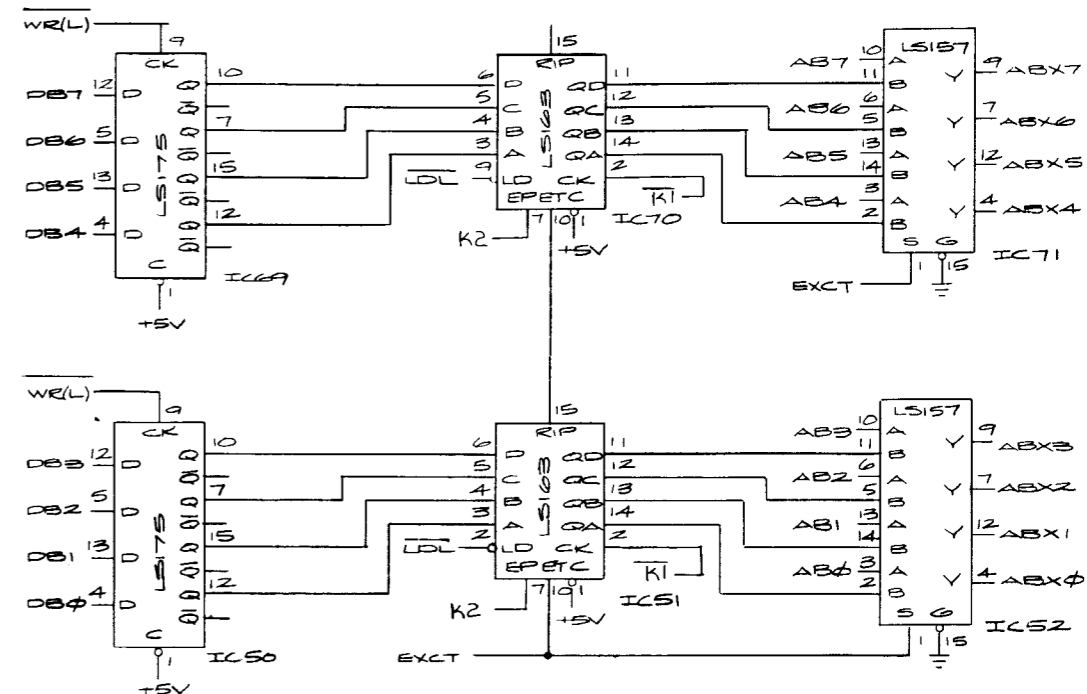
### Dynamic RAM Flip Address Decoders



### Dynamic RAM Address Multiplexers



### Dynamic RAM Address Decoders



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### Arabian PCB Schematic Diagram

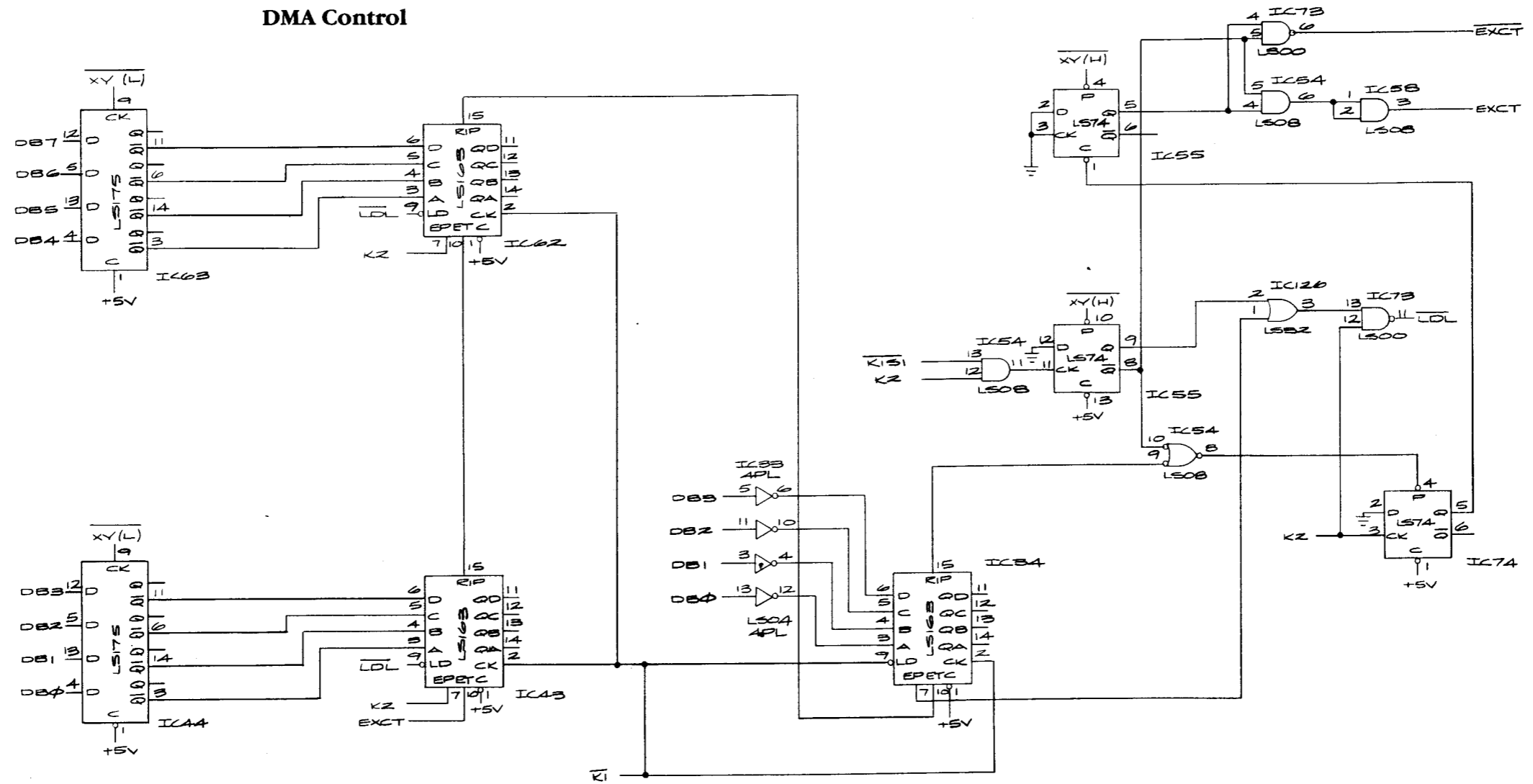


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### DMA Control



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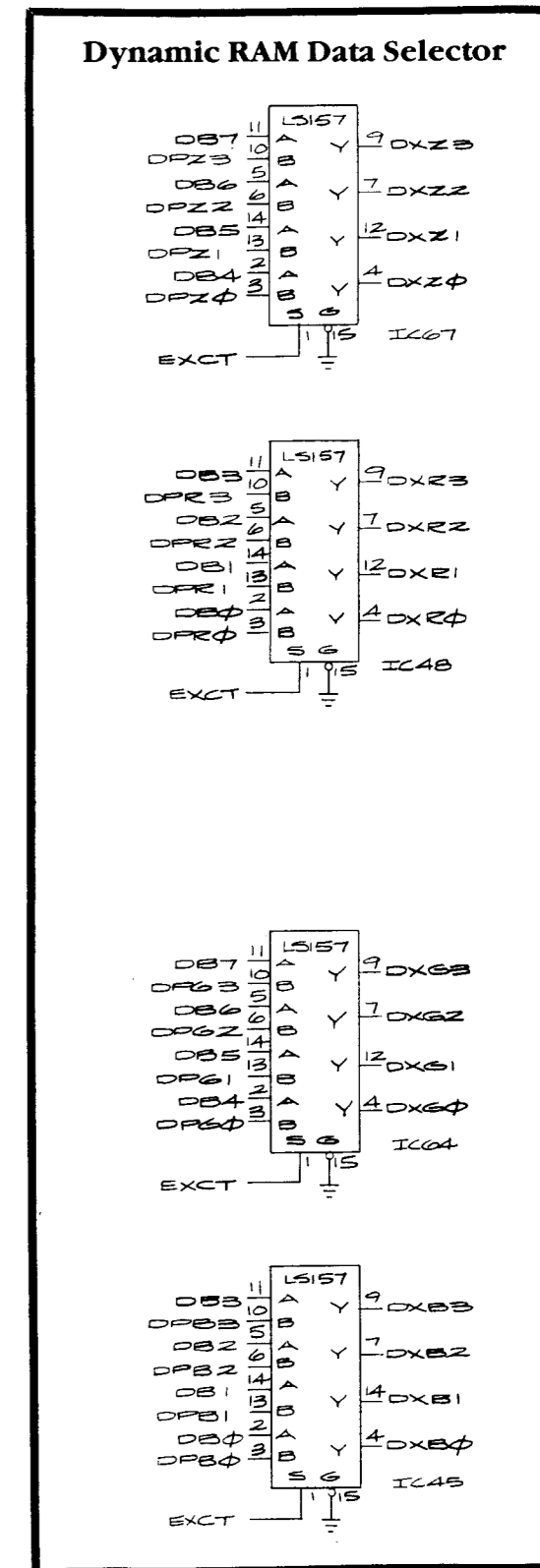
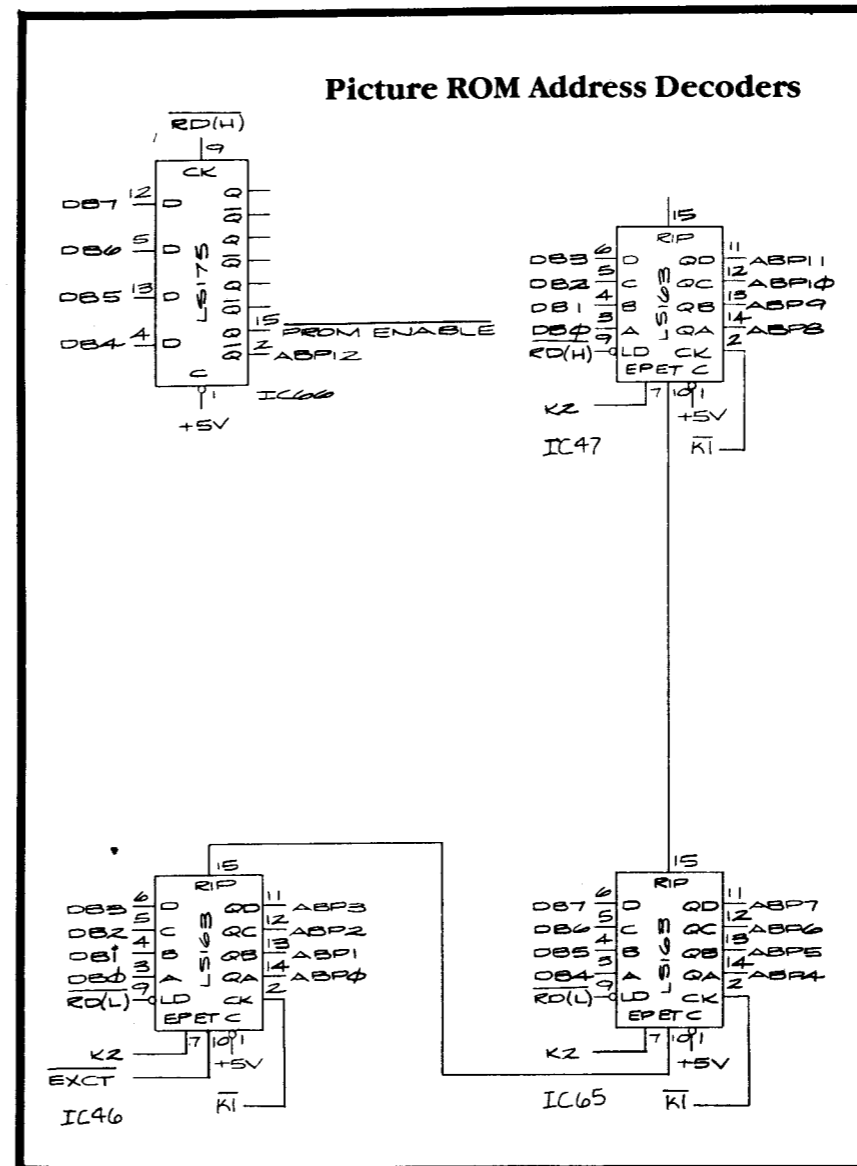
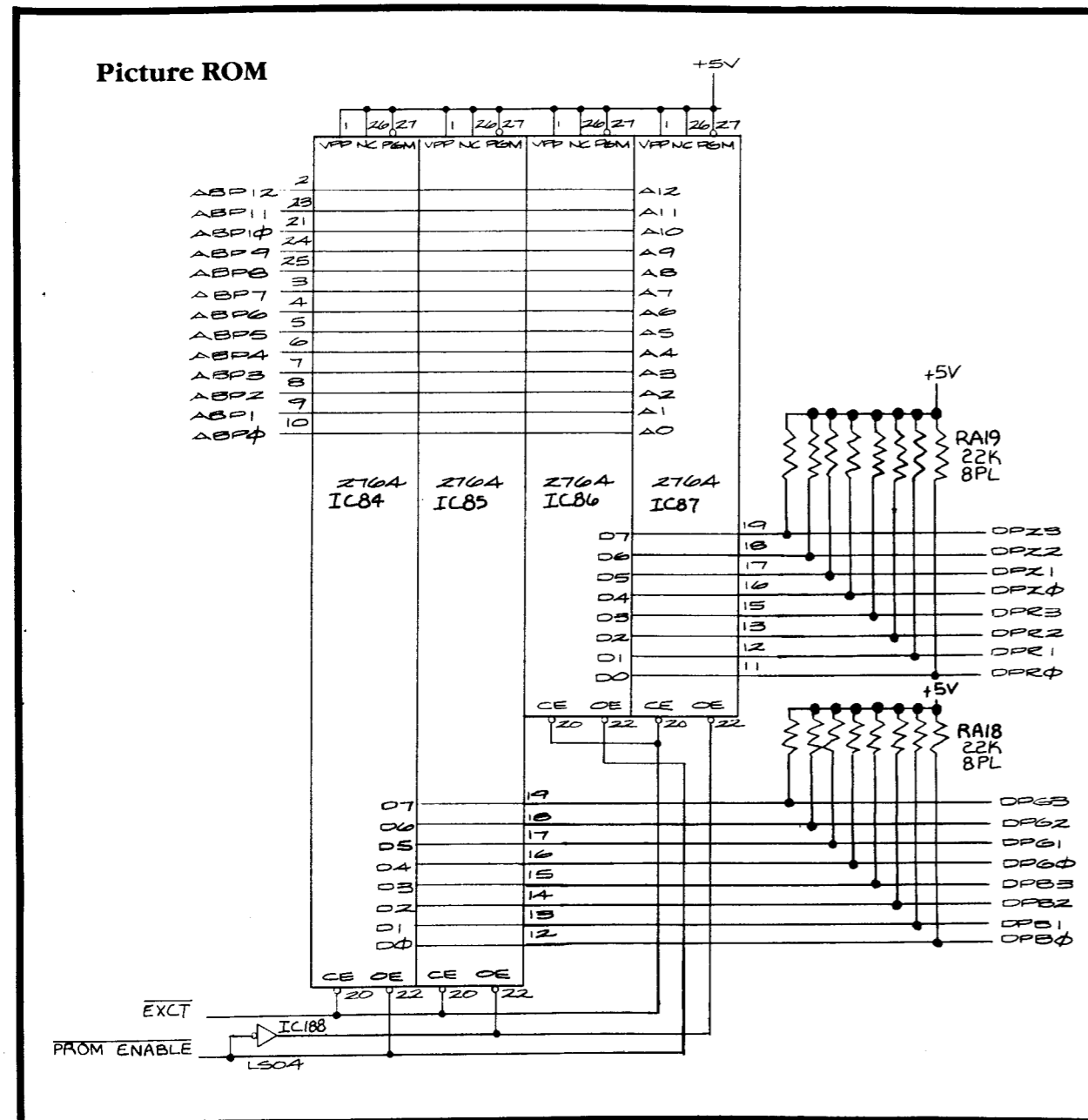
### Arabian PCB Schematic Diagram



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### Arabian PCB Schematic Diagram



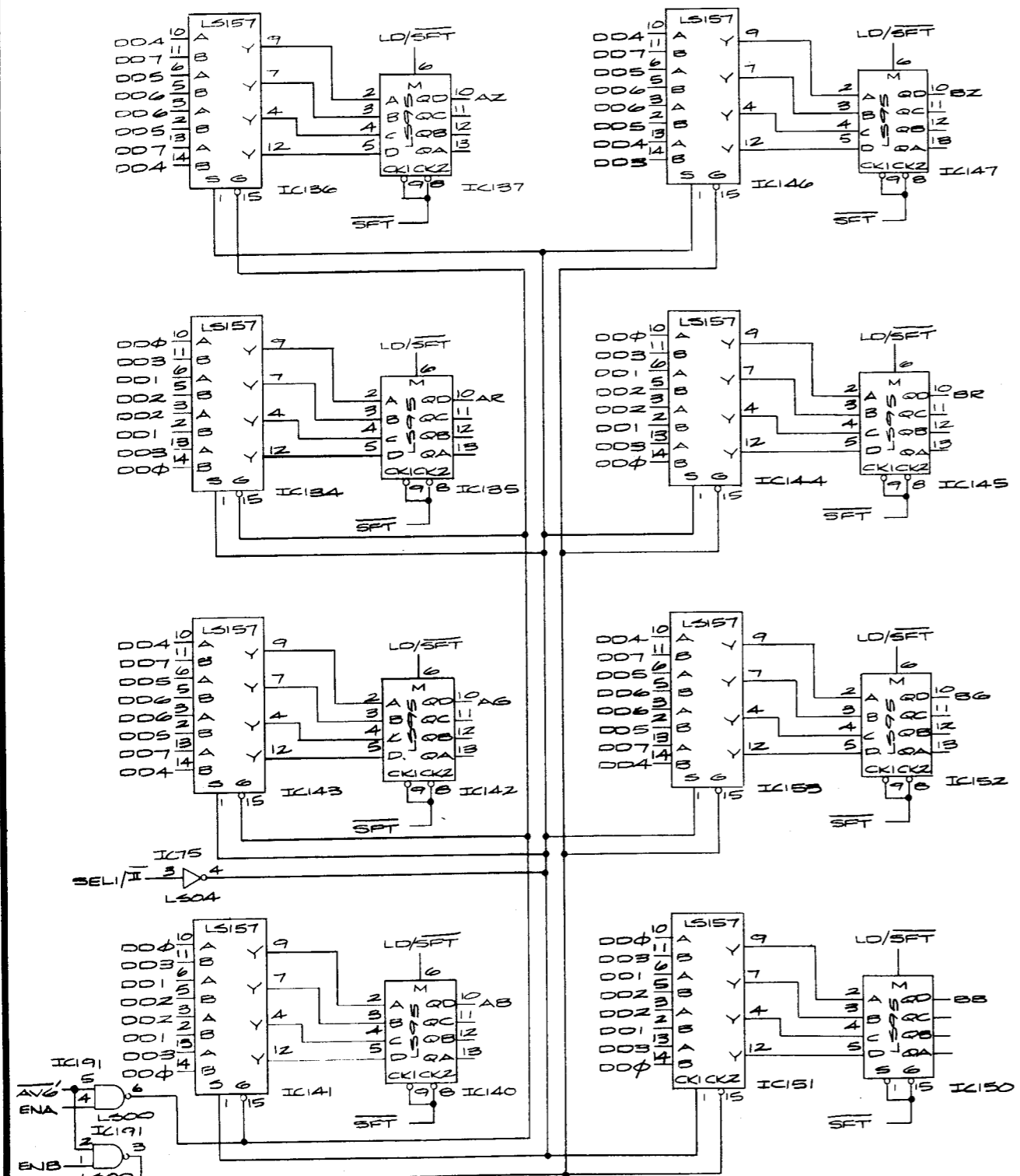
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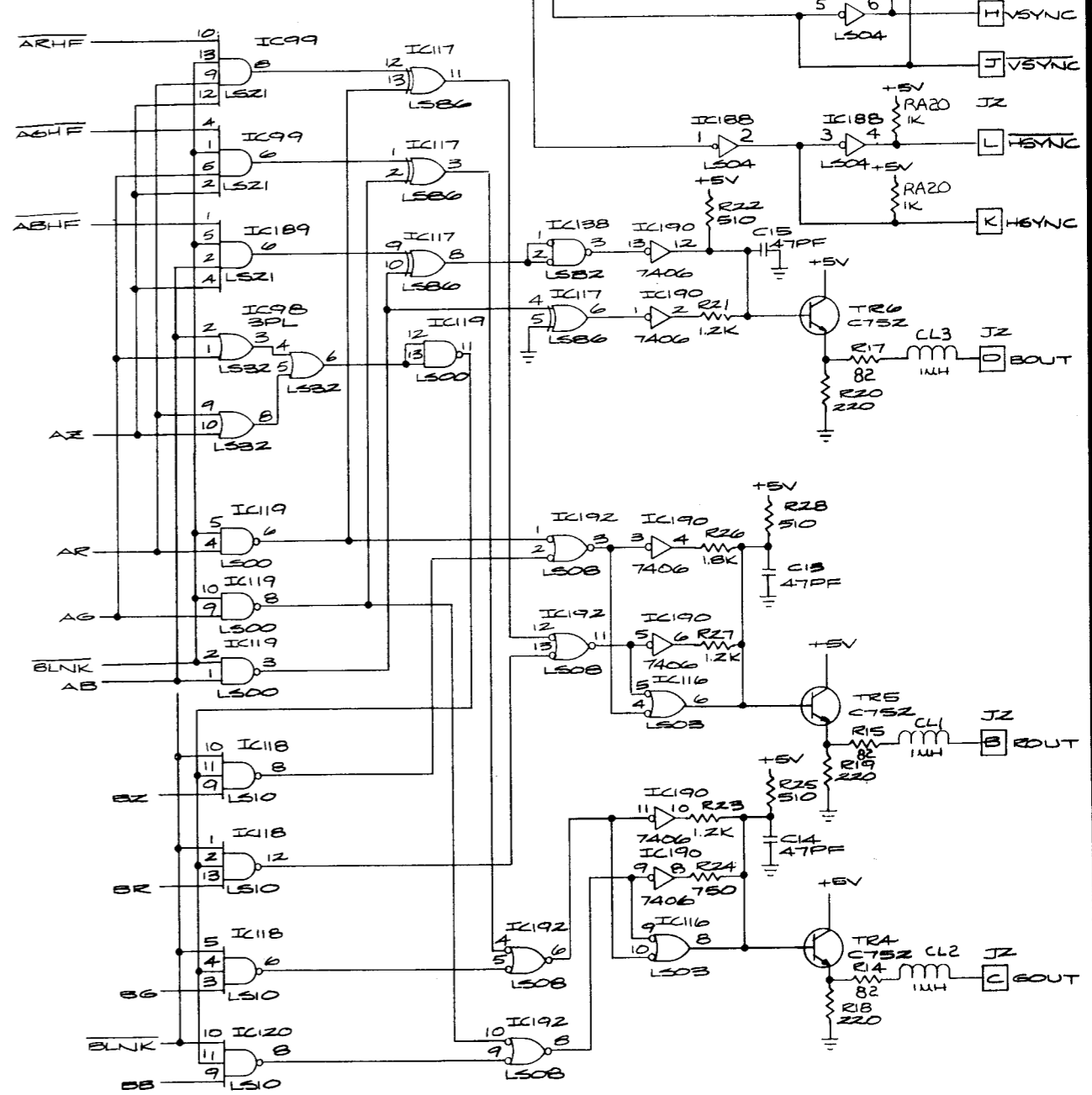
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### Video Output Decoders



### Video Output



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**Arabic PCB Schematic Diagram**

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