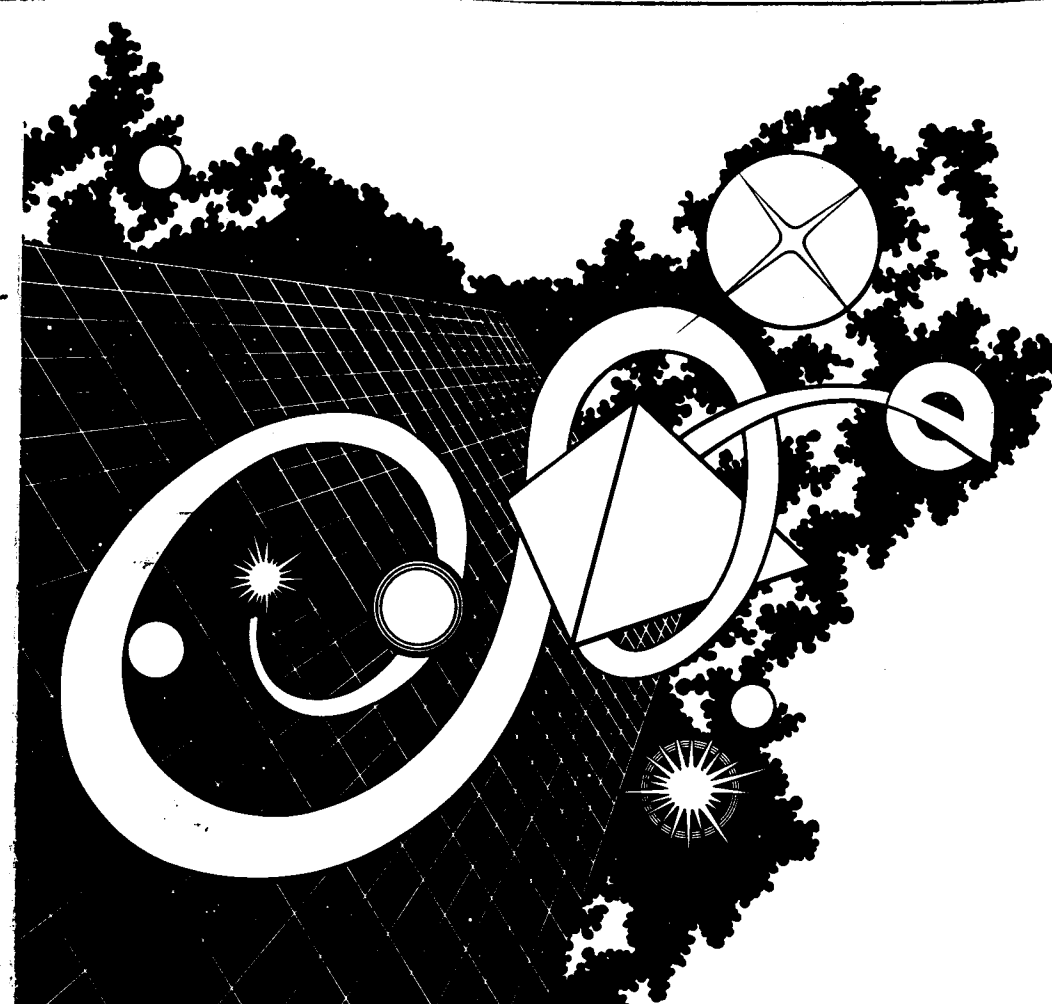


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**NOTE**  
This staple temporarily holds the schematic package together. Remove the staple before using these schematics.

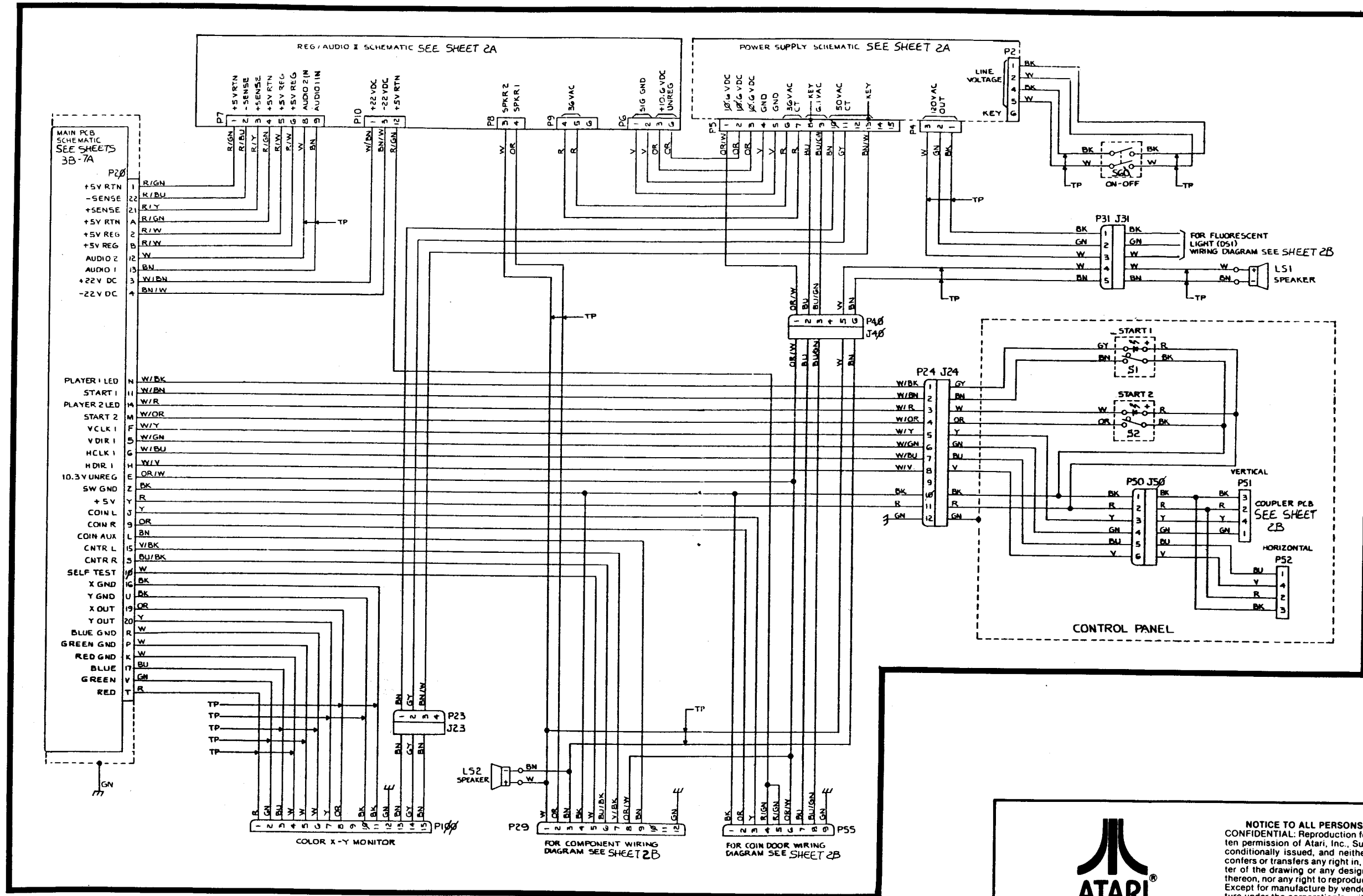
## Schematic Package Supplement to



## Operation, Maintenance, and Service Manual

12L

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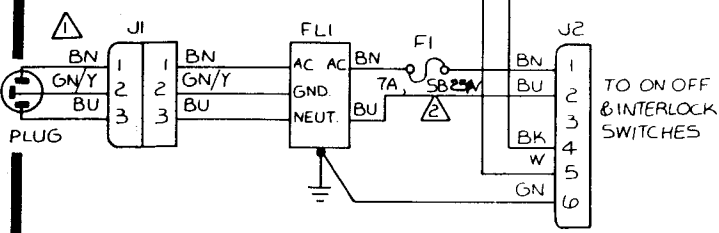
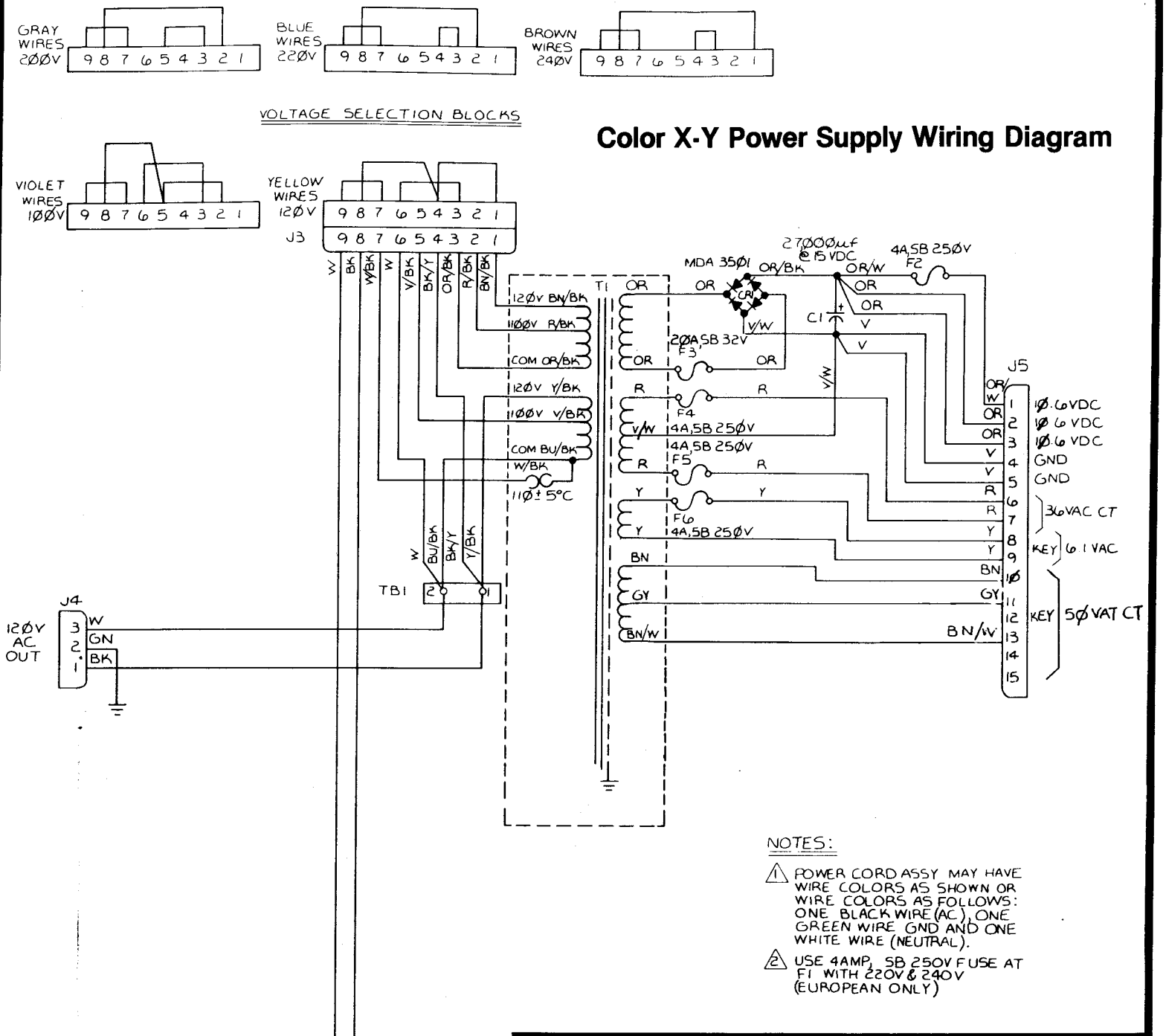
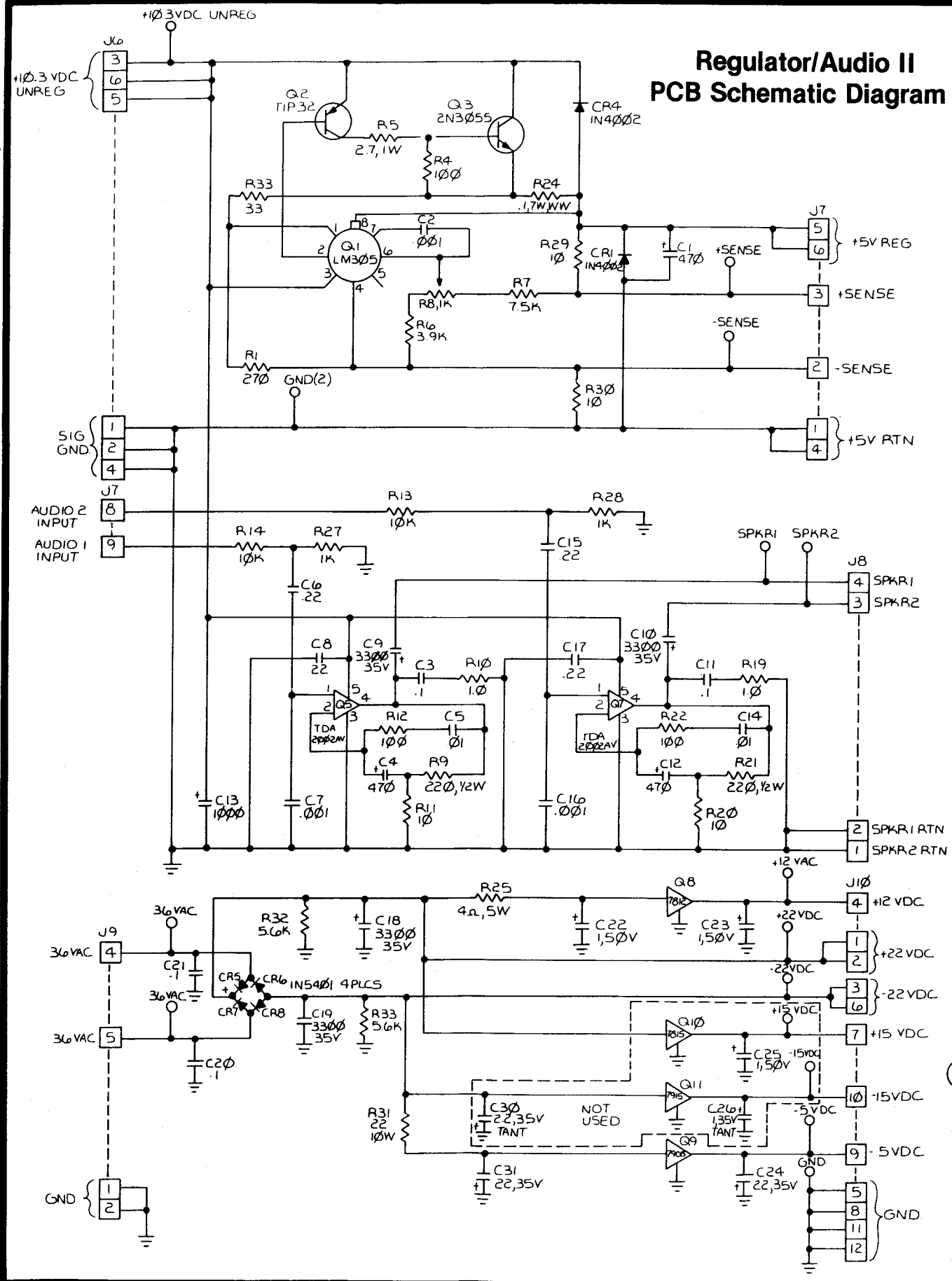
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**Quantum™ Main Wiring Diagram**

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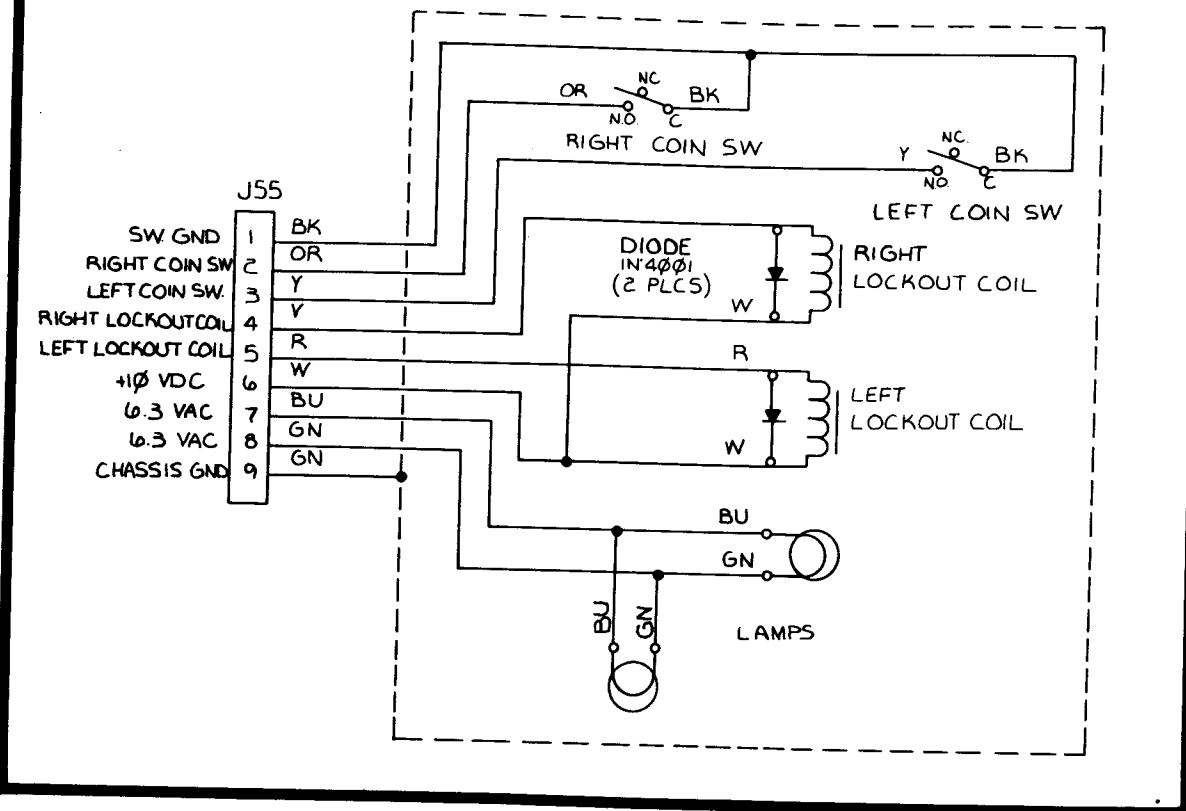
**Quantum™ Reg./Audio II PCB and Power Supply Diagrams**

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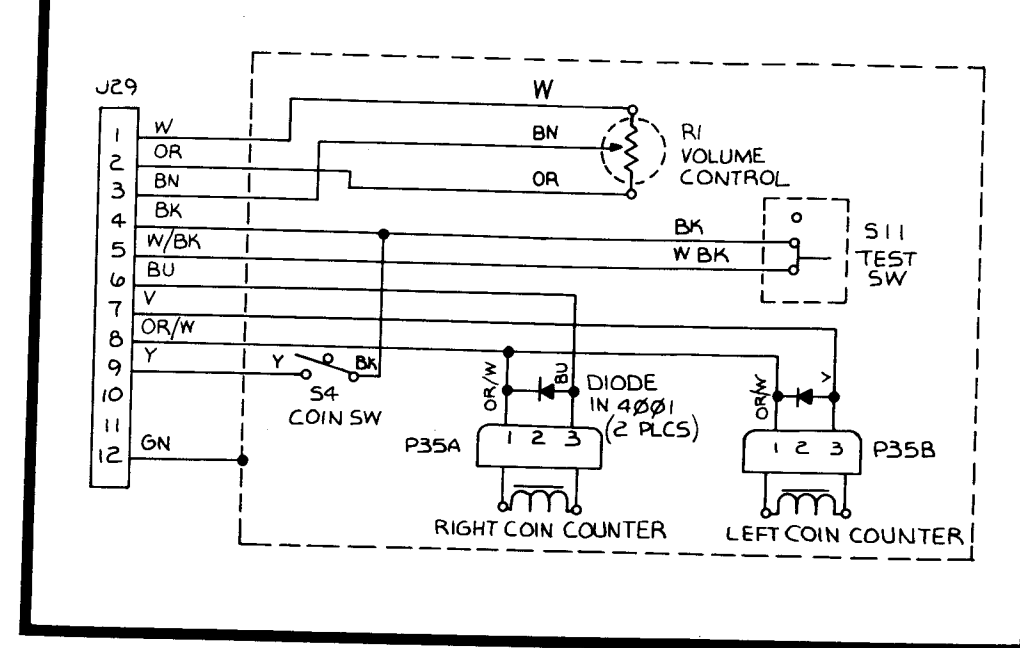
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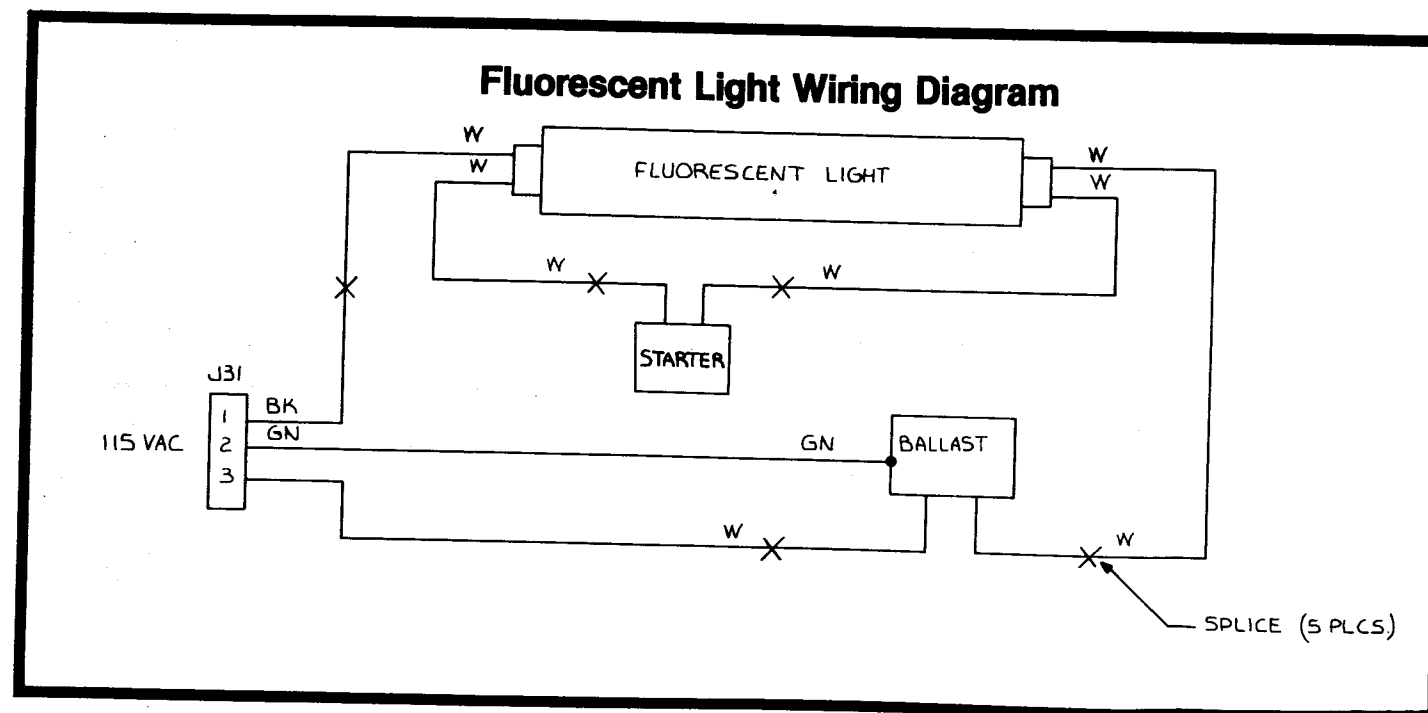
### Coin-Door Wiring Diagram



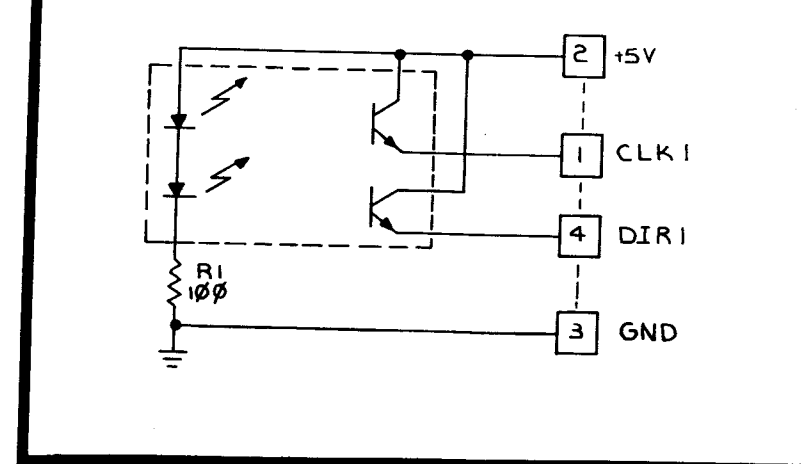
### Utility Panel Wiring Diagram



### Fluorescent Light Wiring Diagram



### Coupler PCB Schematic



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### Quantum™ Game Wiring Interfaces

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## MEMORY MAP

HEXIDECIMAL ADDRESS	FUNCTION
000000 - 003FFF	ROM0
004000 - 004FFF	ROM1
008000 - 00BFFF	ROM2
00C000 - 00FFFF	ROM3
010000 - 013FFF	ROM4
018000 - 01BFFF	RAM0
01C000 - 01CFFF	RAM1
940000	TRACKBALL
948000	SWITCHES
950000	COLORAM
958000	CONTROL
960000 - 970000	RECALL
968000	VGRST
970000	VGG0
978000	WDCLR
900000	NVRAM
840000	I/O
800000 - 801FFF	VMEM
940000	I/O
900000	DTACK1

## 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 ( $\mu\text{f}$ )  
 Resistors = ohms ( $\Omega$ )  
 Inductors = microhenrys ( $\mu\text{h}$ )

### SYMBOLS:



Ground



PCB edge connector pad



Test Point



PCB test connector pad

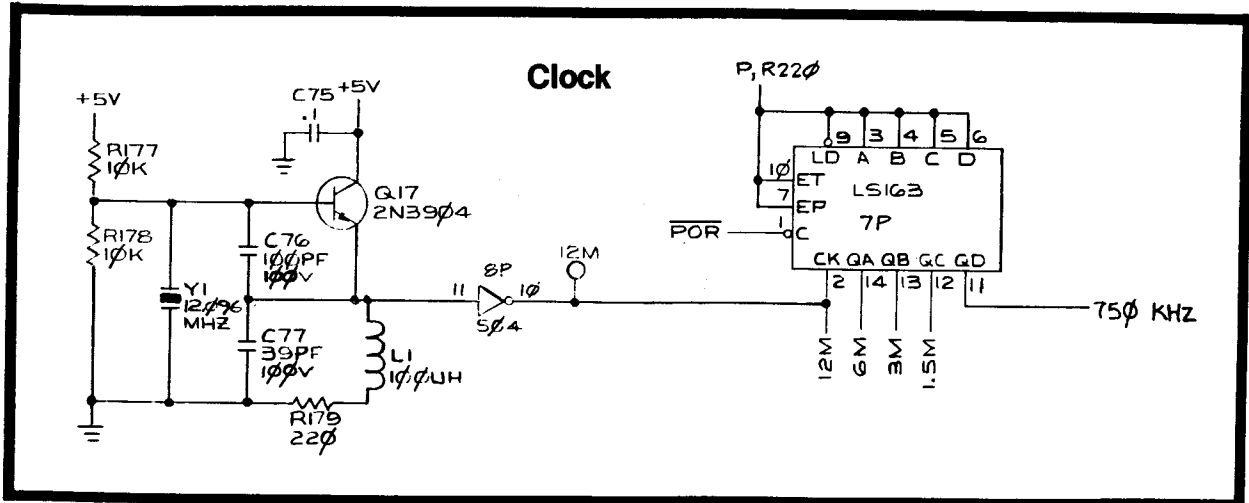
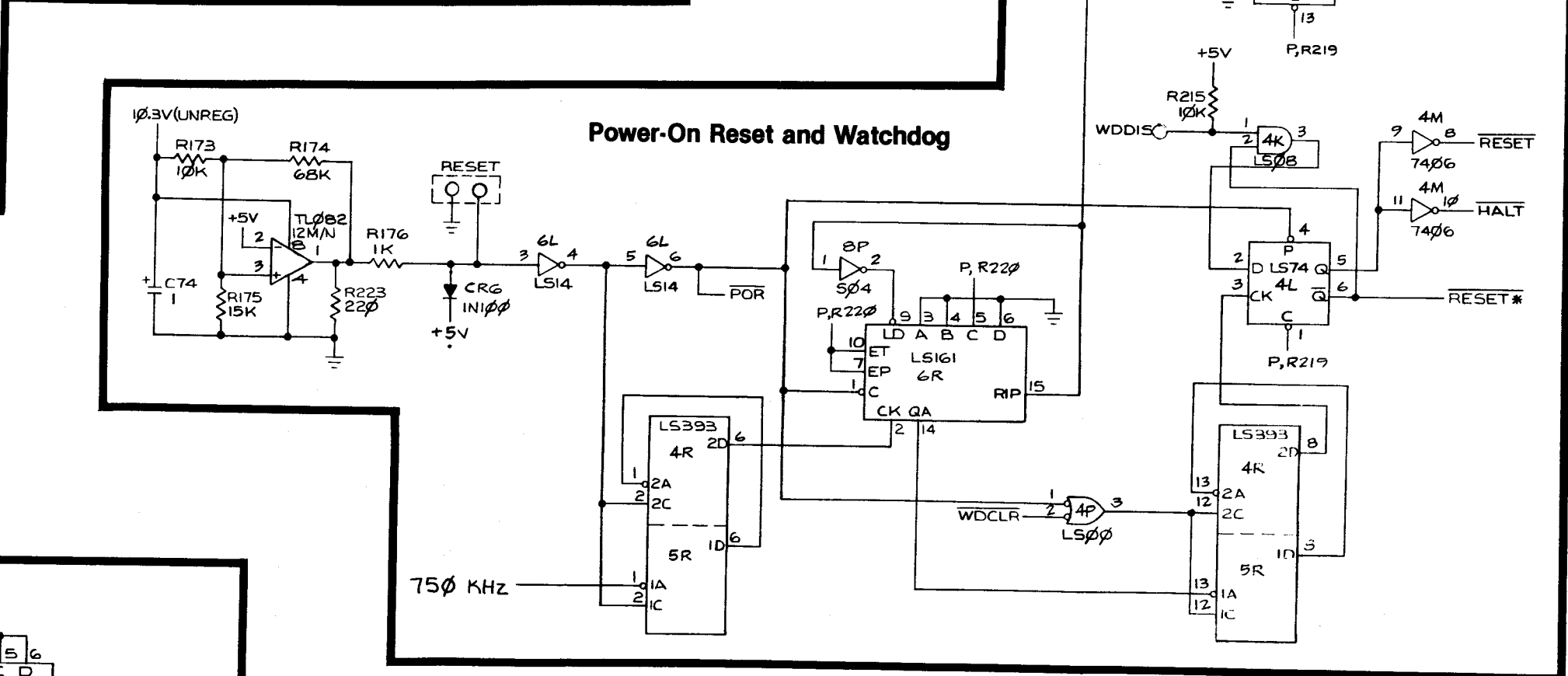
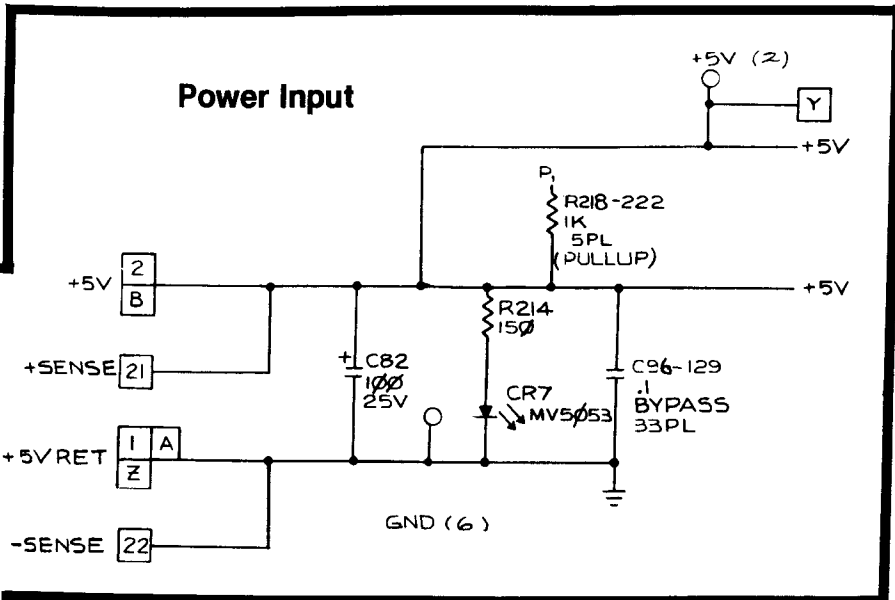
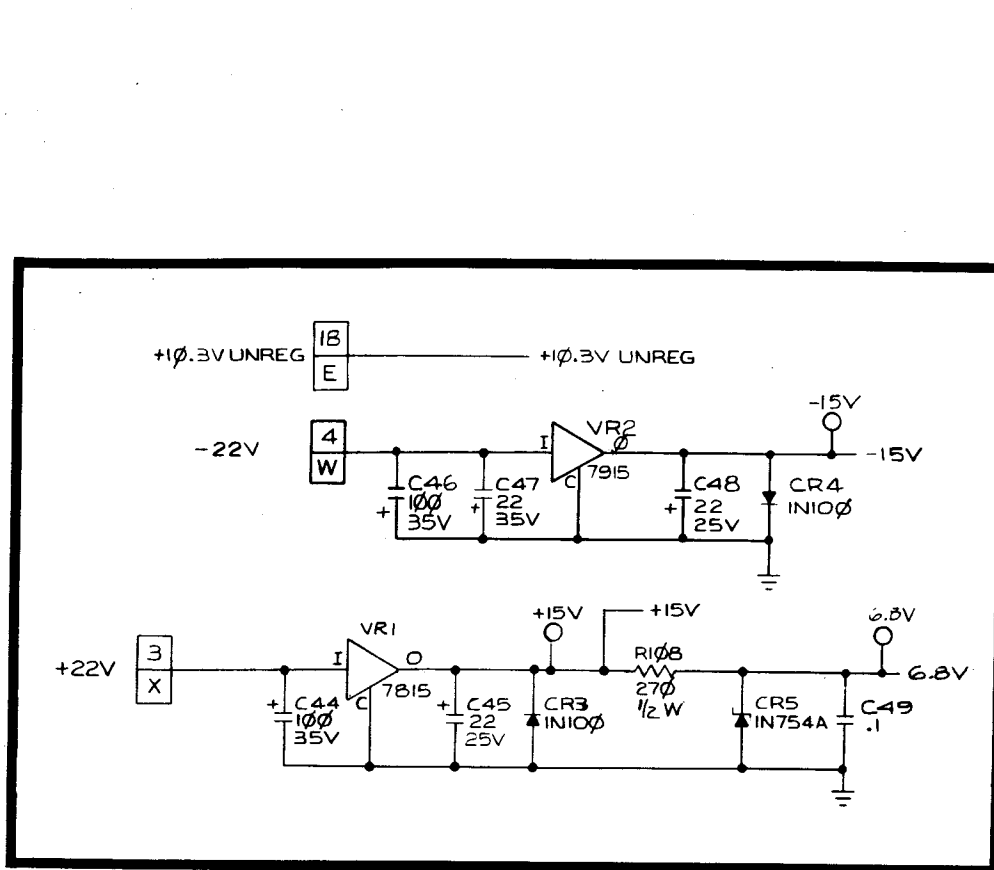



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### Quantum™ Memory Map and Schematic Notes

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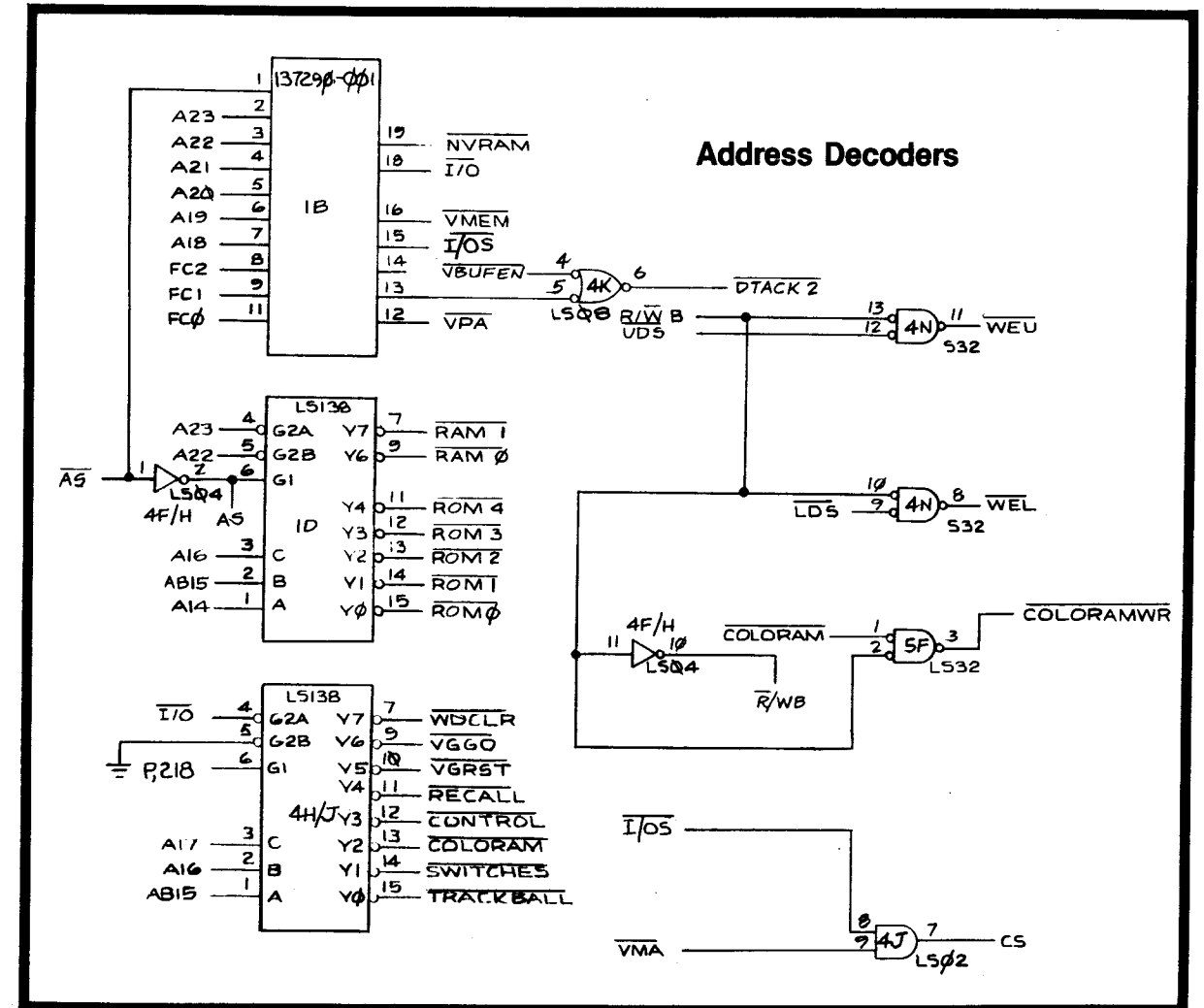
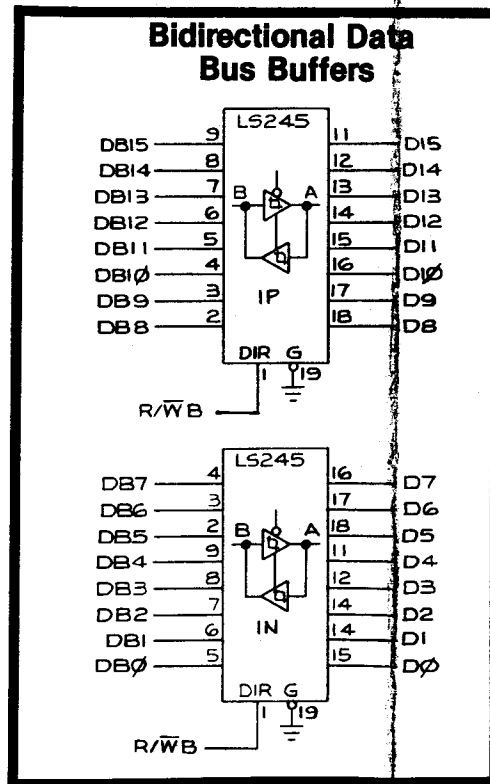
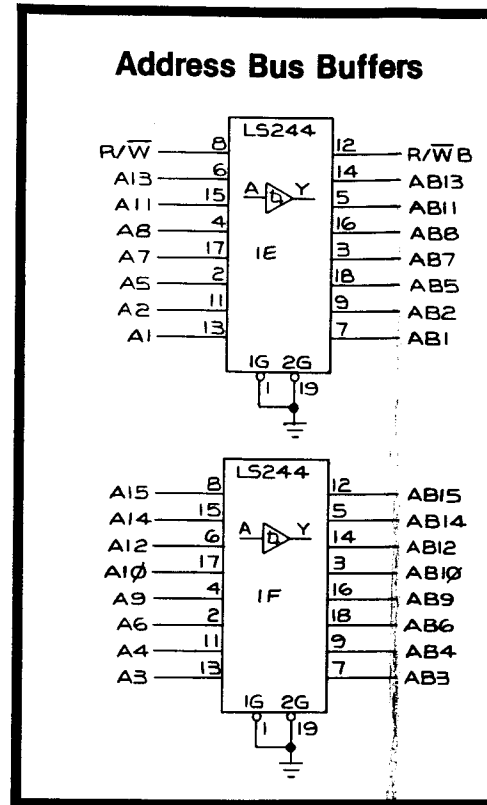
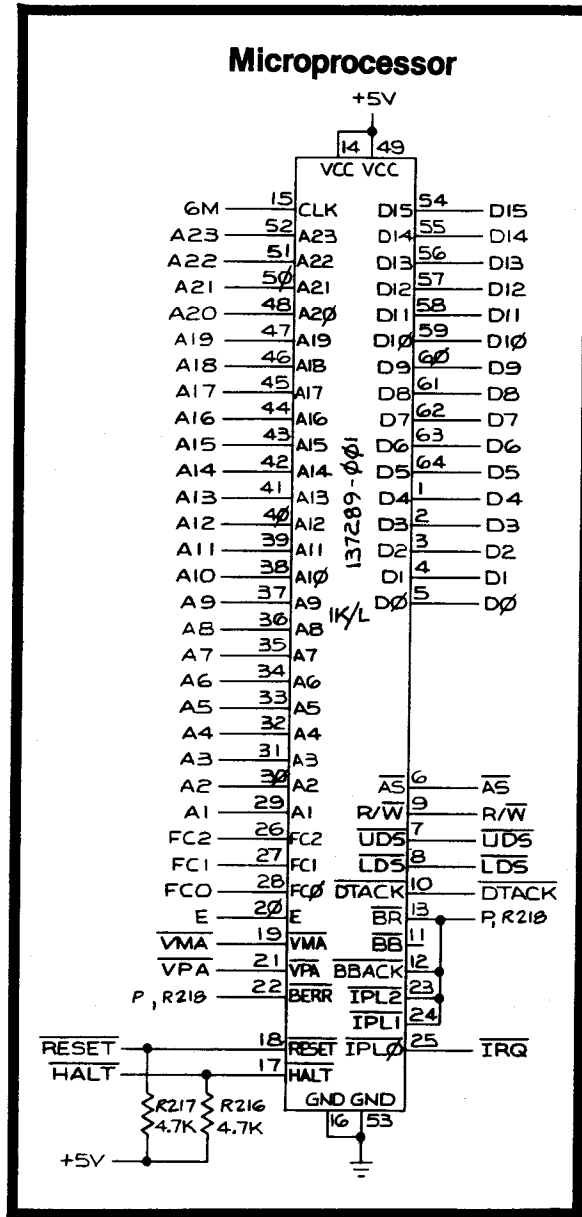




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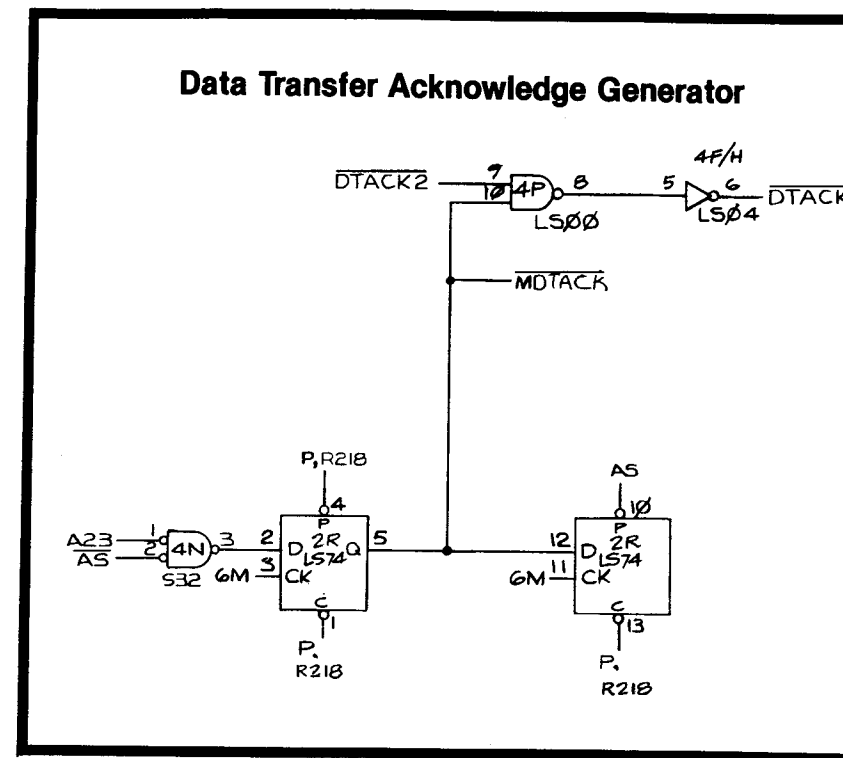
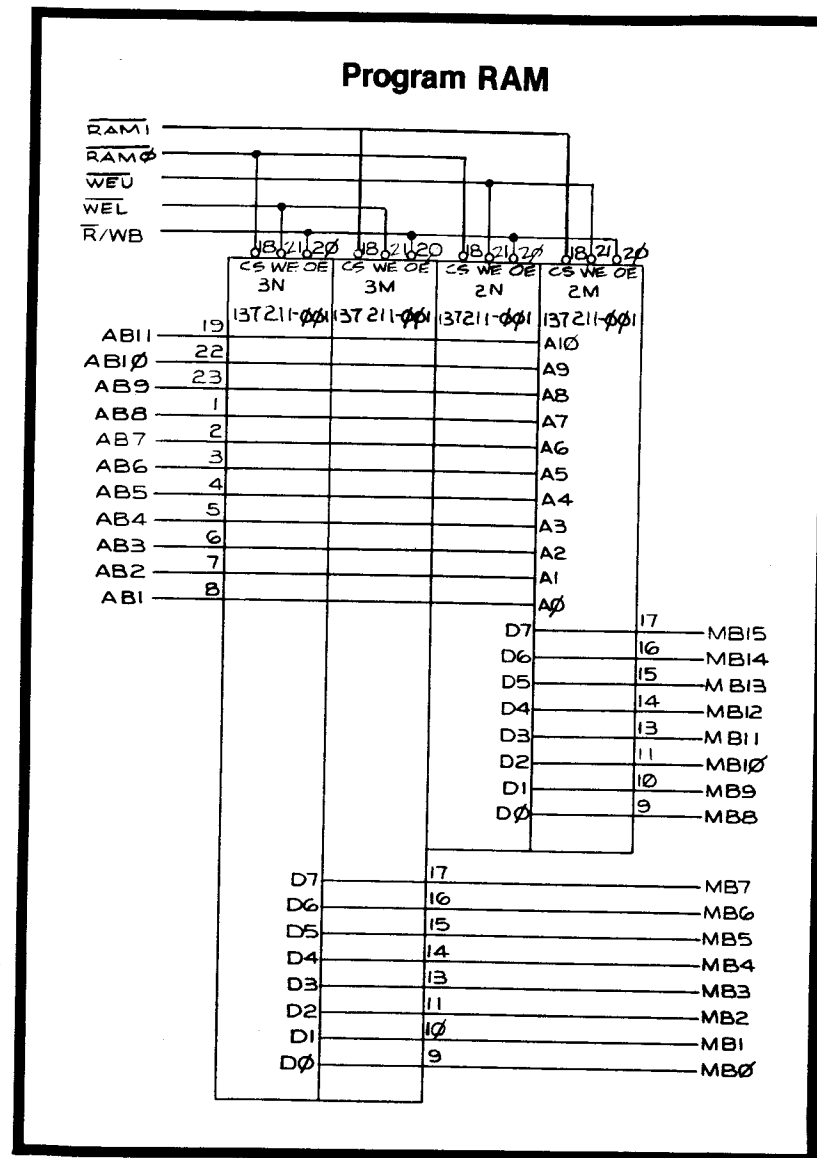
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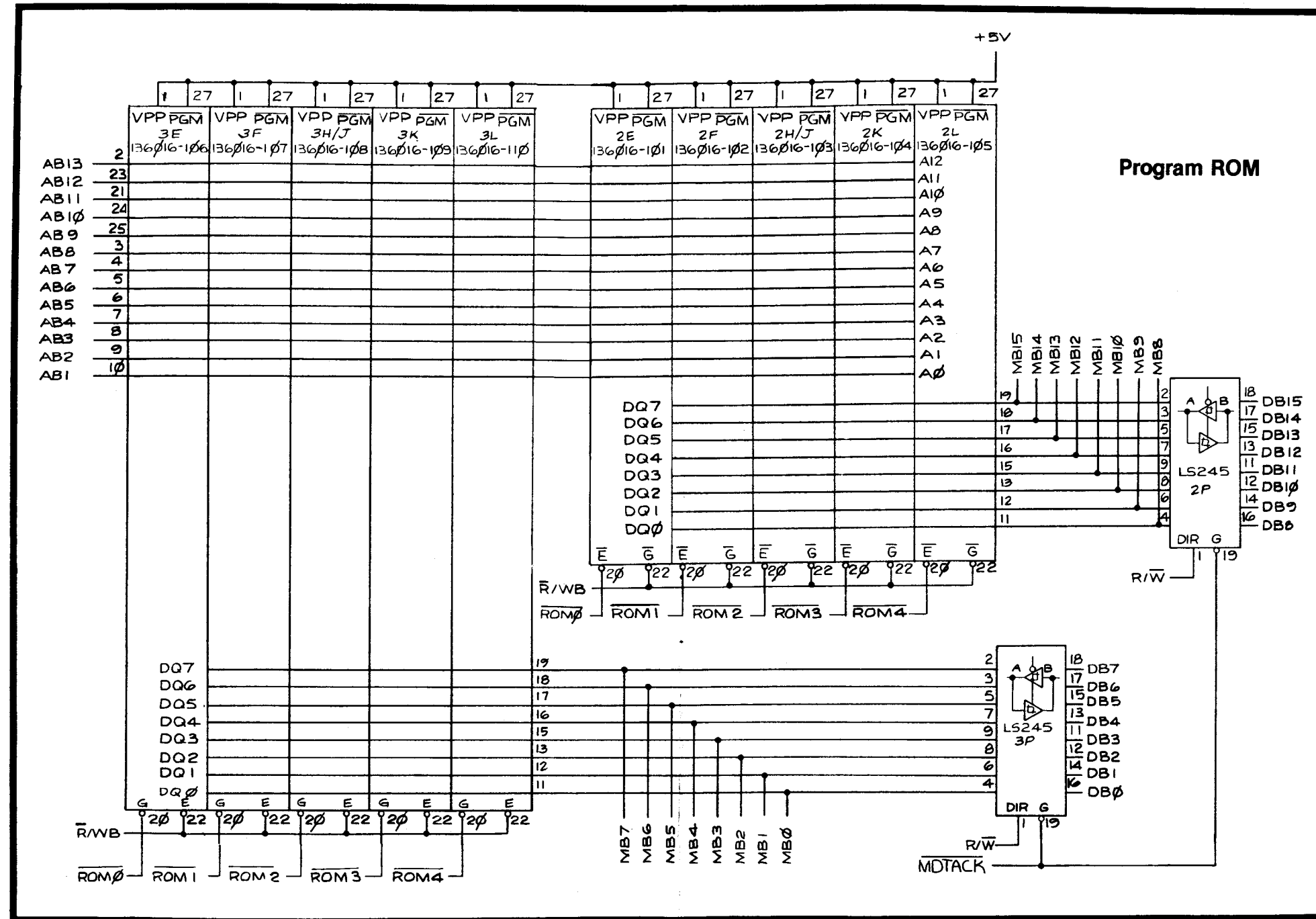
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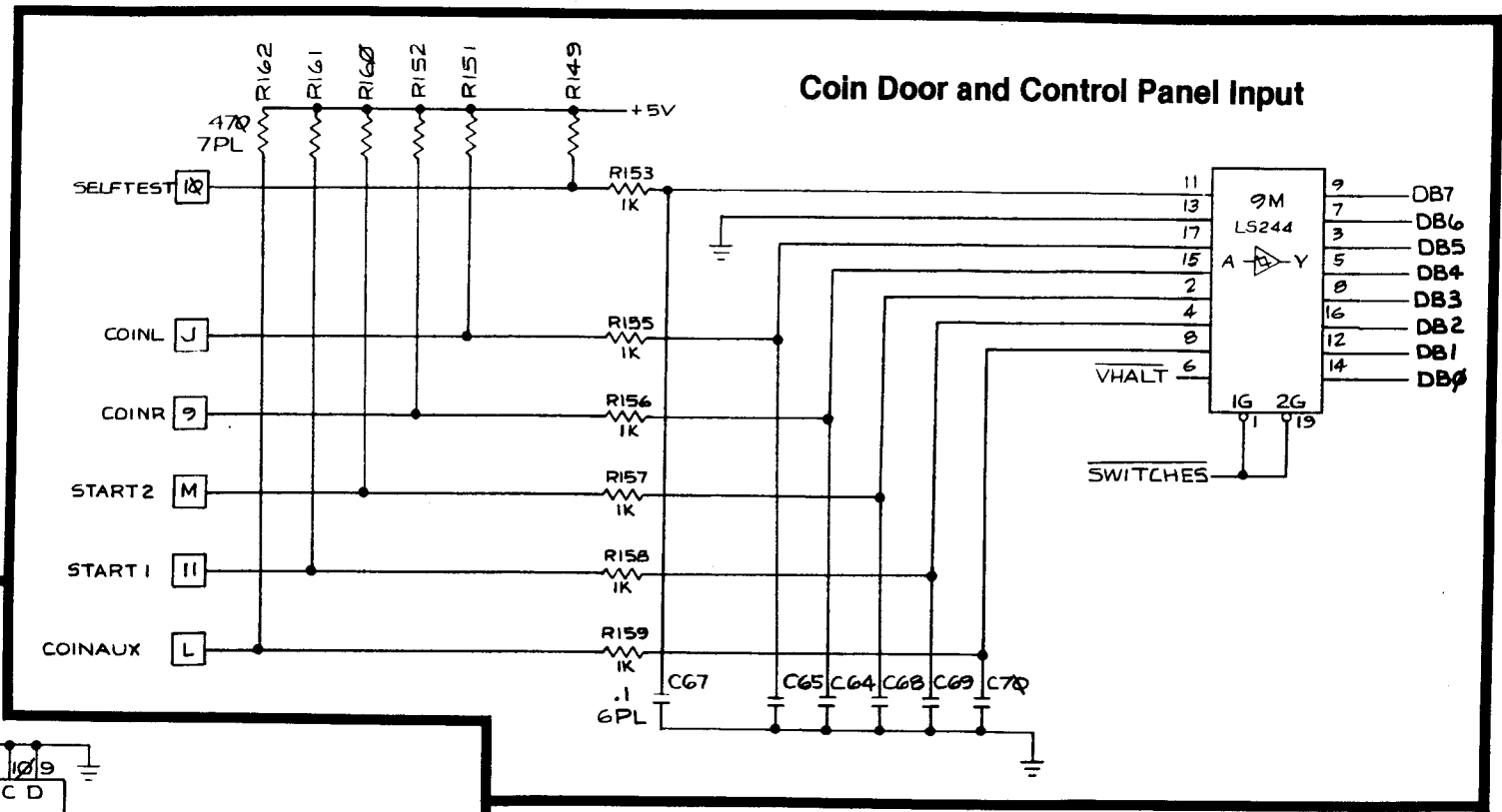
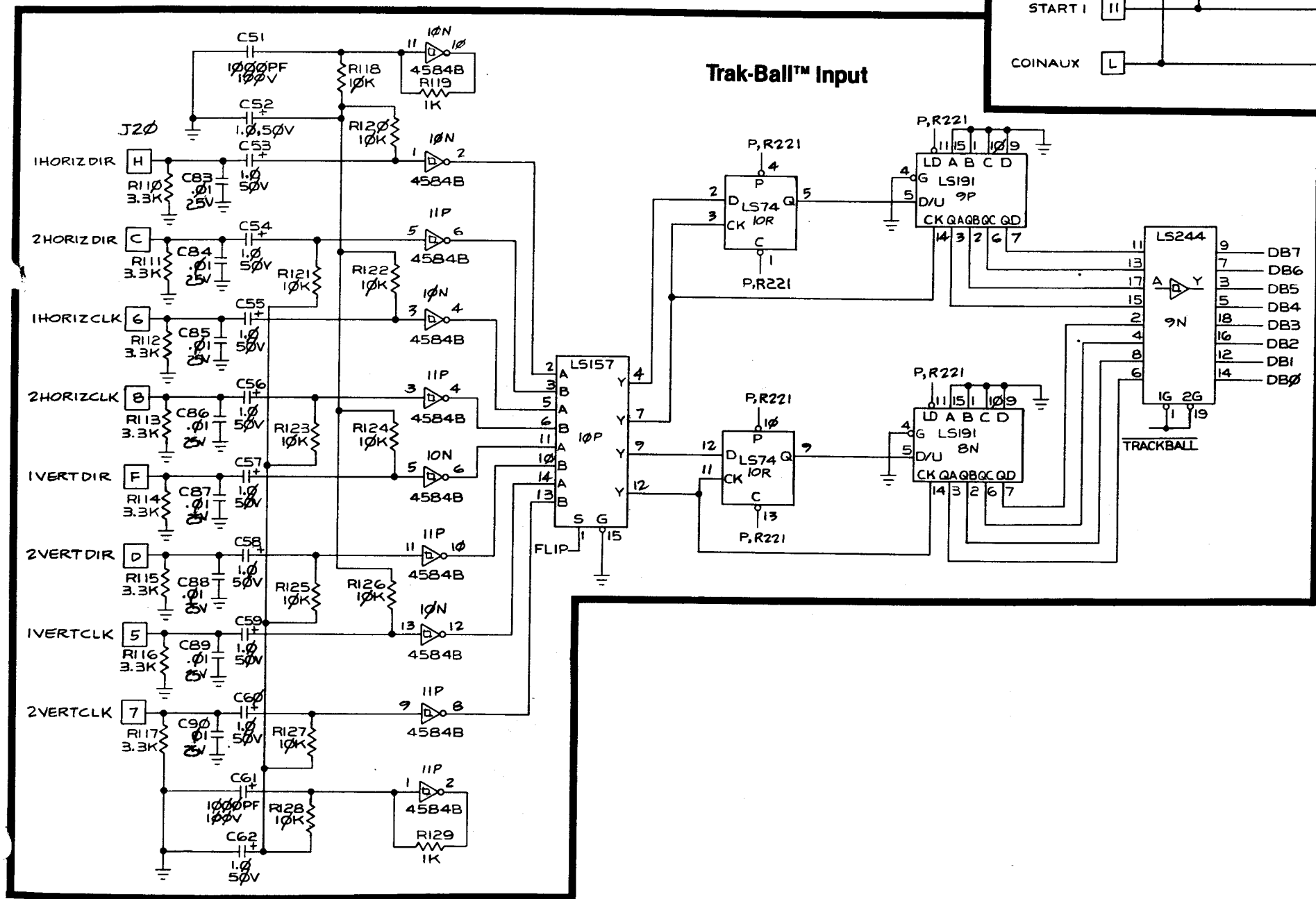



Program ROM



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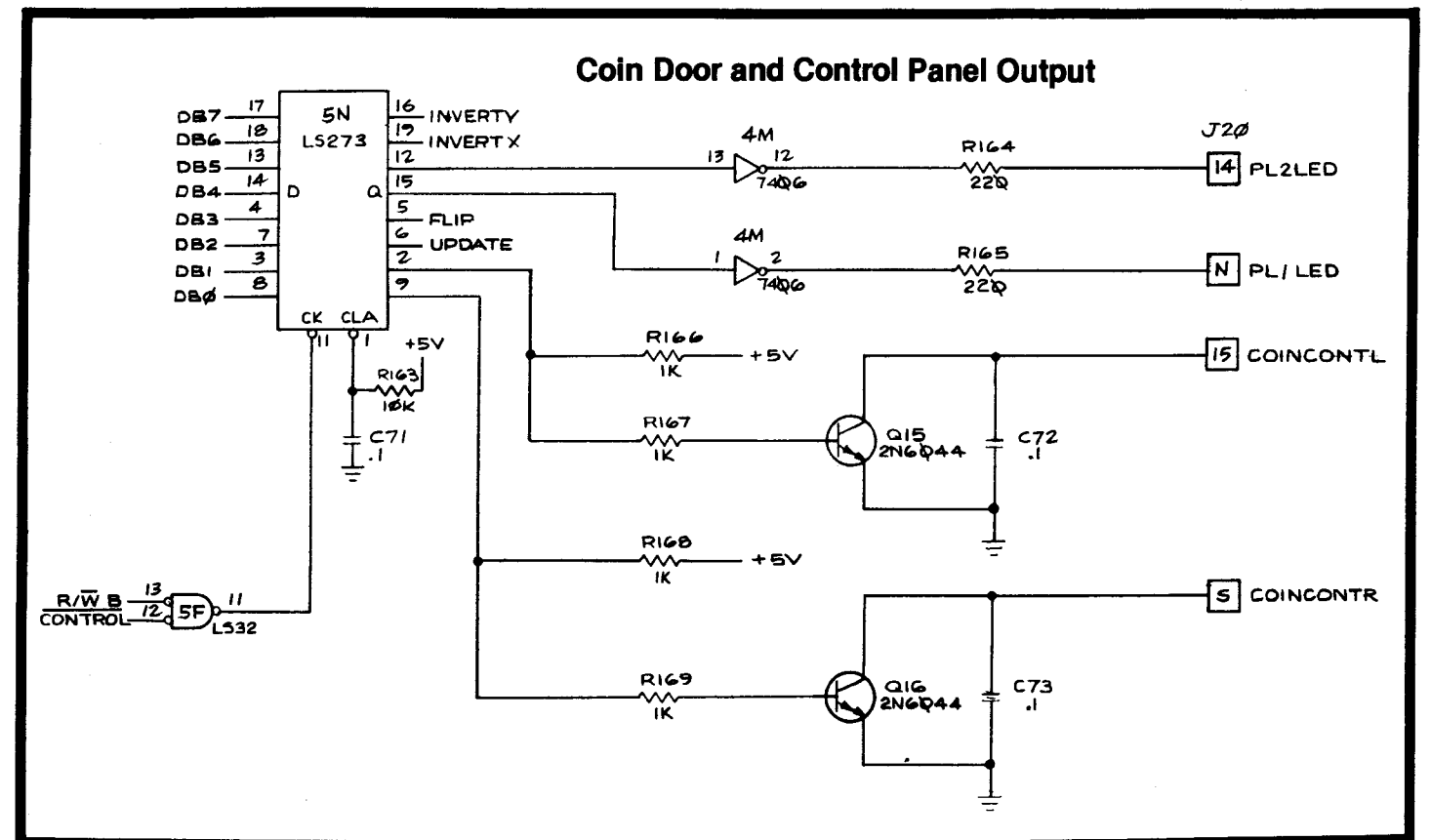
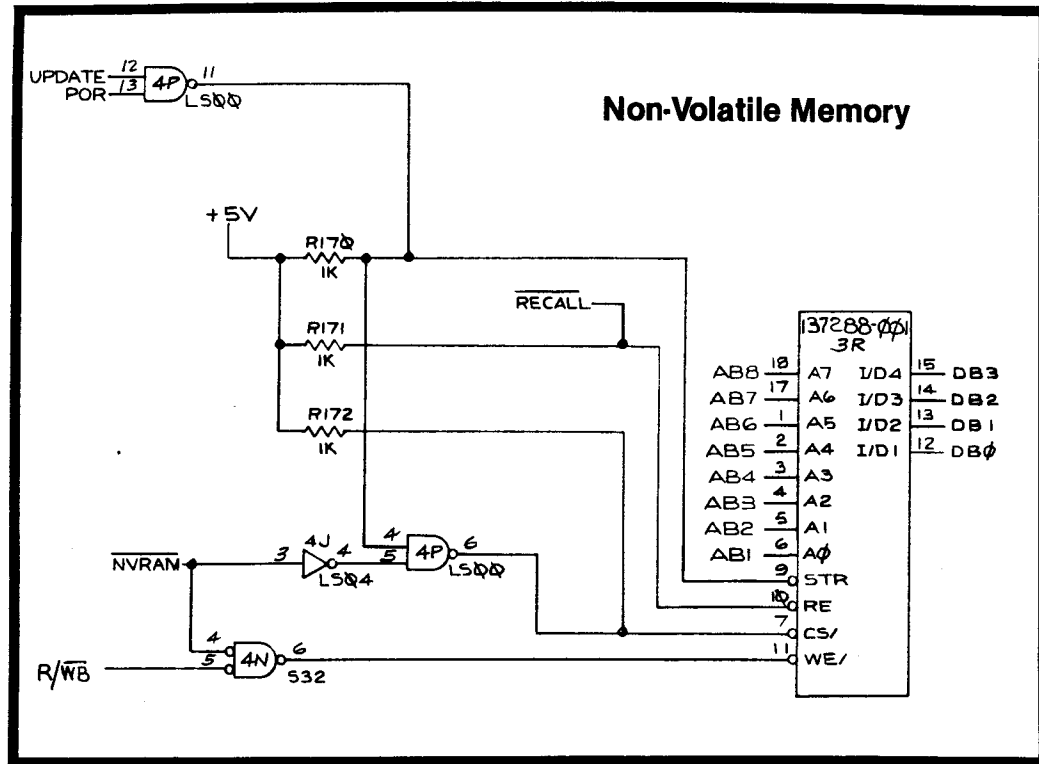
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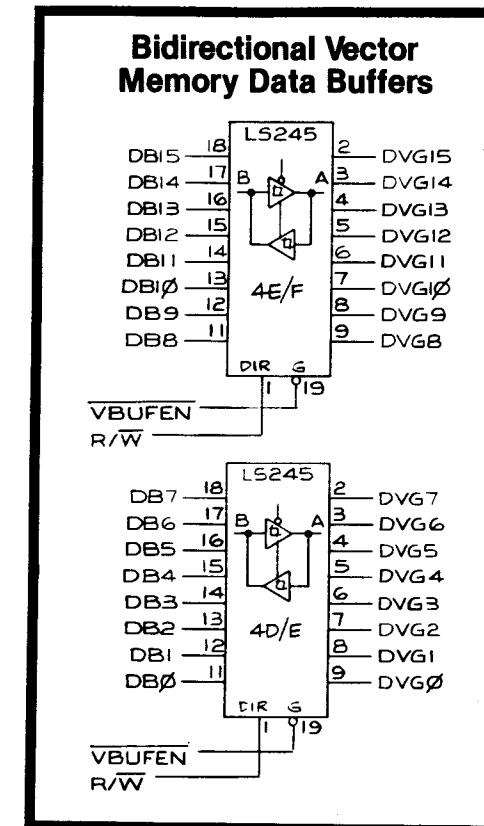
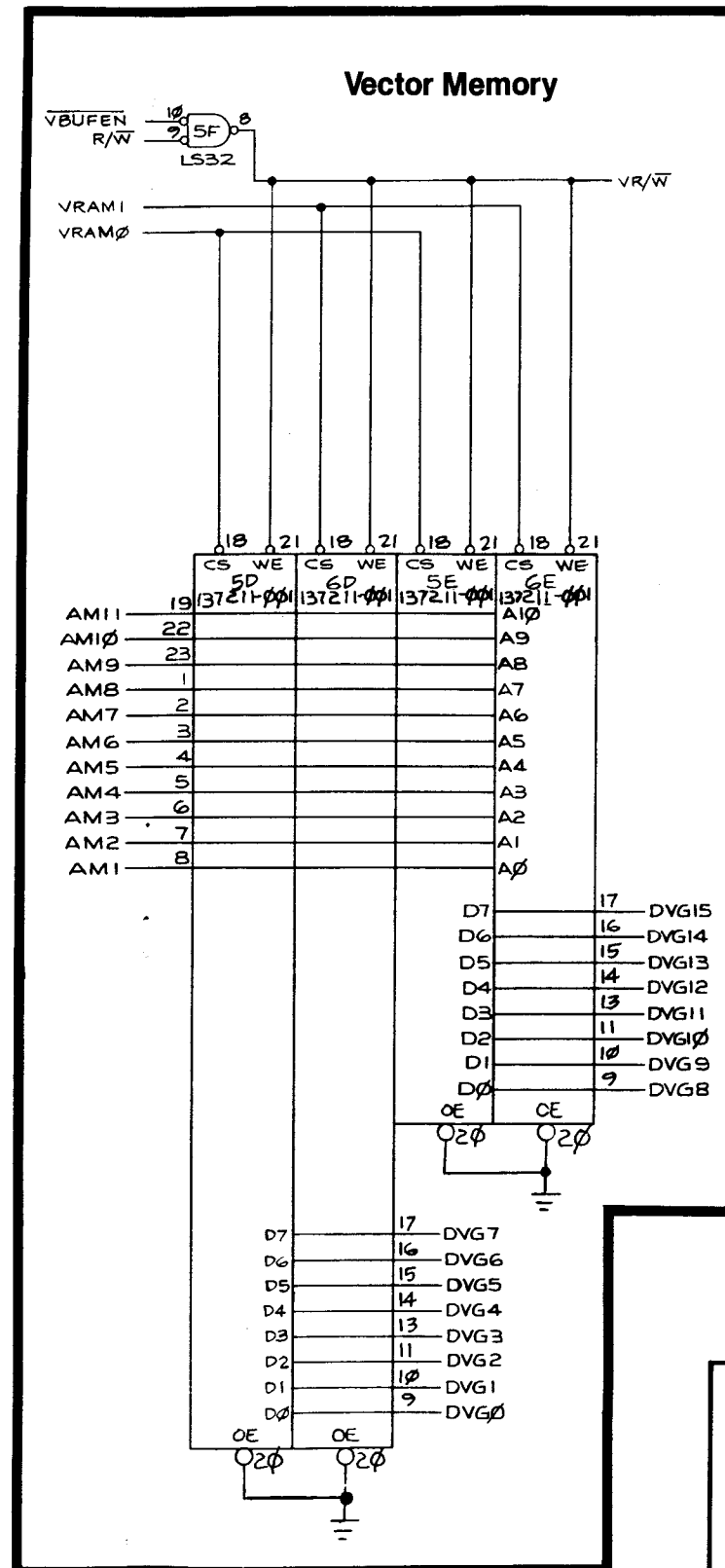
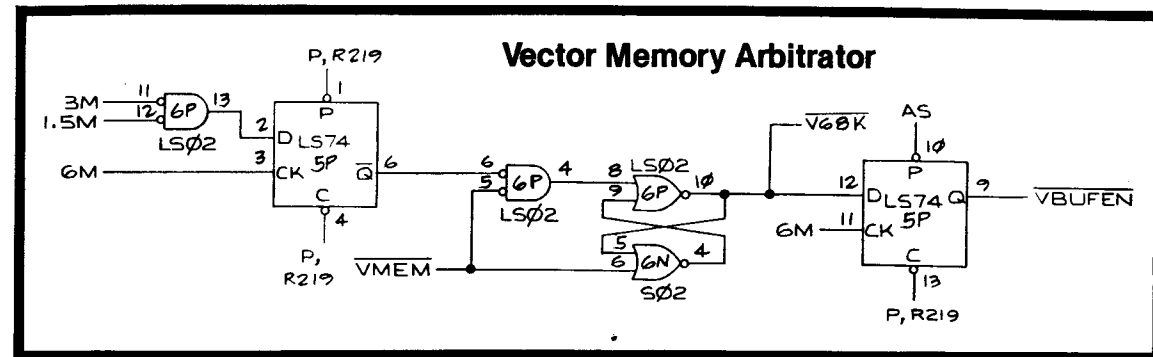
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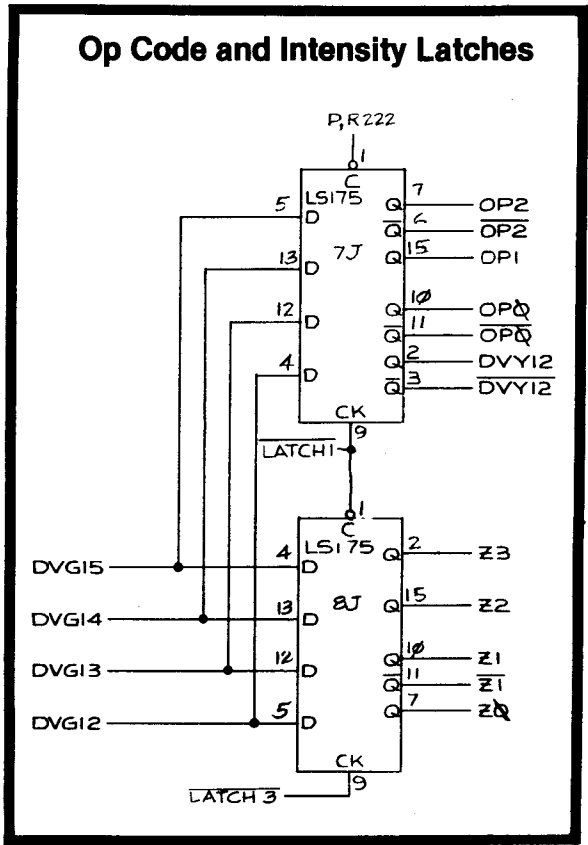
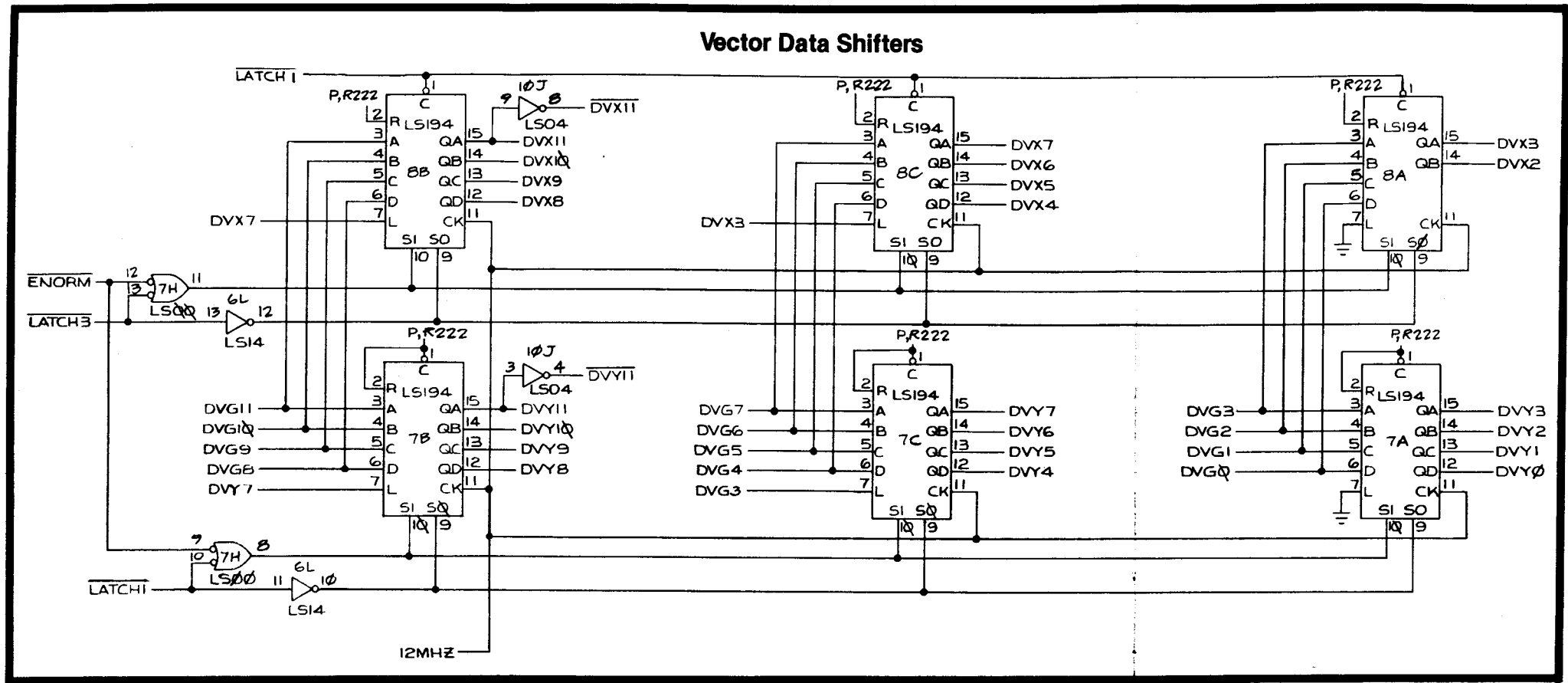




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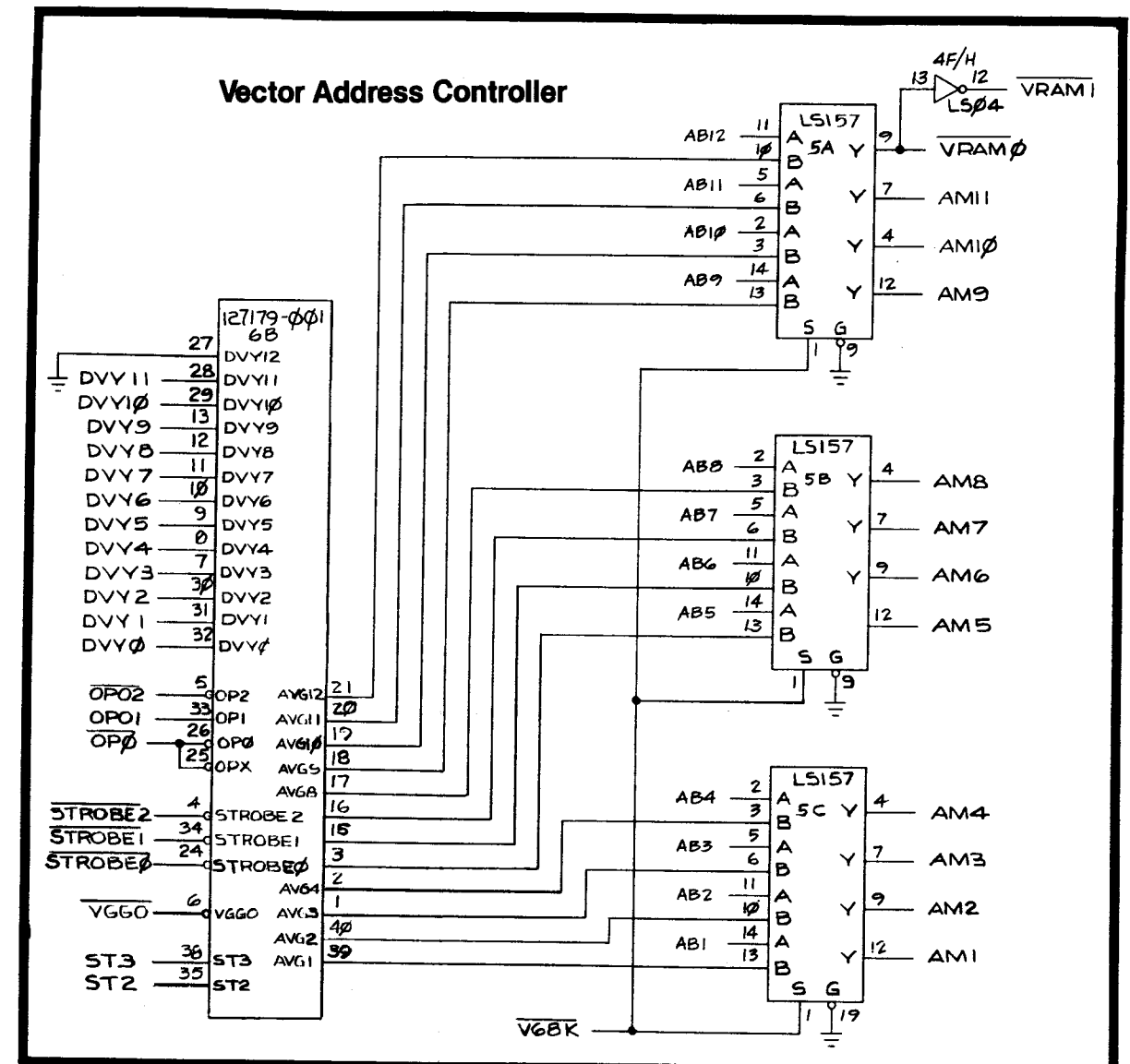
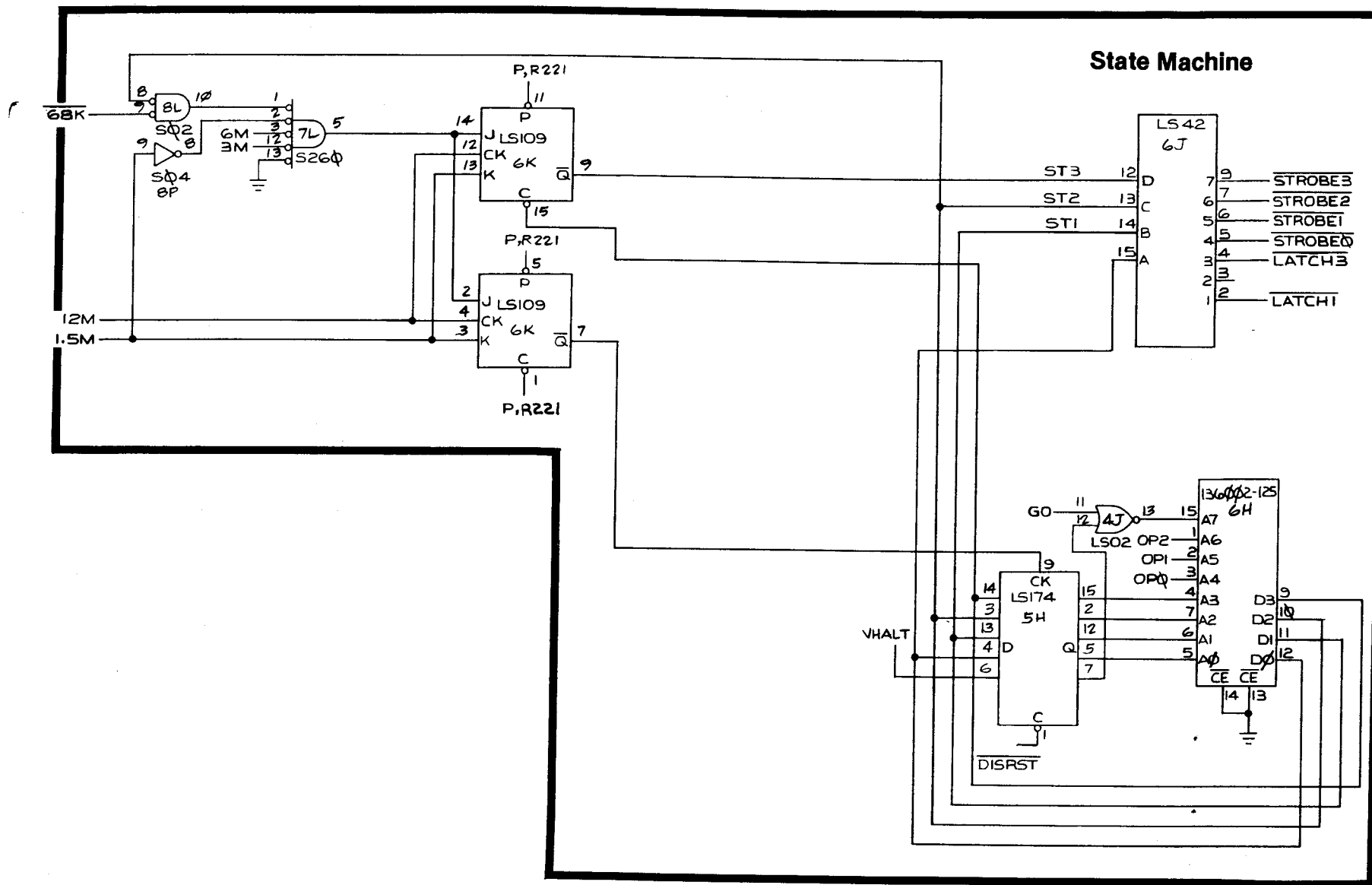
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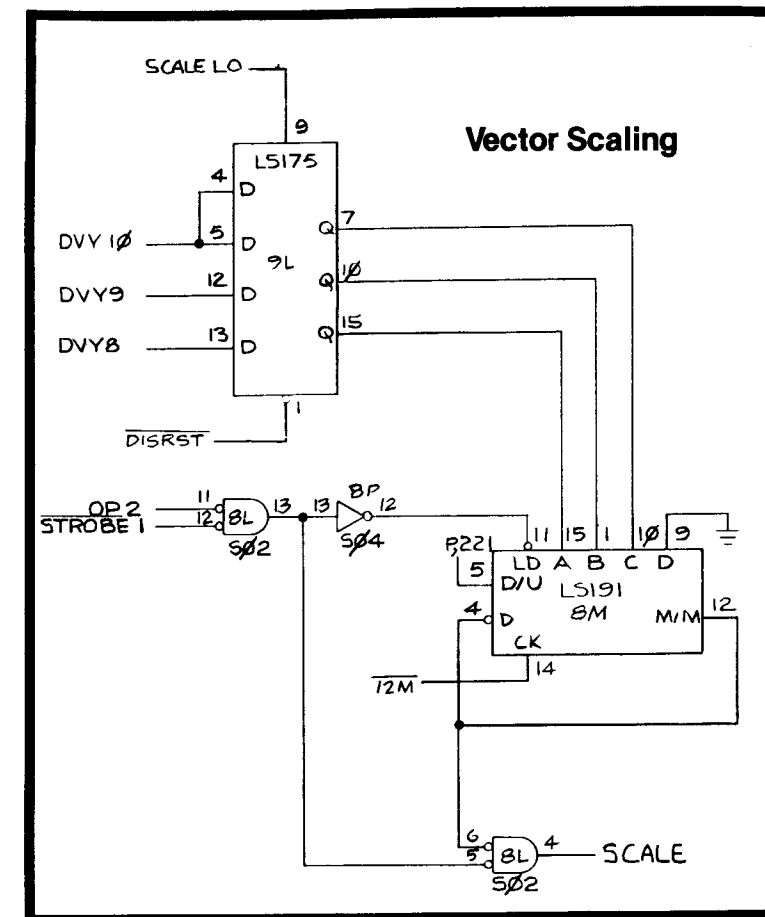
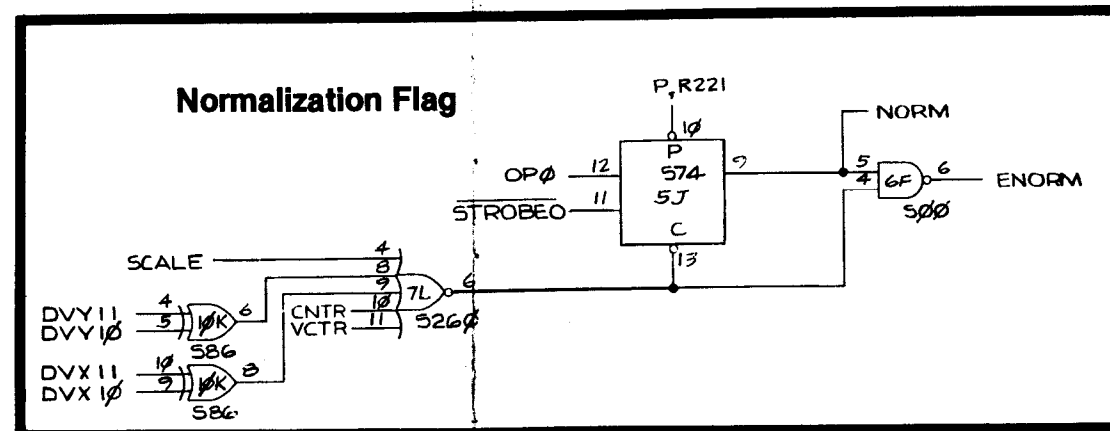
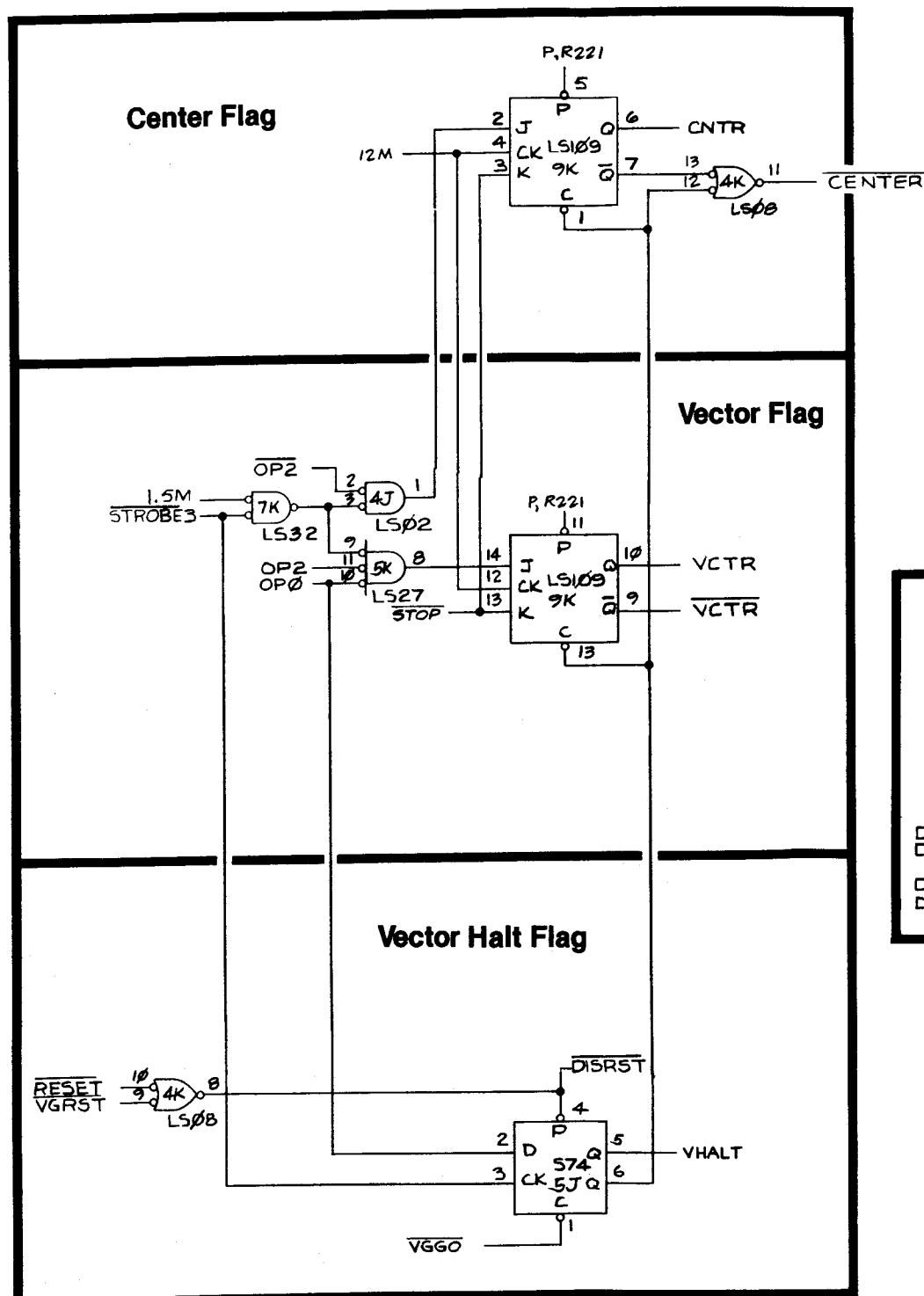
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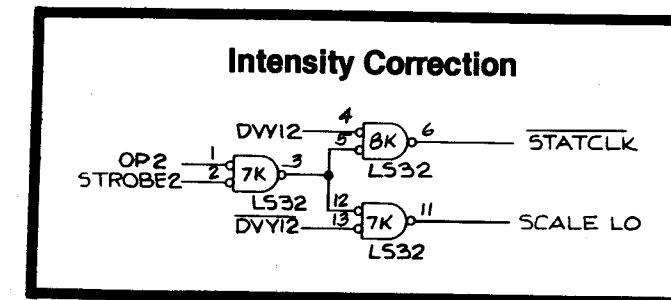
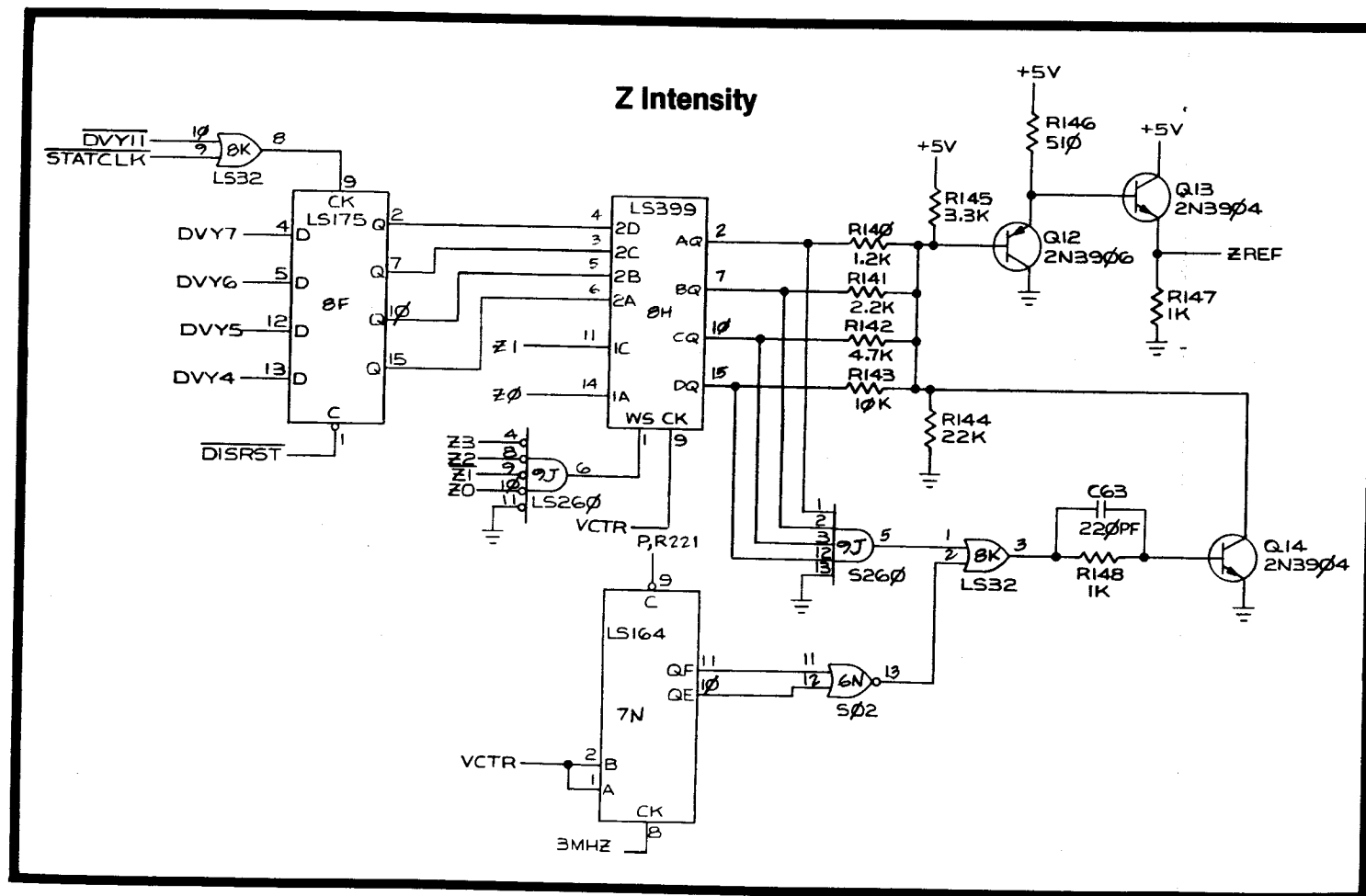
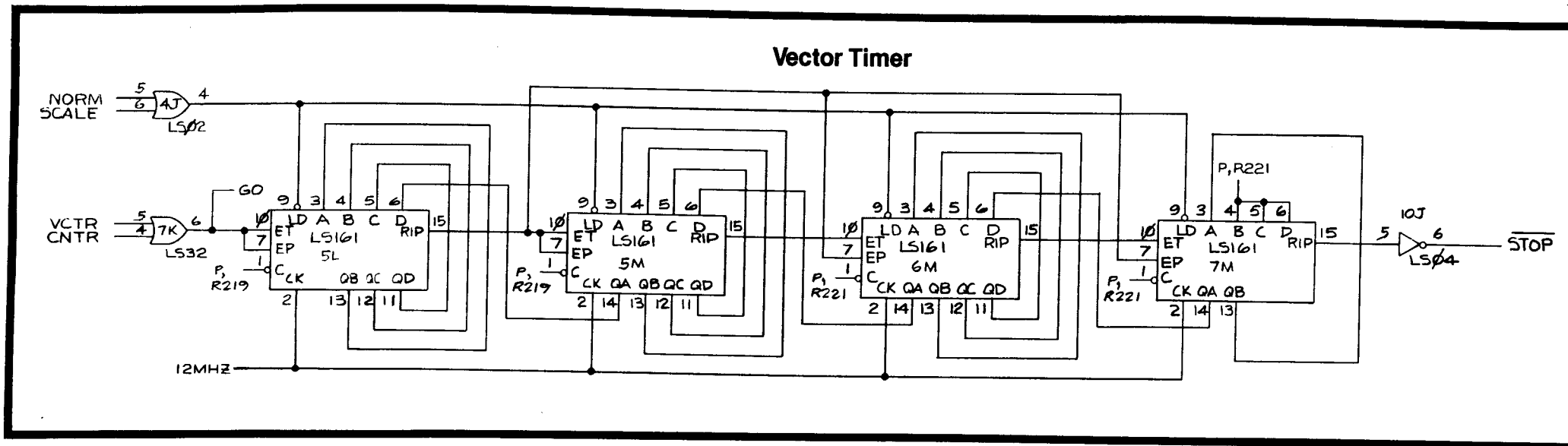
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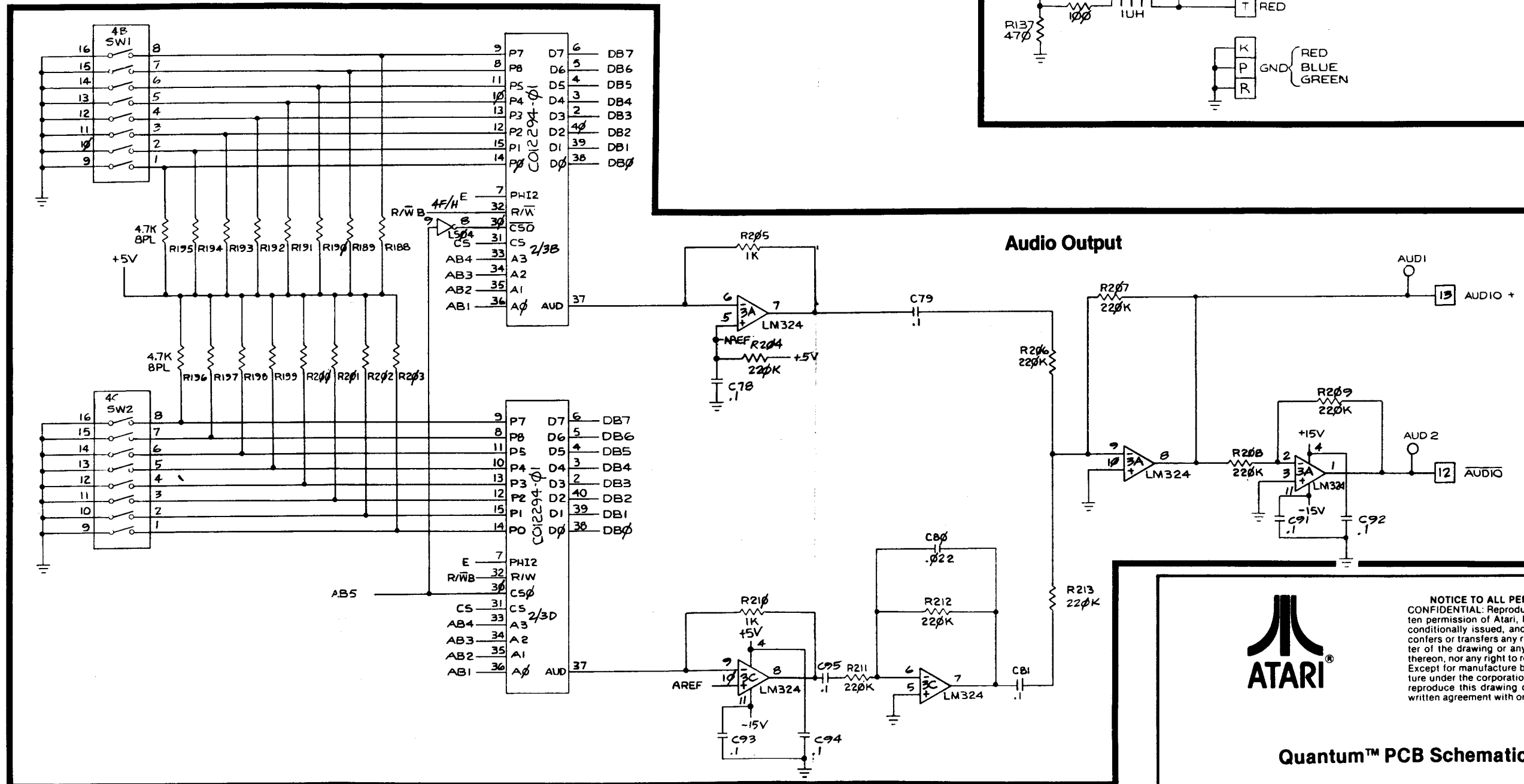
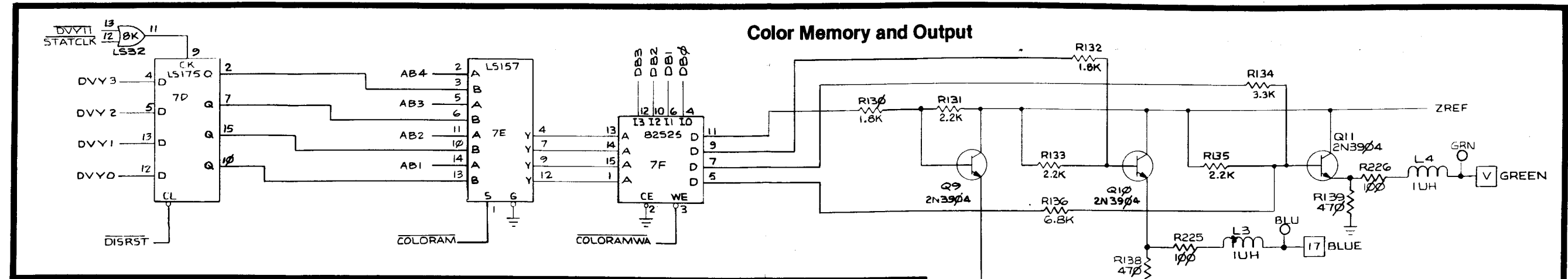
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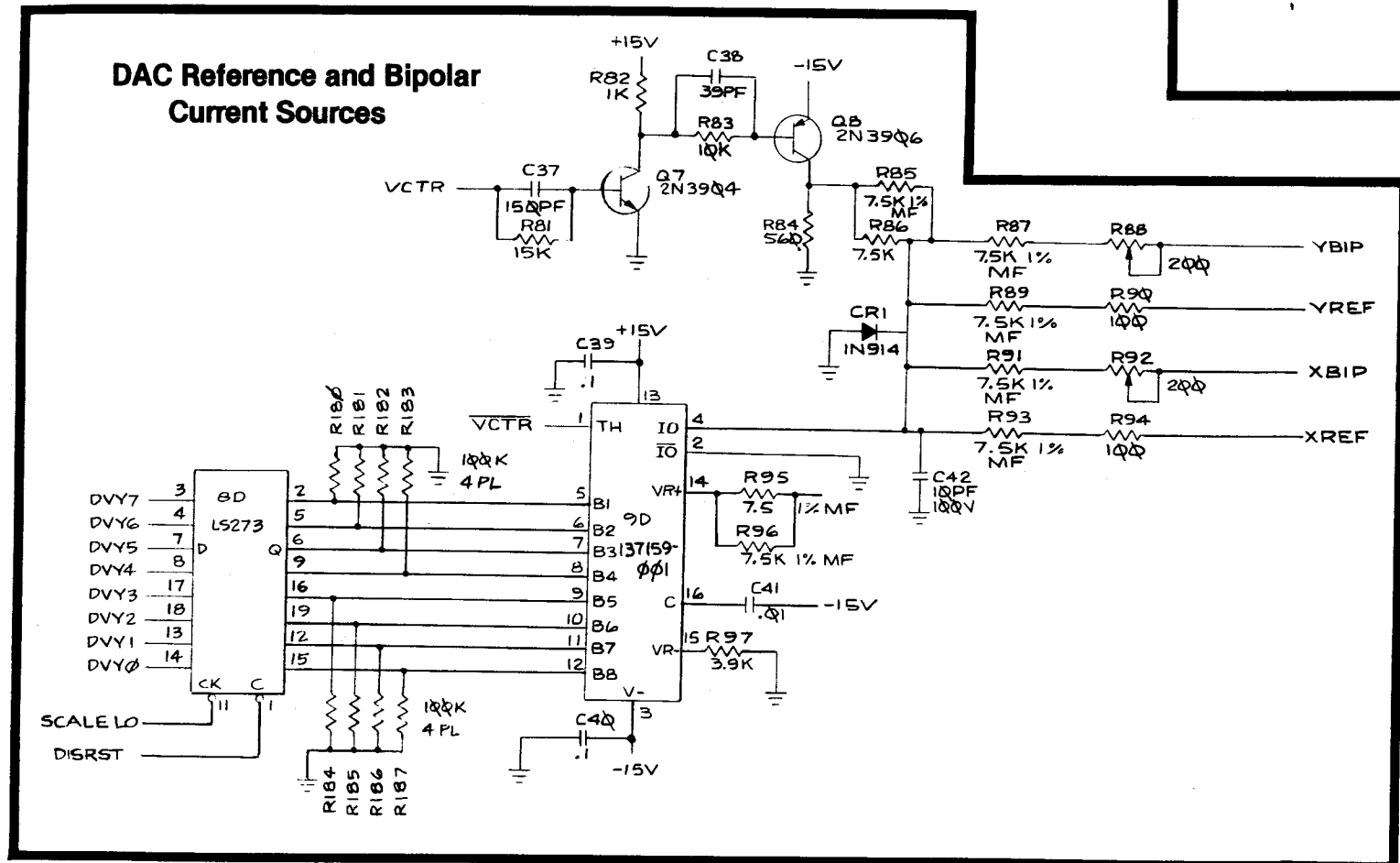
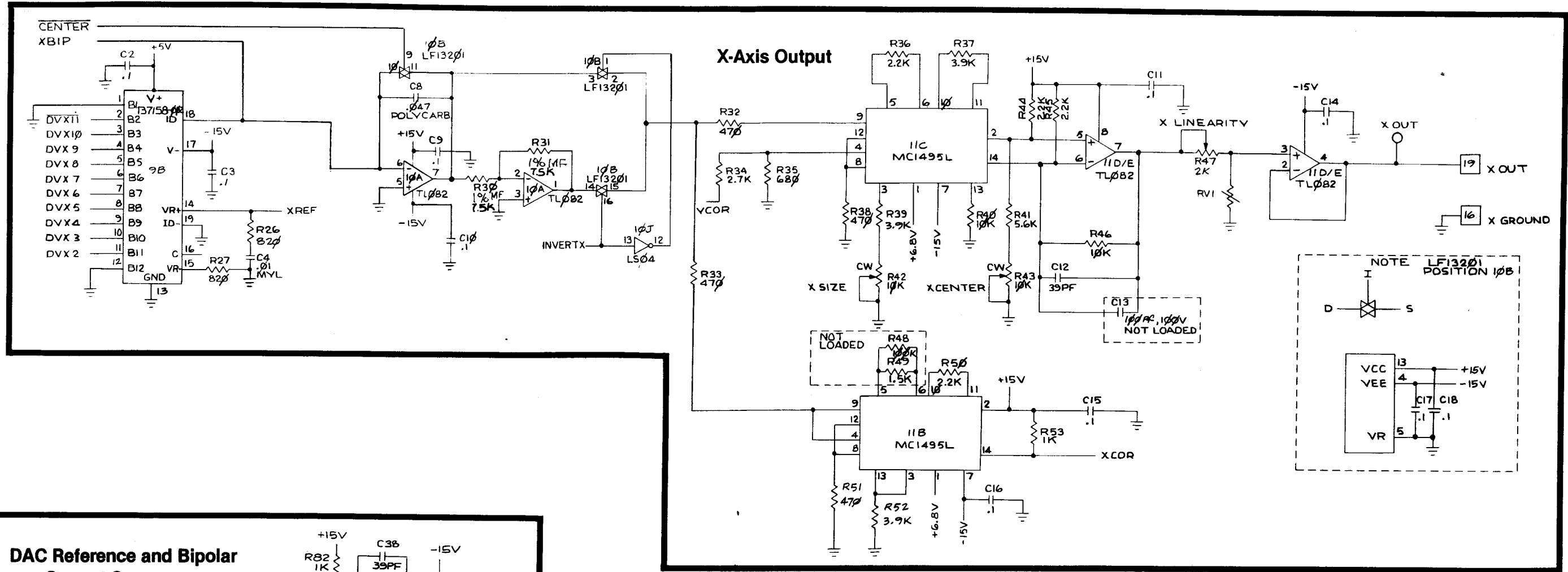


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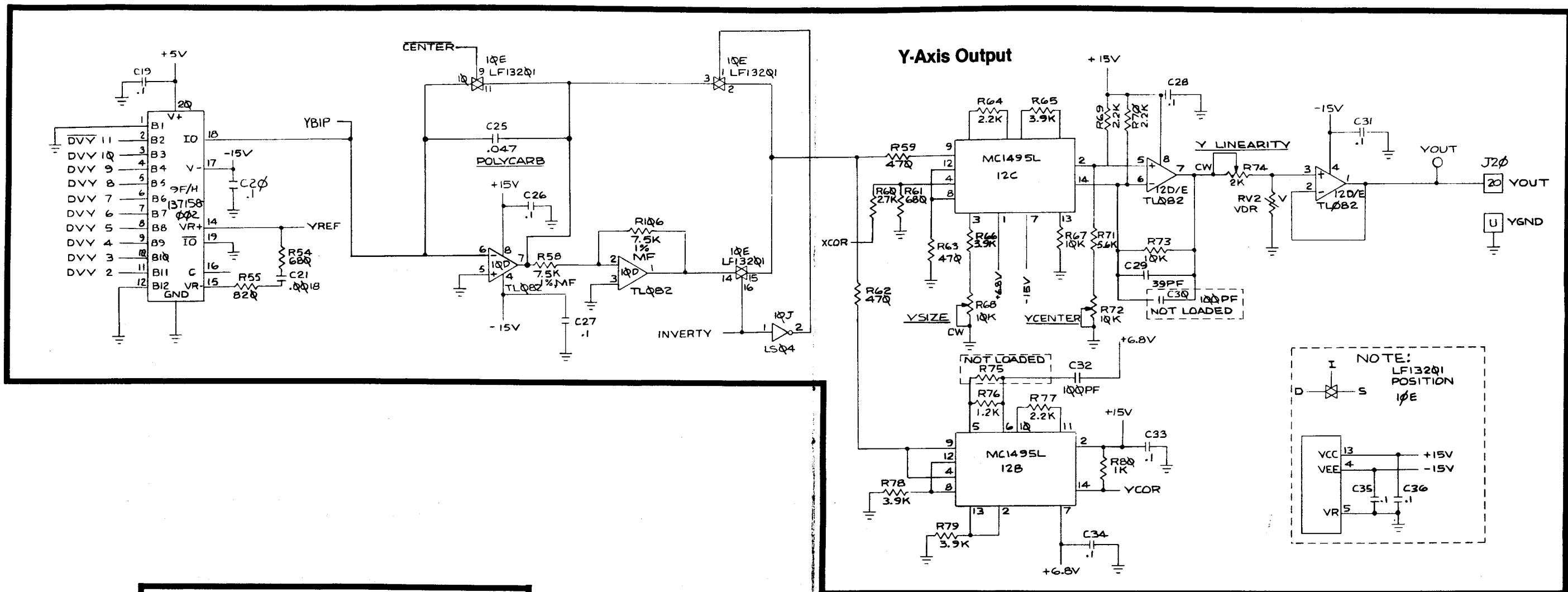
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**Adjusting the X- and Y-Axis  
Video Potentiometers**

The X- and Y-Axis potentiometers; which are X SIZE, X CENTER, X LINEARITY, Y SIZE, Y CENTER, and Y LINEARITY; are set at the factory and then sealed. These do not need to be adjusted by the game operator.



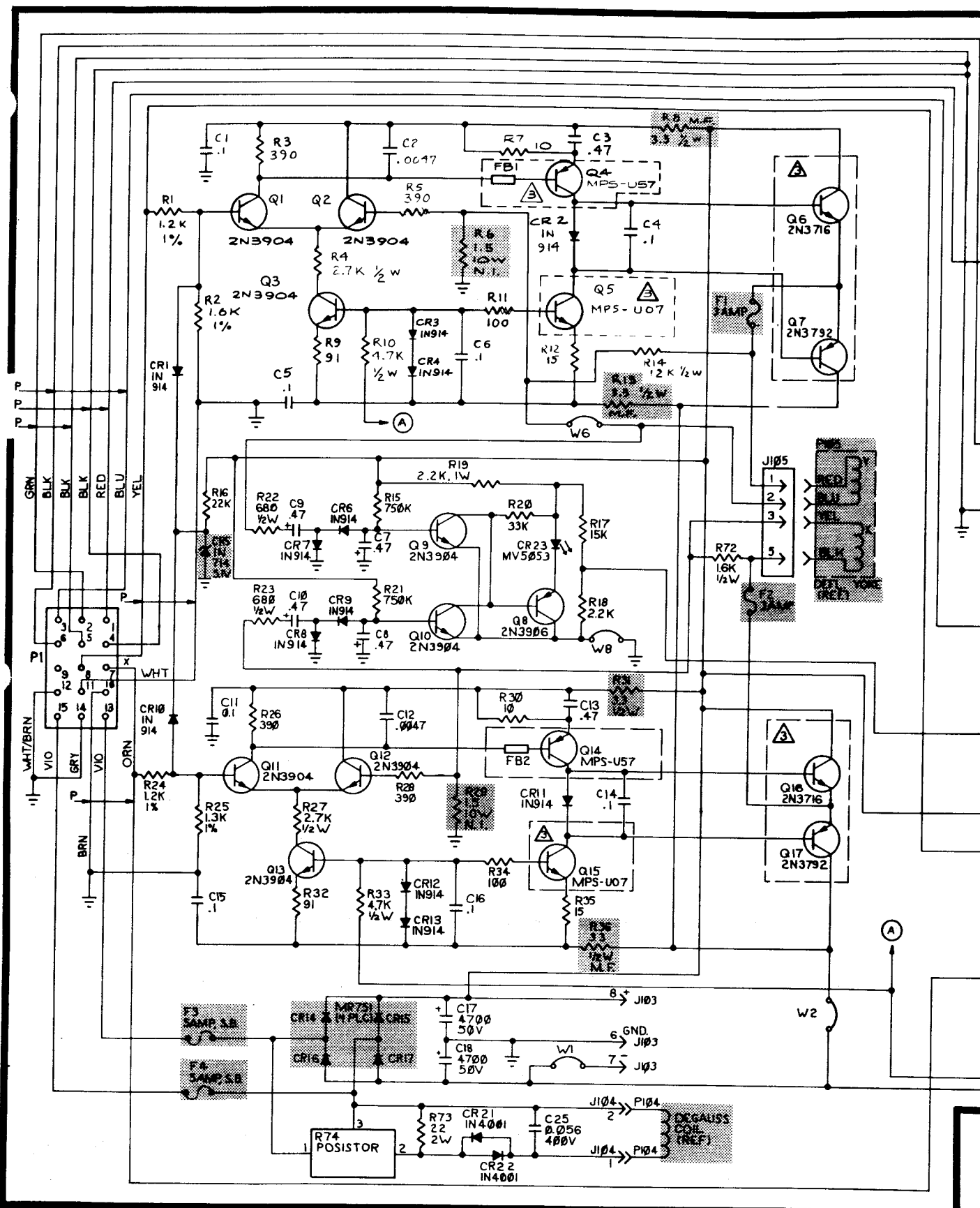
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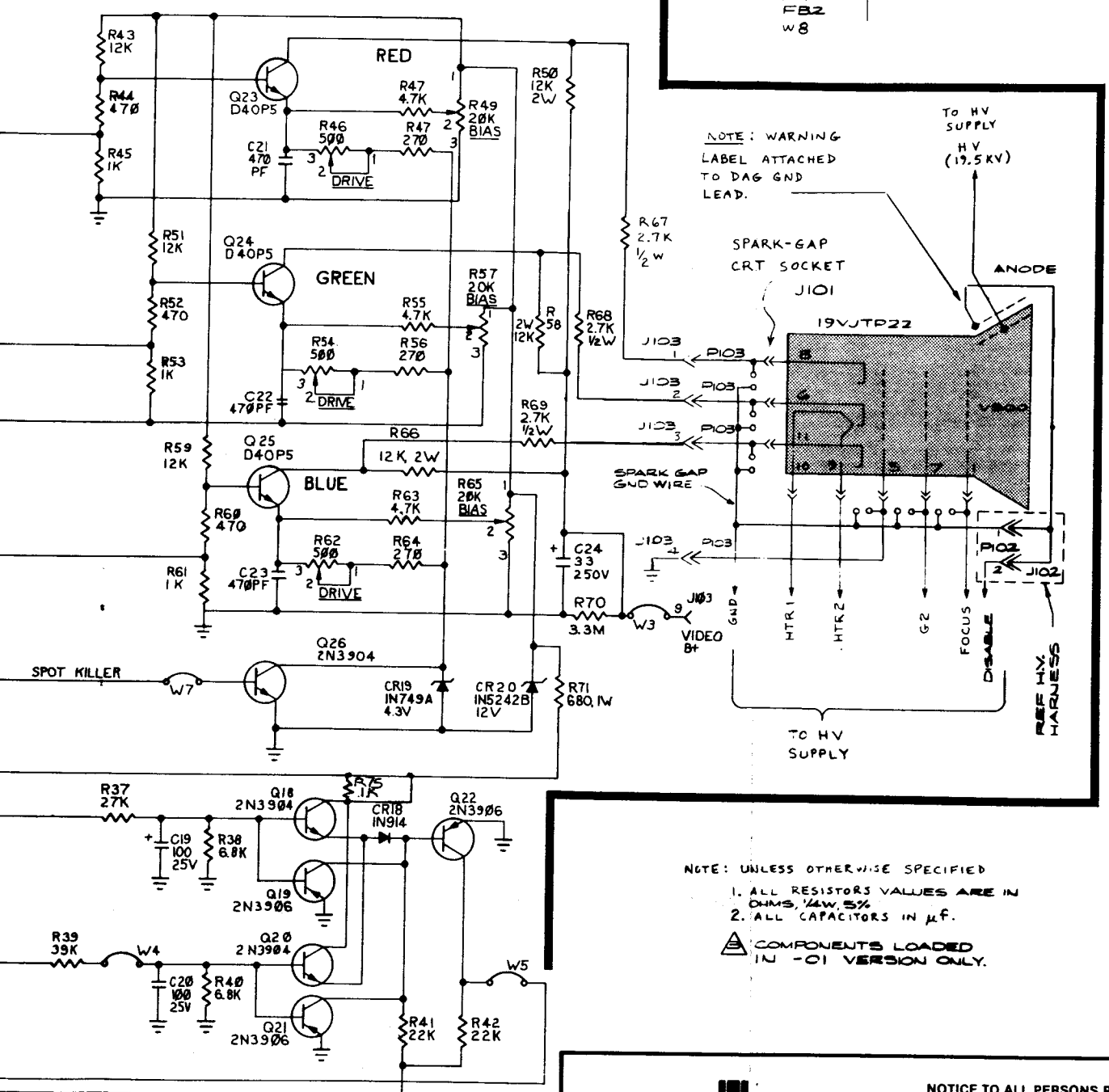
**Quantum™ PCB Schematic Diagram**

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SP-221 Sheet 10A  
 1st Printing



### Amplifone Deflection PCB



DESIGNATOR	
LAST USED	NOT USED
Q24	
Q25	
Q26	
R4	
FB2	
W8	

NOTE: WARNING LABEL ATTACHED TO DAG GND LEAD.

NOTE: UNLESS OTHERWISE SPECIFIED  
 1. ALL RESISTOR VALUES ARE IN OHMS, 1/4W, 5%  
 2. ALL CAPACITORS IN μF.  
 ⚠ COMPONENTS LOADED IN -01 VERSION ONLY.

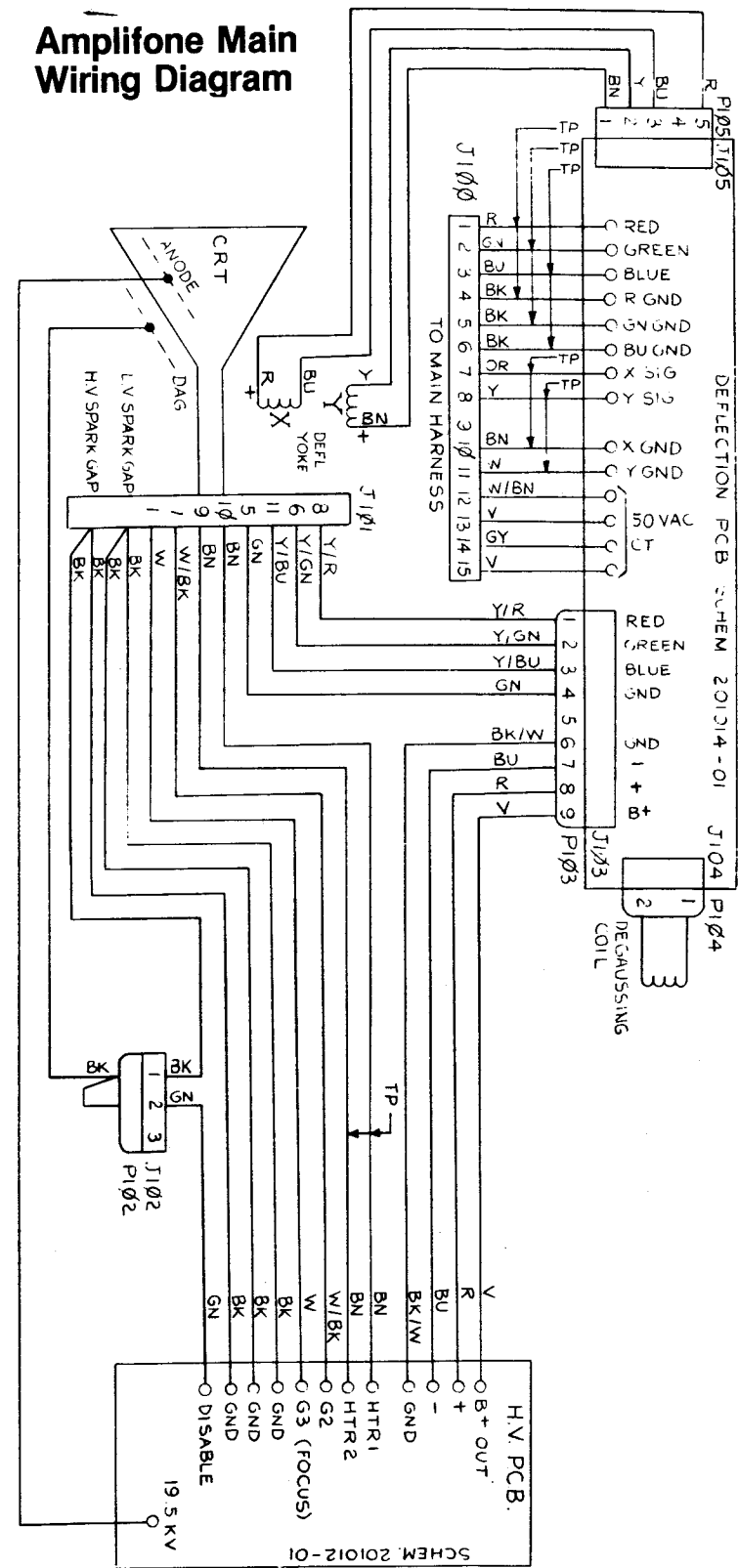
**WARNING**  
 Components identified by shading have special characteristics important to safety and should be replaced only with identical types.



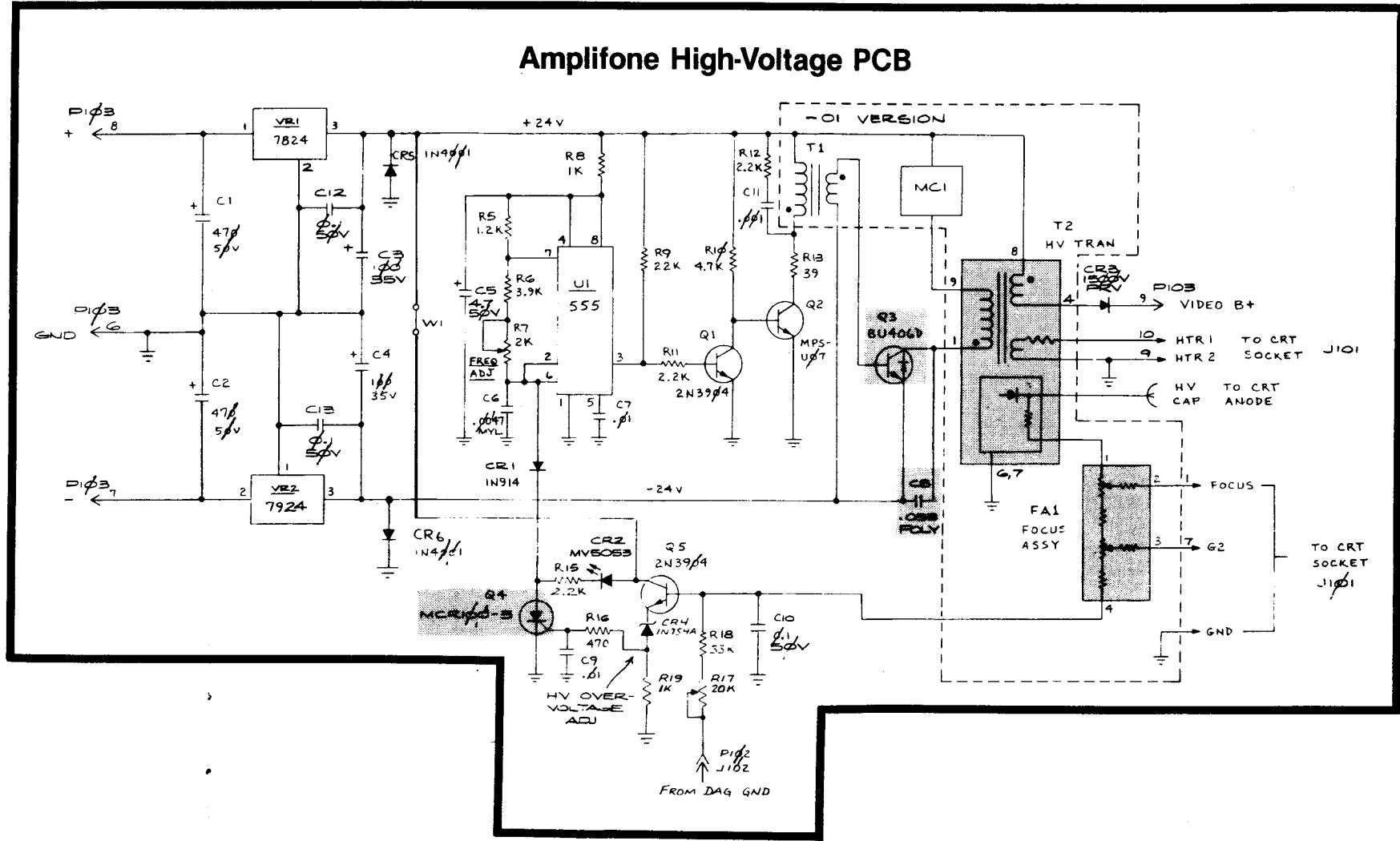
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### Amplifone Color X-Y Display Schematic

# Amplifone Main Wiring Diagram



# Amplifone High-Voltage PCB



Note: Unless otherwise specified:  
 1. All resistor values are in ohms, 1/4 W, 5%  
 2. All capacitor values are in  $\mu$ F.

**WARNING**  
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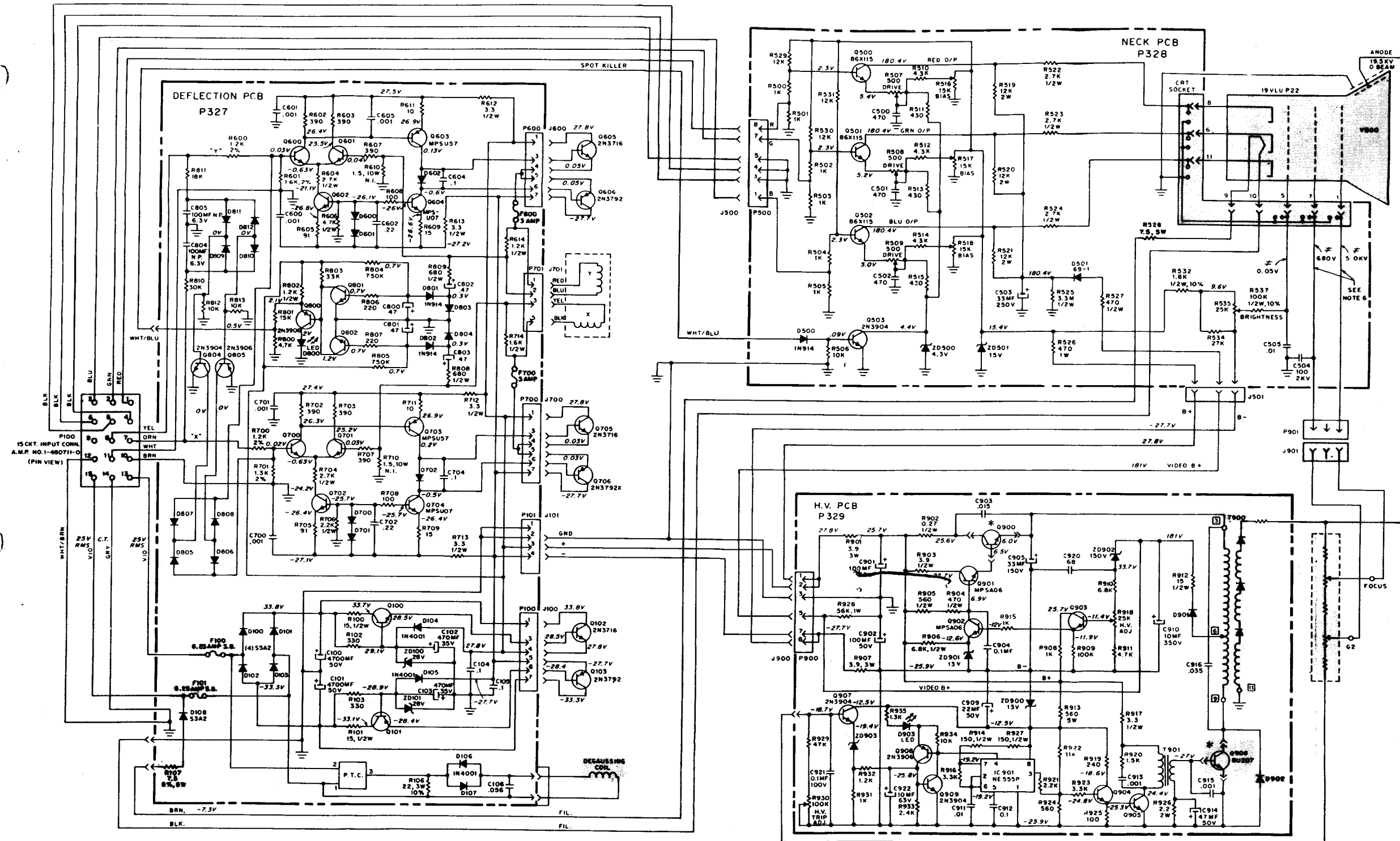
DESIGNATOR	
LAST USED	NOT USED
R19	R1-4, 14
C13	
Q5	
VR2	
T2	
FA1	
U1	
MCI	
CR6	
WI	



## Amplifone Color X-Y Display Schematic

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**GENERAL NOTES**

1. Resistance values in ohms, 1/4 watt, ±5%, unless otherwise noted. K = 1,000, M = 1,000,000
2. Capacitance value of 1 or less is in microFarads, above 1 in picoFarads, unless otherwise noted.
3. \* Q900 and Q906 are not in High-Voltage PCB.
4. All D.C. voltages are ±10% measured from point indicated to ground, using a high-impedance meter. Voltages are measured with no signal input and controls are in a normal operating position.
5. Circled numbers indicate location of waveform reading.
6. ZD100-101 uses (66X0040-007) zener diode in series with (340X2331-934) 330-ohm resistor in early production models.
7. Use a 1,000:1 probe when measuring G2 (screen) or focus voltage.



**Wells Gardner  
 Color X-Y Display Schematic Diagram**

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