

# APB™ Schematic Package

## Supplement to the Operators Manual

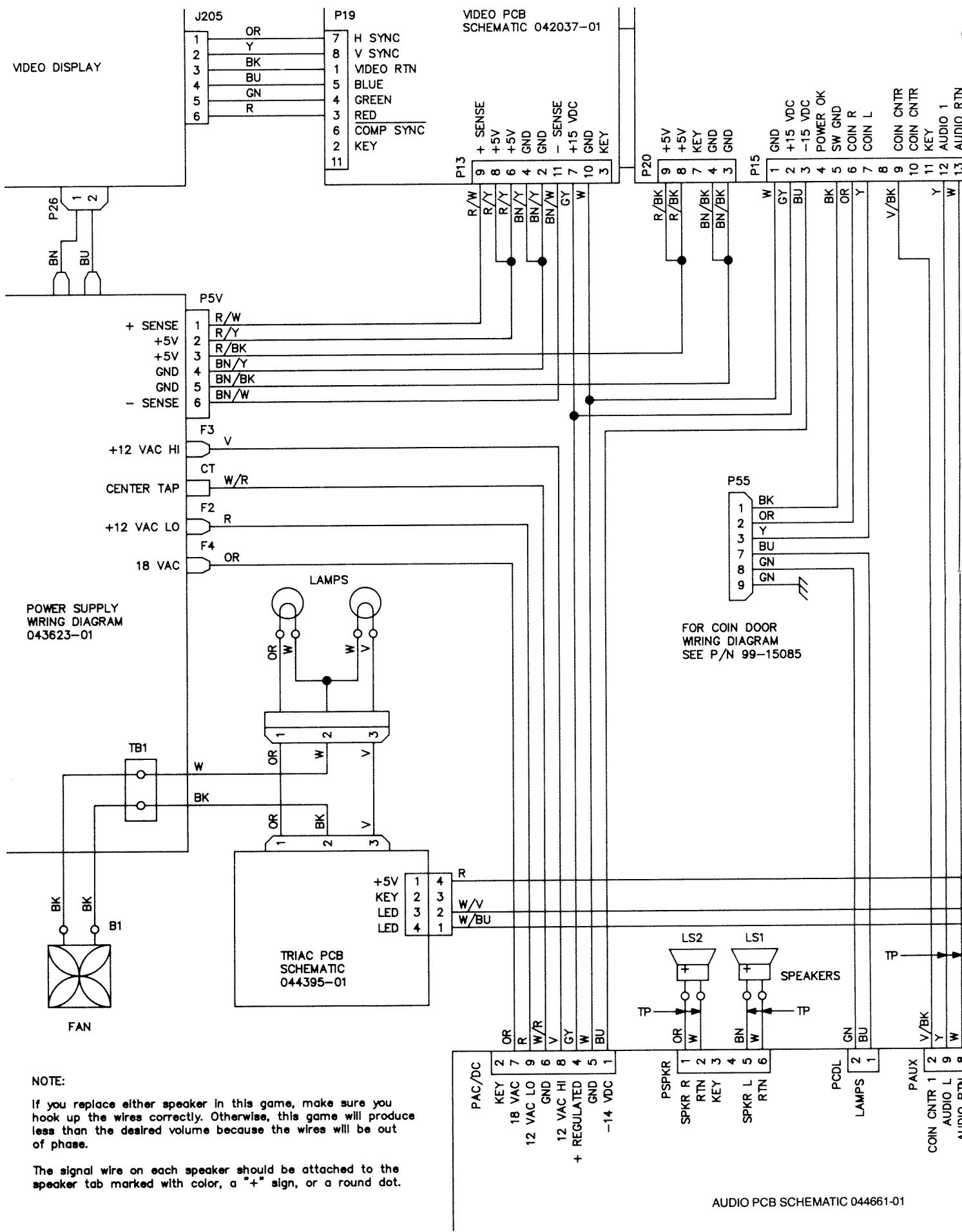


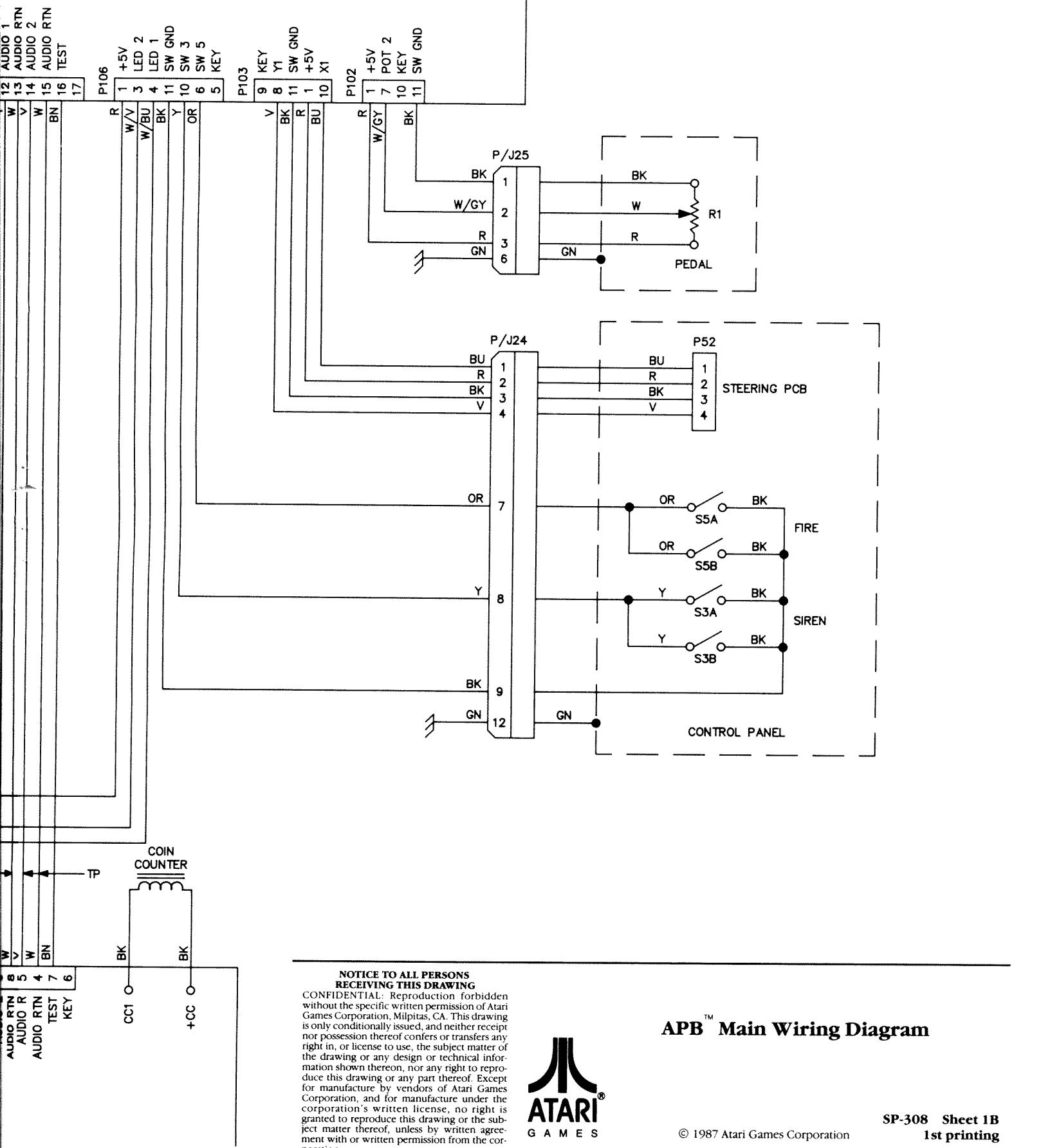
**NOTE:**  
This staple temporarily holds the schematic package together. Remove the staple before using these schematics.

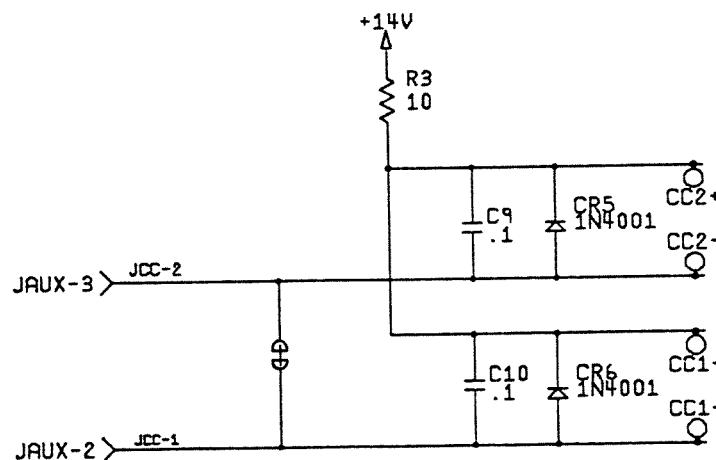
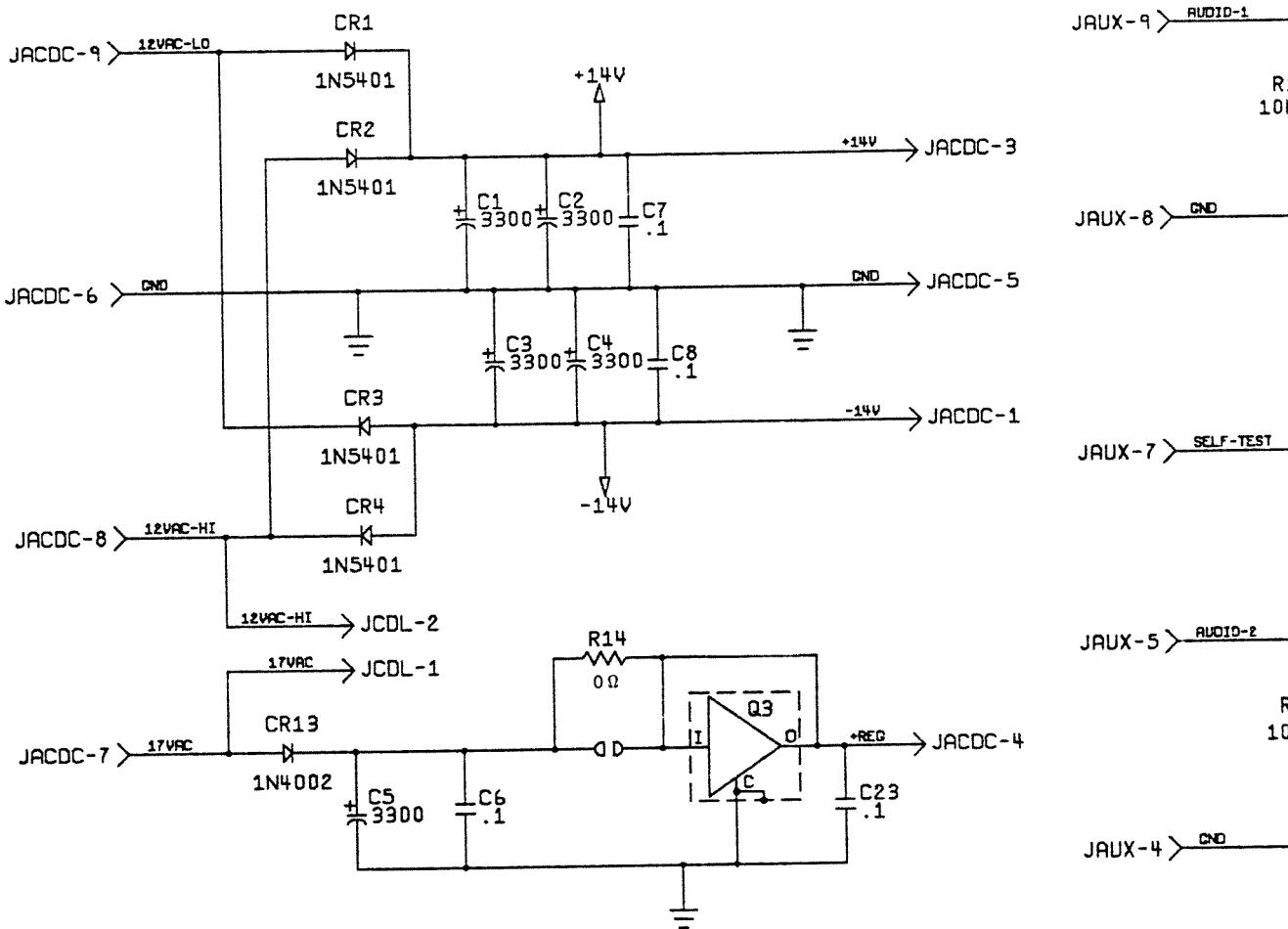
# Table of Contents

APB™ Main Wiring Diagram .....	Sheet 1B
Audio II PCB Schematic Diagram .....	Sheet 2A
Switching/Linear (SL) Power Supply, Coin Door, Hitron 5V, 13A Switching Power Supply Wiring Diagrams, and Triac PCB Schematic Diagram .....	Sheet 2B
APB Main Microprocessor (T-11) Memory Map .....	Sheet 3A
APB Sound Microprocessor (6502) Memory Map .....	Sheet 3B
<b>APB CPU PCB Schematic Diagrams:</b>	
Power Input .....	Sheet 4A
Extender Socket, Mode Register, T-11 Clock, Clock Stretching, Interrupt Logic, T-11 Microprocessor, and Address Latches .....	Sheet 4B
Address Decoders, 6502 Microprocessor Communication Flags .....	Sheet 5A
Paged Program ROM, Reset and Watchdog Clear .....	Sheet 5B
6502 Microprocessor Communication Latches, Fixed Program ROM, Zero-Page RAM, Control Panel Inputs .....	Sheet 6A
CPU/Video Buffers, Clock and Control Signals .....	Sheet 6B
6502 Microprocessor, Program Memory, Zero Page RAM and EEROM, Address Decoding .....	Sheet 7A
A/D Converter, Address Decoding, Coin Counters, LED Drivers .....	Sheet 7B
Coin Door and Status Inputs, Speech, Music, Power Connections .....	Sheet 8A
Audio Output Drivers, Sound Effects Option Switches, Steering Wheel Inputs .....	Sheet 8B

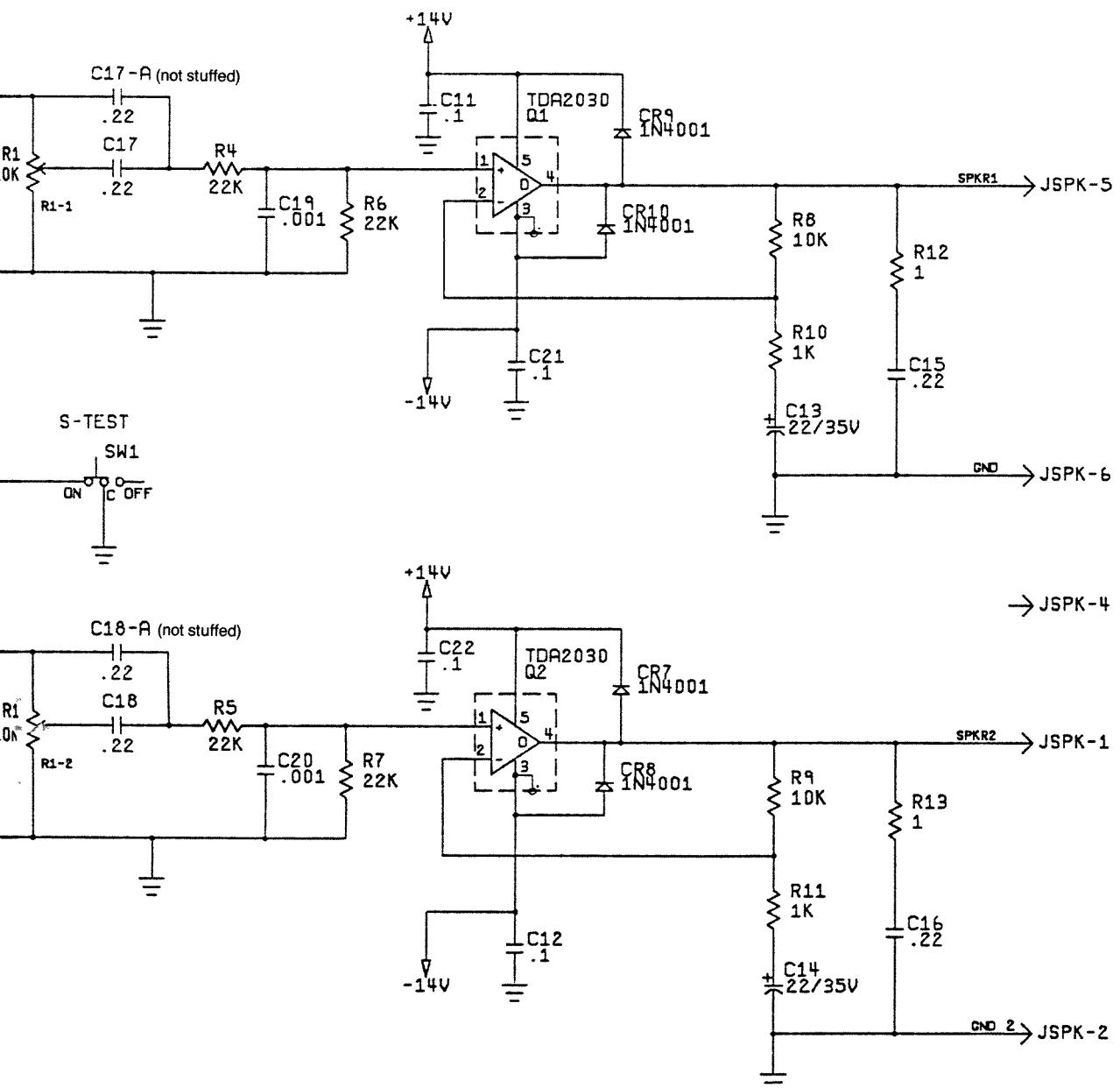
<b>APB Video PCB Schematic Diagrams:</b>	
Power Input .....	Sheet 9A
Video/CPU Buffers, Address Decoding Control Signals .....	Sheet 9B
Video Clock, Sync Chain and Timing Strobes .....	Sheet 10A
Alphanumeric/Motion Object RAM .....	Sheet 10B
Motion Object ROM Addressing, Link List Address Latch .....	Sheet 11A
Alphanumeric ROM Addressing, Playfield Data Latch Strobes, Playfield Bank Select .....	Sheet 11B
Playfield RAM Addressing, Playfield Data Latches, Playfield RAM, Playfield ROM Addressing, Alphanumeric ROM .....	Sheet 12A
Motion Object ROM .....	Sheet 12B
Playfield ROM .....	Sheet 13A
Motion Object Line Buffers .....	Sheet 13B
Playfield Horizontal Scroll Registers, Playfield Vertical Scroll Registers .....	Sheet 14A
Playfield Scrolling, Prioritizing Logic .....	Sheet 14B
Color RAM, Color RAM Addressing and Data Buffers, Alphanumeric Color Palettes Selects .....	Sheet 15A
Data Latches and Blanking, Video Intensity Control and Driver Enables .....	Sheet 15B
Output Drivers .....	Sheet 16A







JAUXT-1 >



**NOTICE TO ALL PERSONS RECEIVING THIS DRAWING**  
**CONFIDENTIAL:** Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

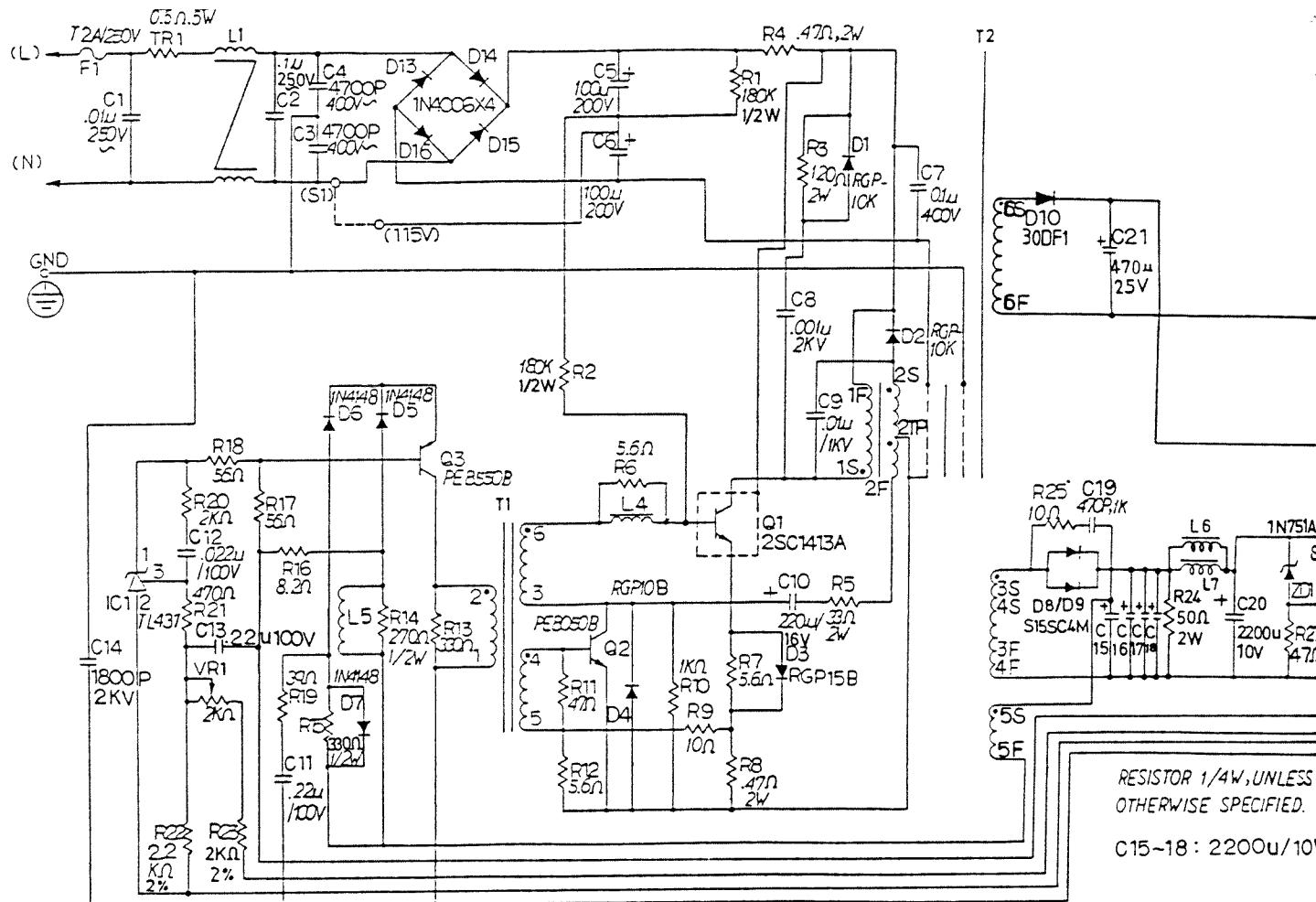
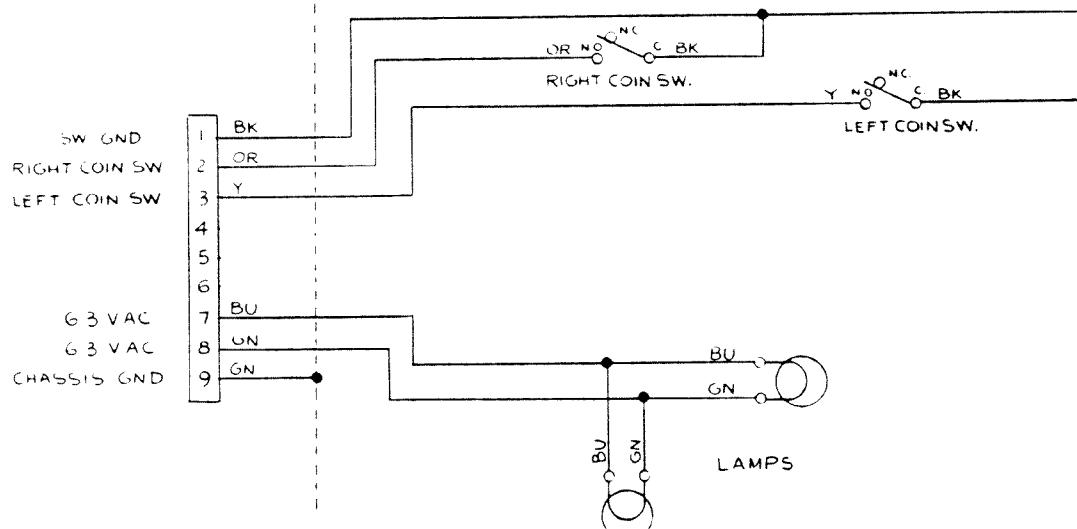
## APB™ Audio II PCB Schematic Diagram



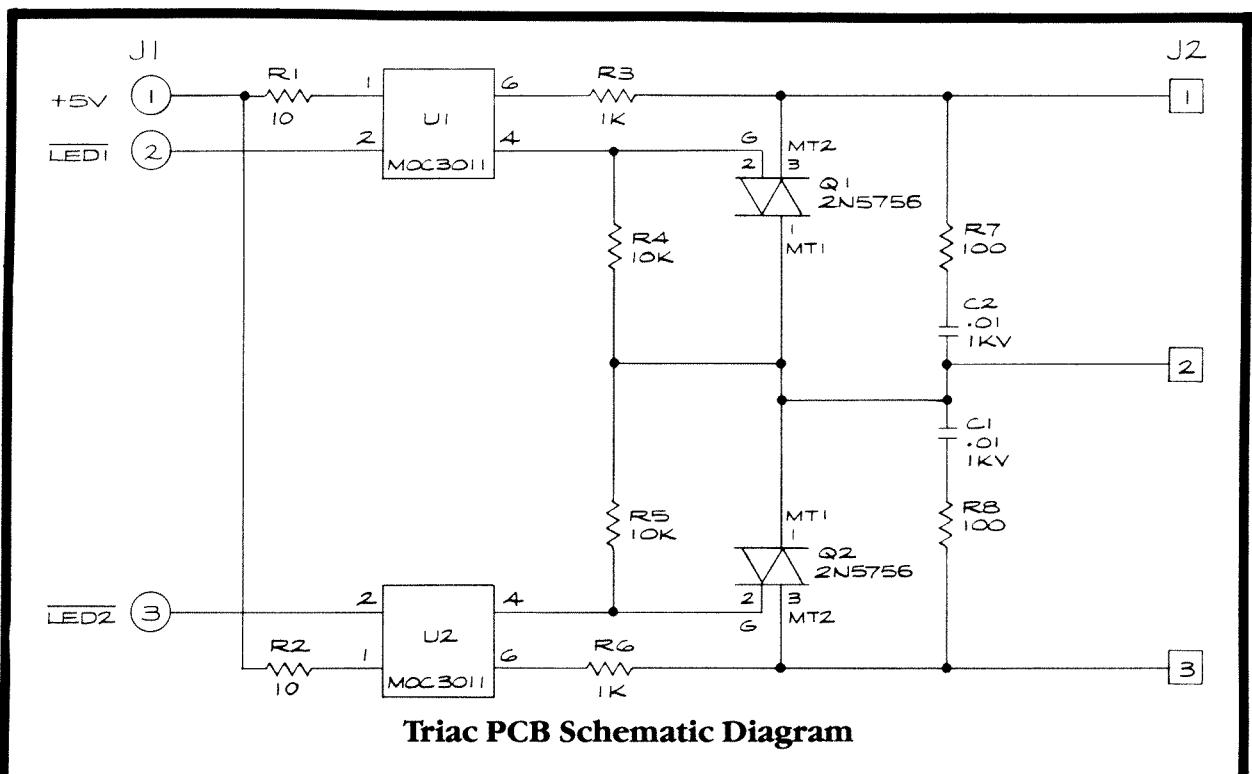
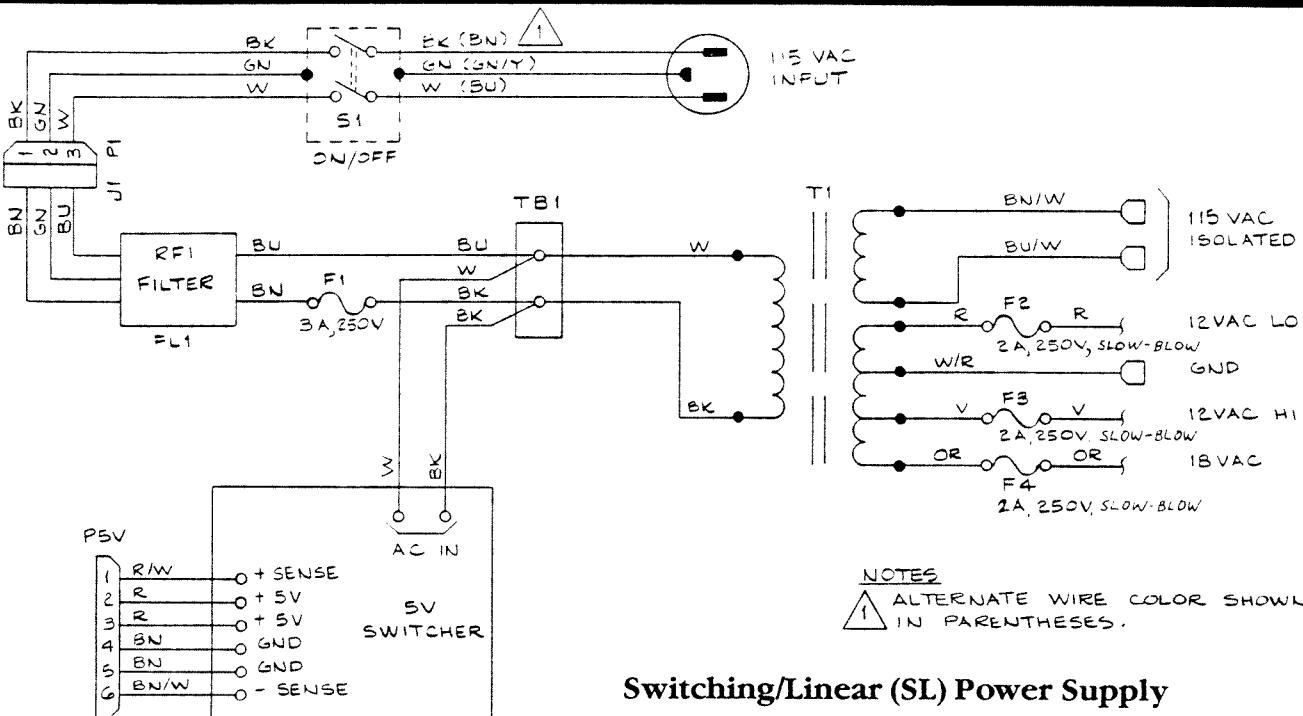
© 1987 Atari Games Corporation

SP-308 Sheet 2A  
1st printing

## Coin Door Wiring Diagram



Hitron 5V, 13A Switching Power Supply



**NOTICE TO ALL PERSONS RECEIVING THIS DRAWING**  
 CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

## (SL) Power Supply, Coin Door, 5V, 13A Power Supply Wiring Diagrams and Triac PCB Schematic Diagram



© 1987 Atari Games Corporation

SP-308 Sheet 2B  
1st printing

## Main Microprocessor

## **T-11 Memory Map**

**NOTICE TO ALL PERSONS  
RECEIVING THIS DRAWING:**

**RECEIVING THIS DRAWING**  
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to, use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.



## **APB<sup>TM</sup> Main Microprocessor Memory Map**

## Sound Microprocessor

# Microprocessor (6502) Memory Map

	D D D D D D D D	
	0 0 0 0 0 0 0 0	
N	7 6 5 4 3 2 1 0	Function and Size
N	D D D D D D D D	Program RAM (4KB)
N	D D D D D D D D	EEROM (2KB)
N	D D D D D D D D	POKEY 1 (16B)
D	D D D D D D D D	LETA
N	D D D D D D D D	POKEY 2 (16B)
	D	T-11 Talk (Active High)
	D	6502 Talk (Active High)
	D	TI READY (Active High)
	D	
	D	Self-Test Switch (Active Low)
	D	Auxiliary Coin Switch (Active Low)
D	D	Left Coin Switch (Active Low)
D	D	Right Coin Switch (Active Low)
D D D D D D D D		Yamaha Sound Chip
D D D D D D D D		Communications Port Read
D D D D D D D D		TI Data
D D D D D D D D		TI Write Enable
D D D D D D D D		Communications Port Write
	D	Right Coin Counter (Active High)
	D	Left Coin Counter (Active High)
	D	IRQ Clear
	D D D	Yamaha Mixer
D D D	D	POKEY Mixer
D D D	D	TI Sound Mixer
	D	LED 1
	D	LED 2
	D	LETA Resolution
D	D	TI Frequency Select
D D D D D D D D	D	Sound Enable (Active High)
D D D D D D D D		Program ROM (16KB)
D D D D D D D D		Program ROM (32KB)

---

#### NOTICE TO ALL PERSONS RECEIVING THIS DRAWING

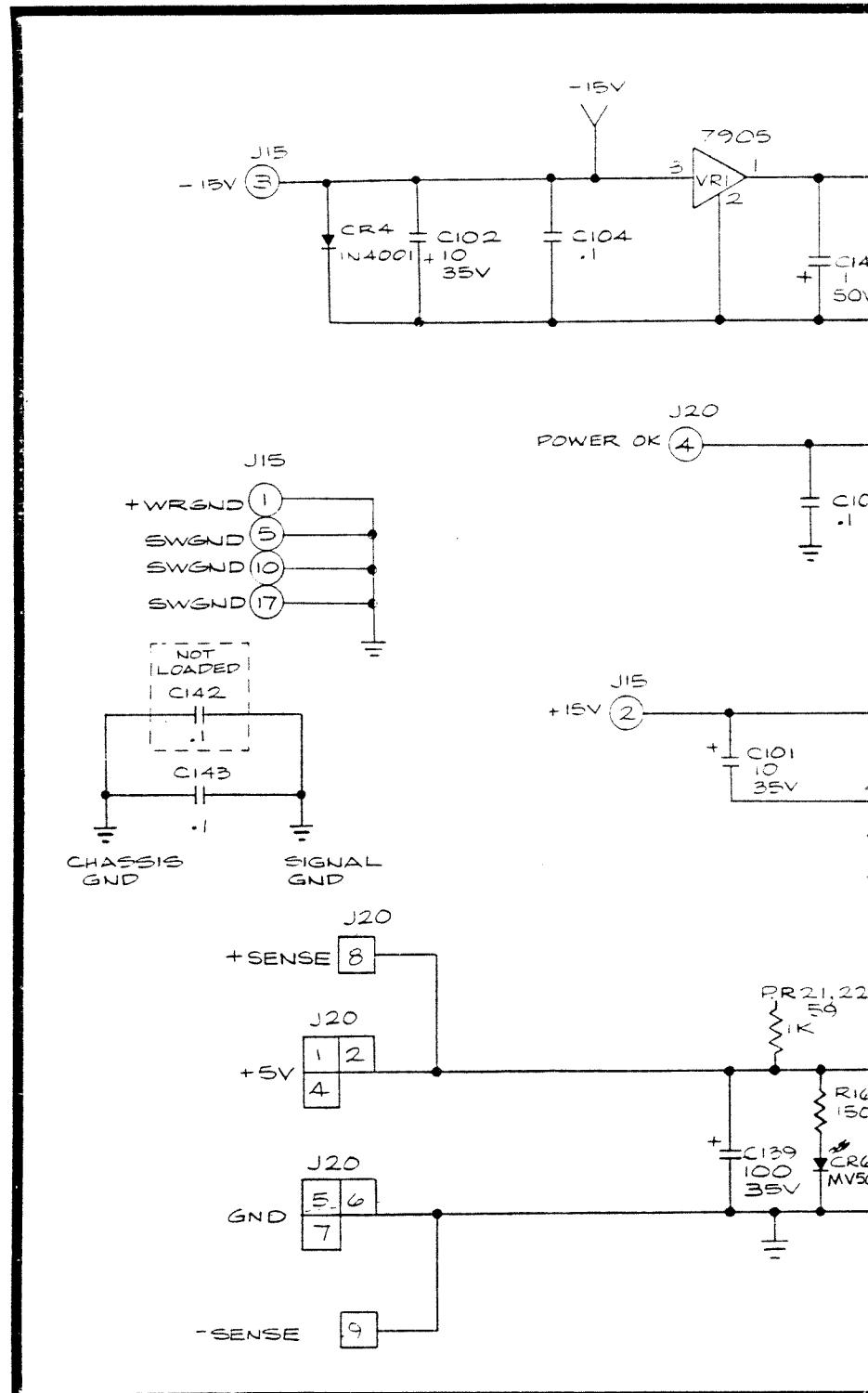
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

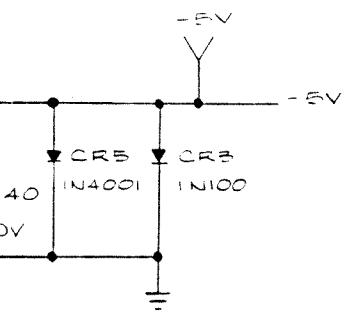
#### APB™ Sound Microprocessor Memory Map



© 1987 Atari Games Corporation

SP-308 Sheet 3B  
1st printing



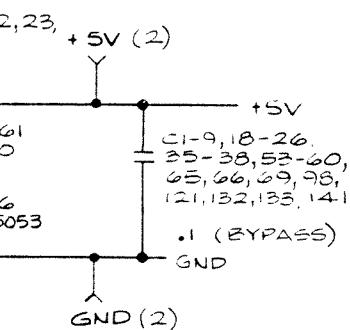
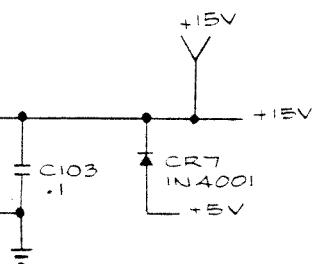


NOTES:

- CONNECTOR J20
- CONNECTOR P18
- CONNECTOR J15

POWER OK

05



**Power Input**

**NOTICE TO ALL PERSONS RECEIVING THIS DRAWING**

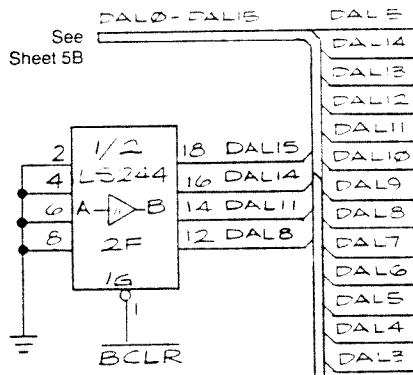
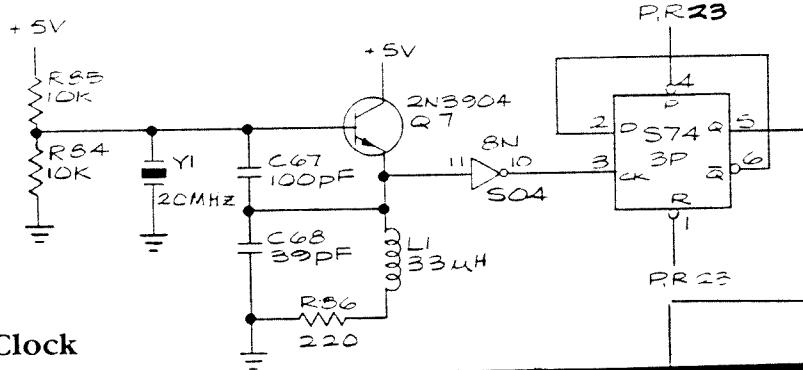
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.



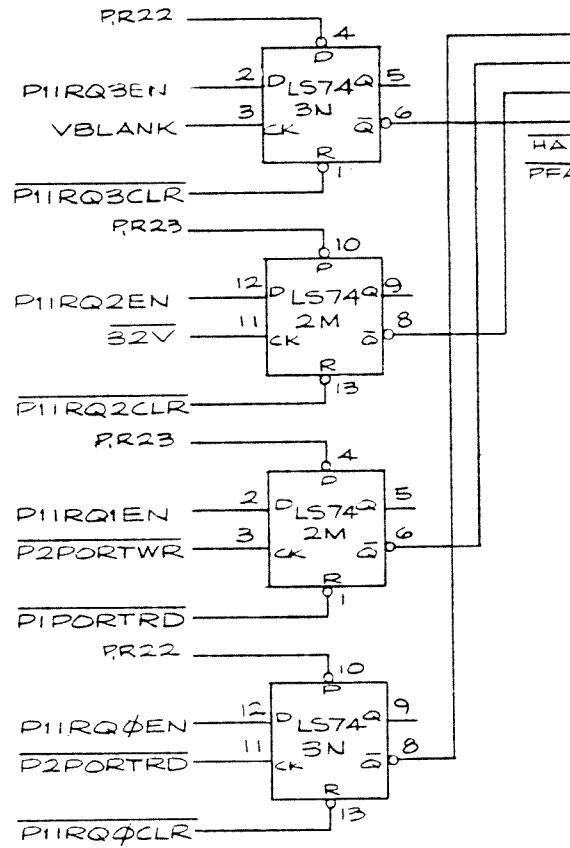
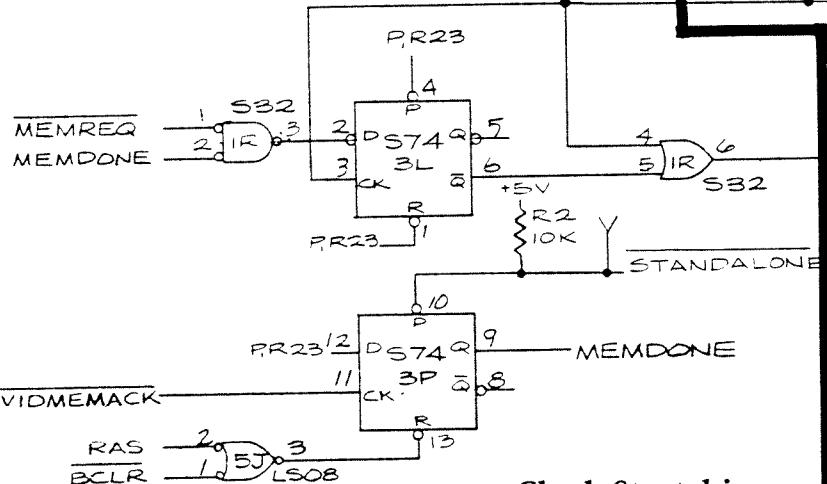
**APB™ CPU PCB  
Schematic Diagram**

© 1987 Atari Games Corporation

**SP-308 Sheet 4A  
1st printing**

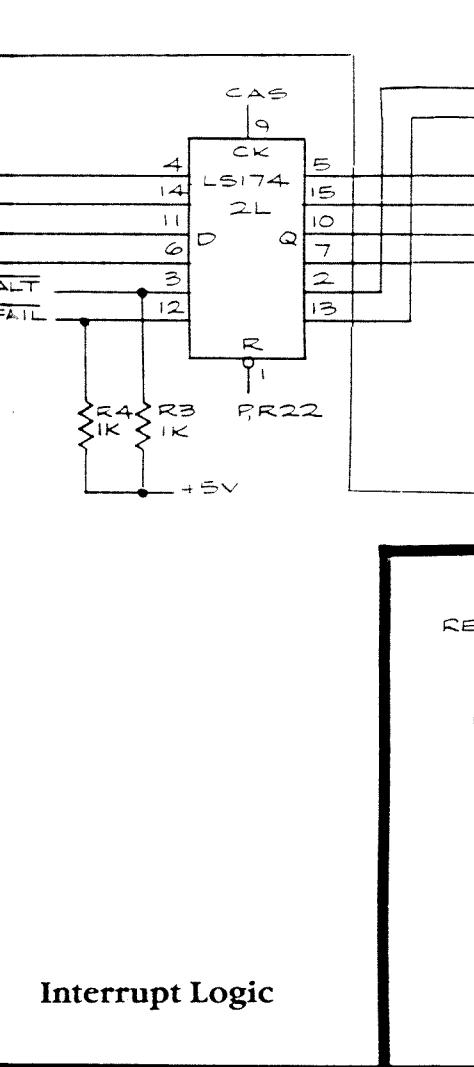


### Mode Register



## Extender Socket

1	EXTENDER	28	+5V
2	SOCKET	27	COUT
3	1F	26	RESET
4		25	HALT
5		24	FAIL
6		23	SEL1
7		22	SEL0
8		21	R/WH
9		20	R/WL
10		19	CAS
11		18	RAS
12		17	DAL0
13		16	DAL1
14		15	DAL2



Interrupt Logic

## NOTICE TO ALL PERSONS RECEIVING THIS DRAWING

CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

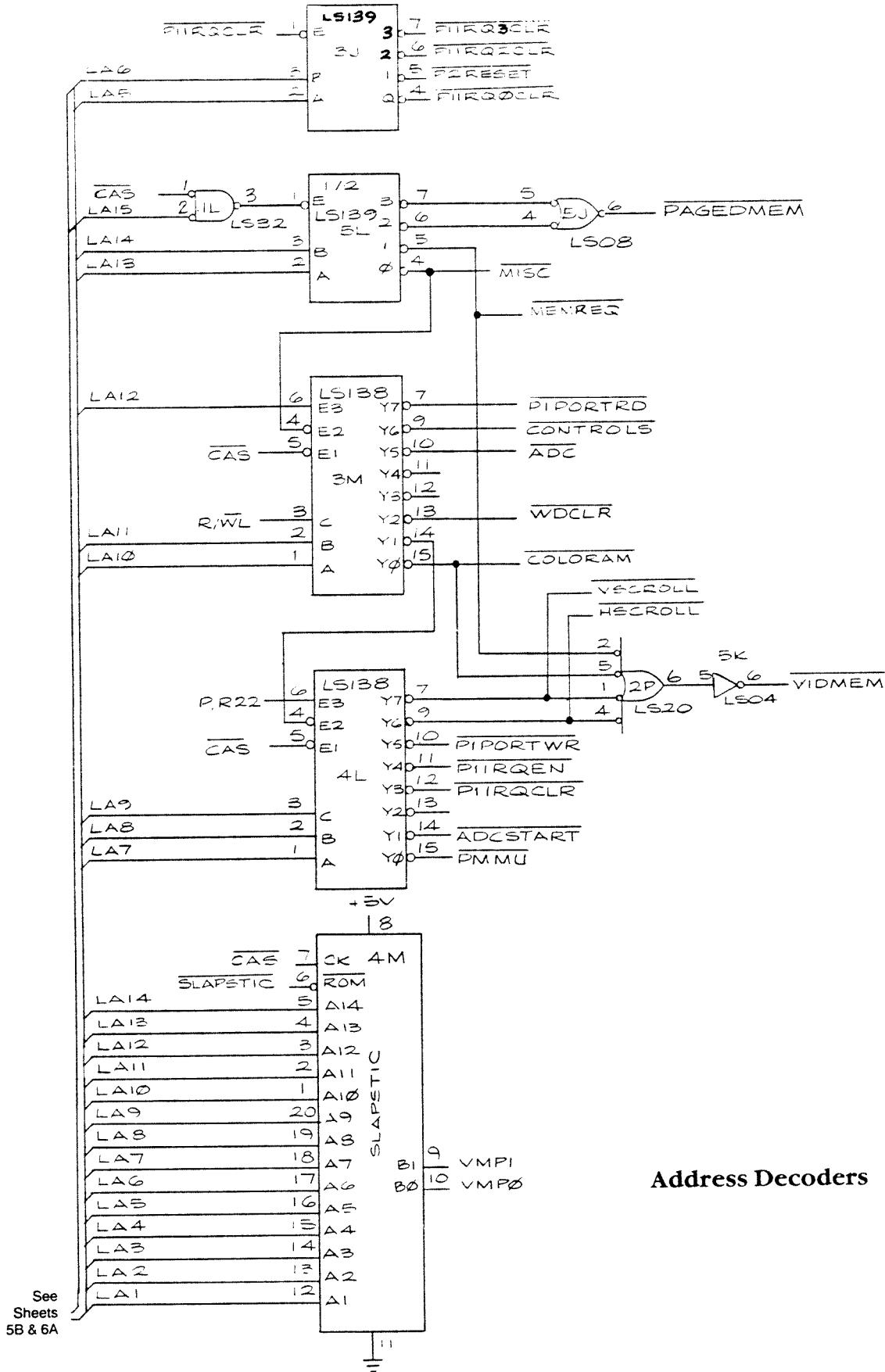
## T-11 Microprocessor and Address Latches



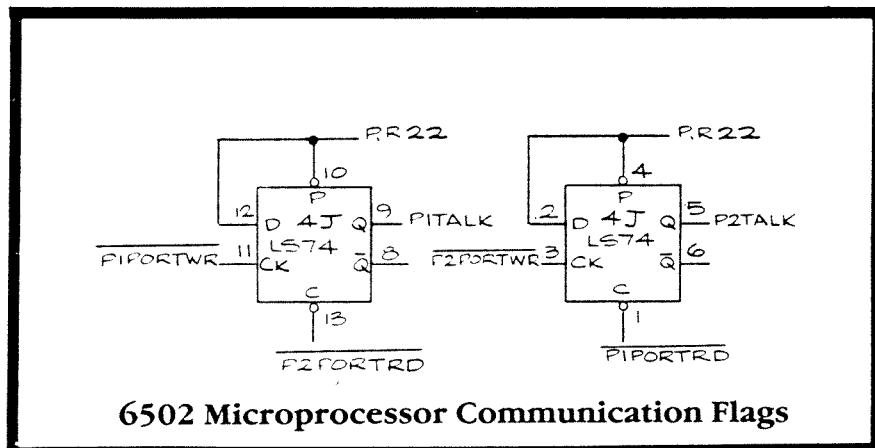
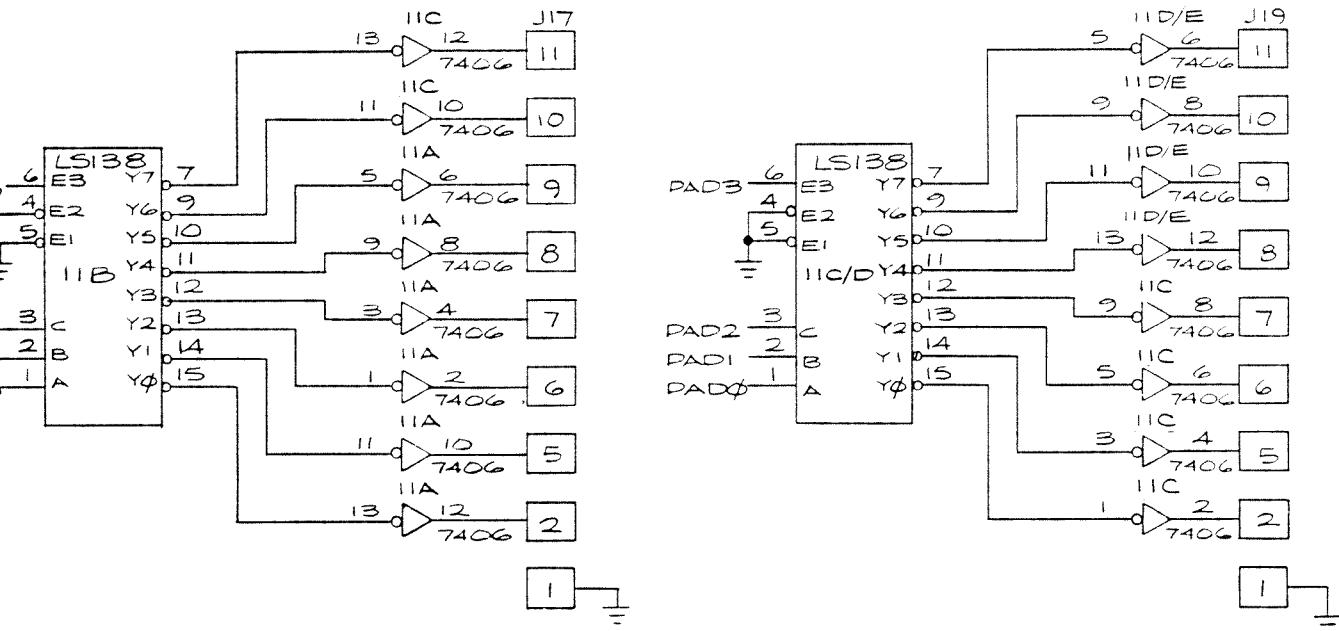
## APB™ CPU PCB Schematic Diagram

© 1987 Atari Games Corporation

SP-308 Sheet 4B  
1st printing



## Used in Development Only



**6502 Microprocessor Communication Flags**

**NOTICE TO ALL PERSONS RECEIVING THIS DRAWING**

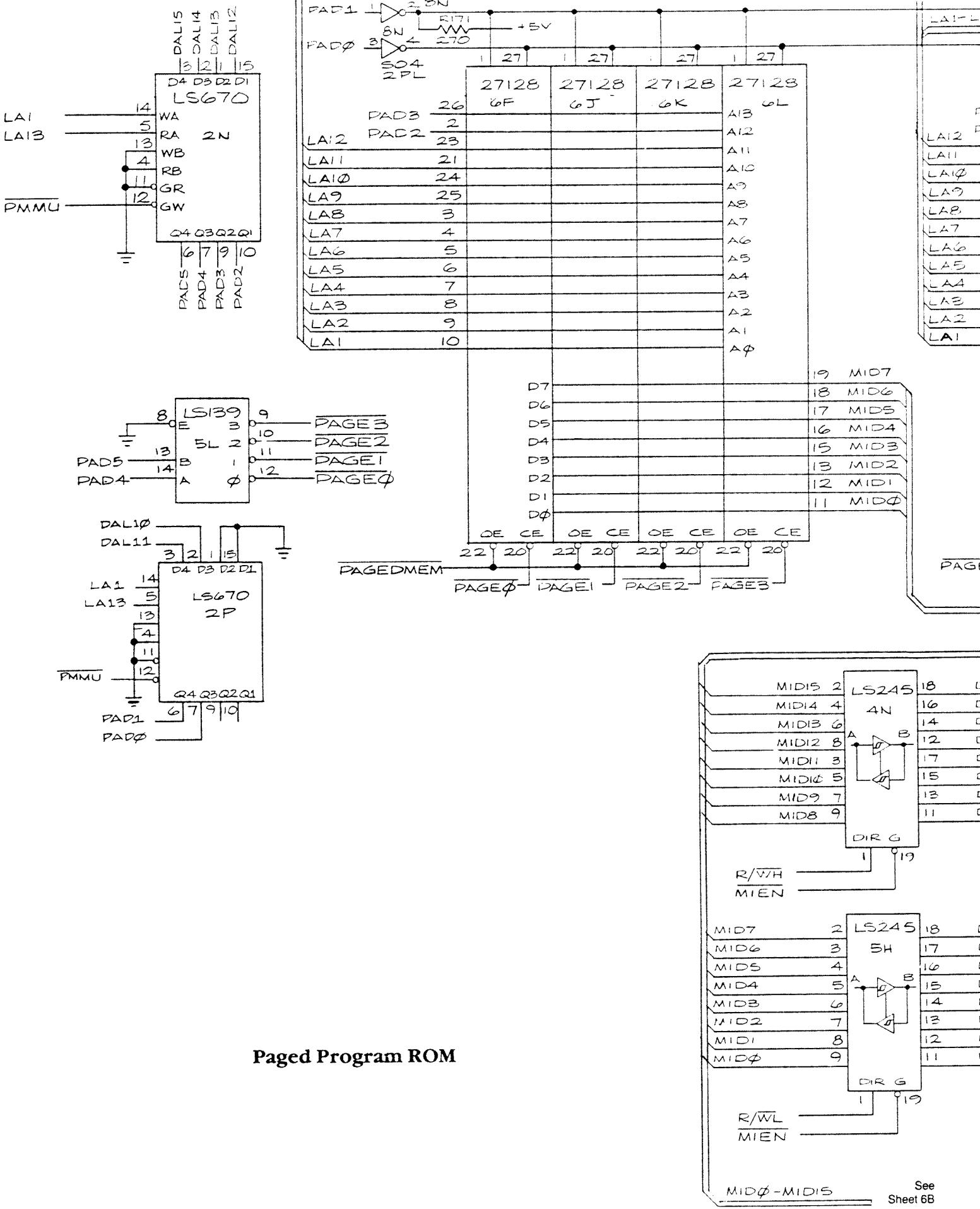
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

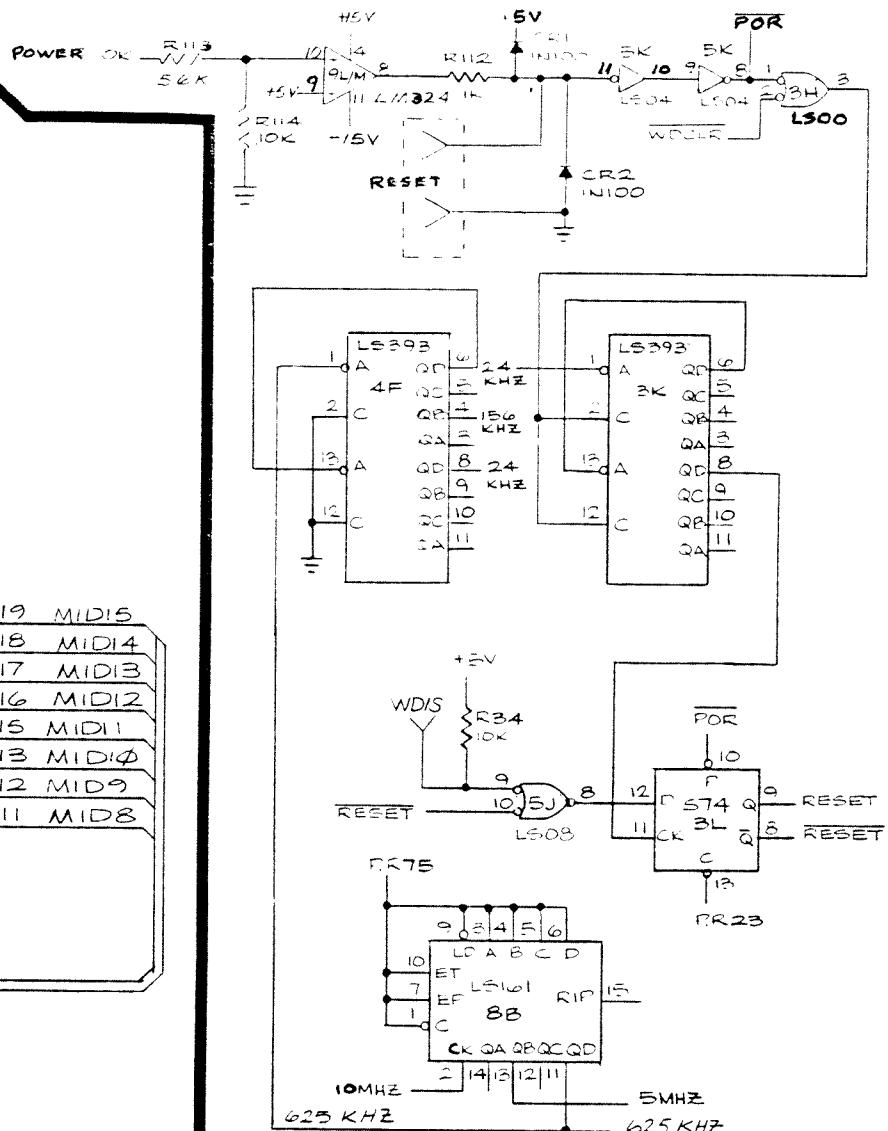
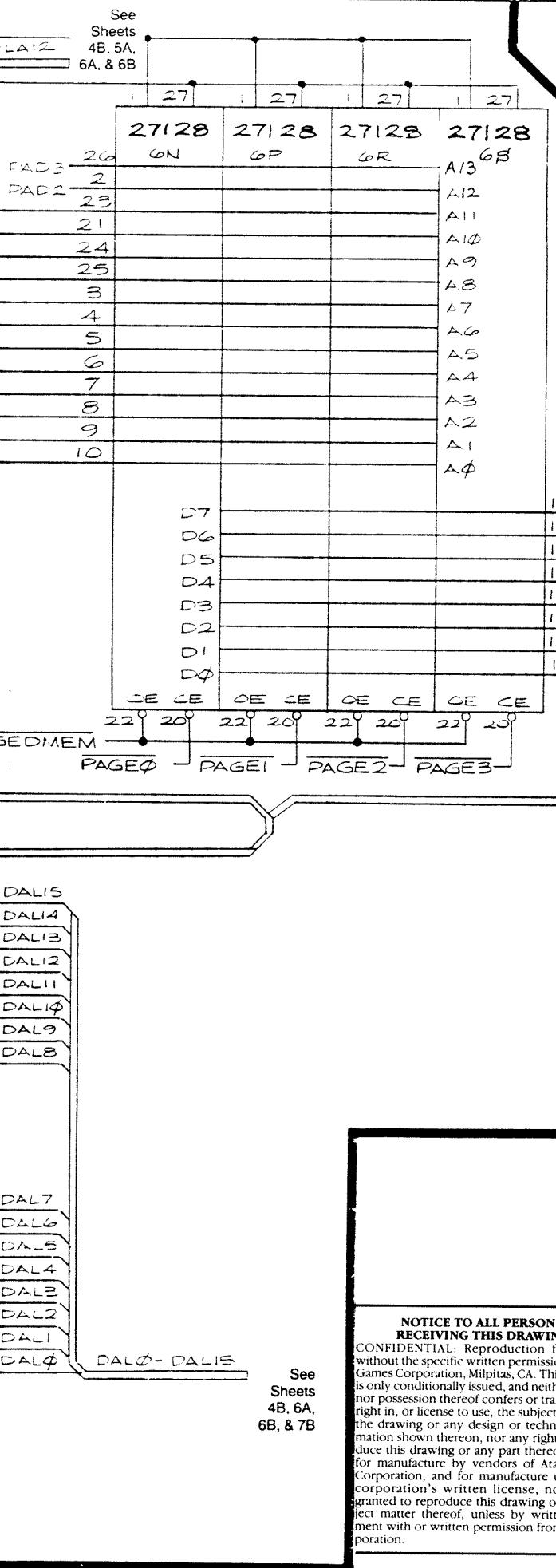


**APB™ CPU PCB  
Schematic Diagram**

© 1987 Atari Games Corporation

**SP-308 Sheet 5A  
1st printing**





### Reset and Watchdog Clear



APB™ CPU PCB  
Schematic Diagram

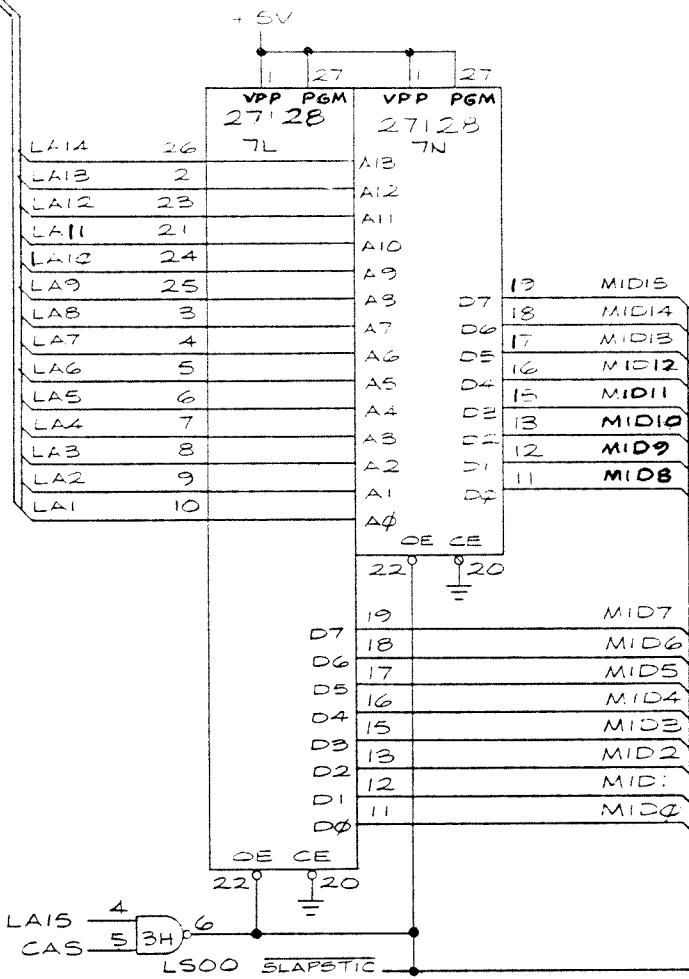
© 1987 Atari Games Corporation

SP-308 Sheet 5B  
1st printing

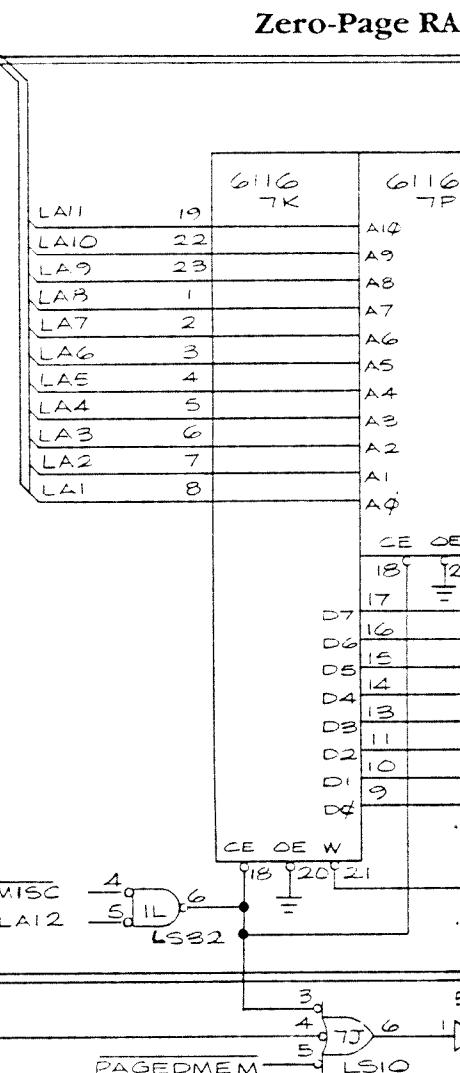
**NOTICE TO ALL PERSONS RECEIVING THIS DRAWING**  
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

## Fixed Program ROM

LAI - LA14  
See Sheet 5A & 5B

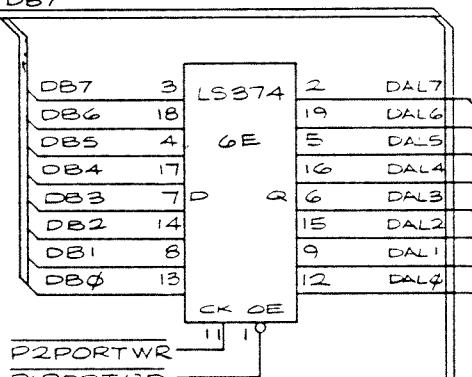


See Sheet 5B MID $\phi$  - MID15



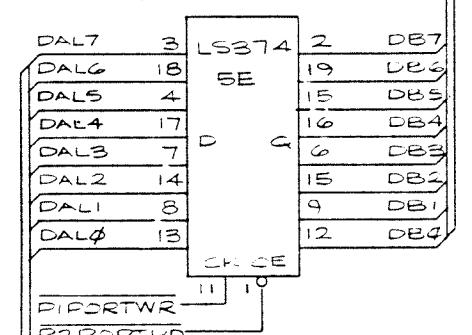
PAGEDMEM 3d 4d 5d 6d LS10

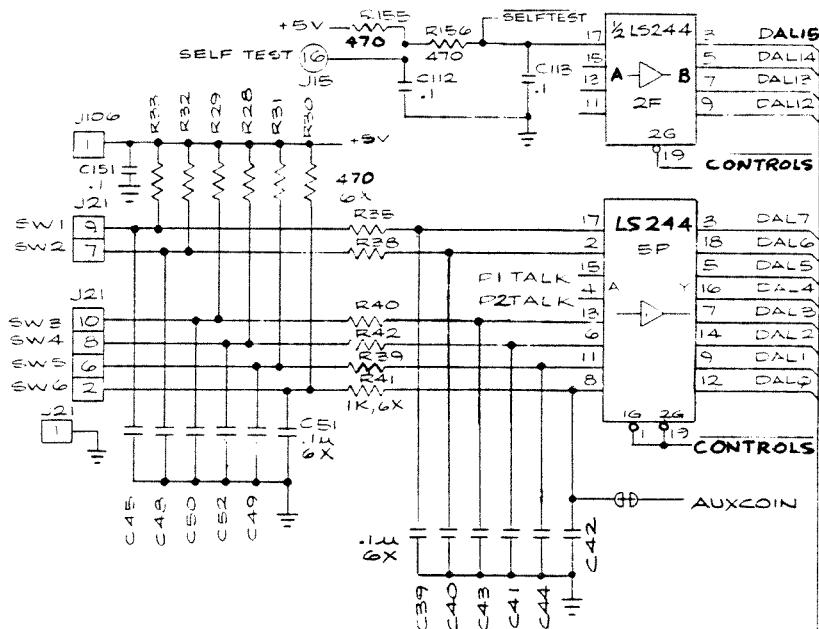
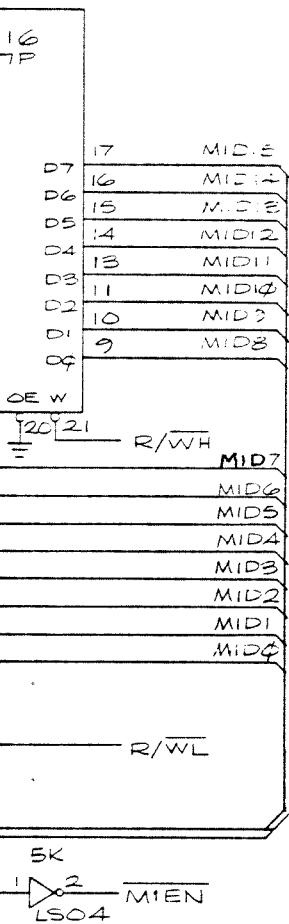
See Sheets 7A, 8A, & 8B DB $\phi$  - DB7



**6502 Micro-processor Communication Latches**

See Sheet 4B DAL $\phi$  - DAL15





## Control Panel Inputs

See  
Sheet 4B

**NOTICE TO ALL PERSONS RECEIVING THIS DRAWING**

**RECEIPT IN THIS DRAWING**  
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.



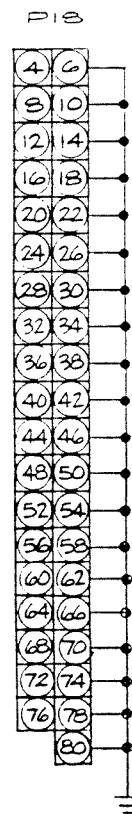
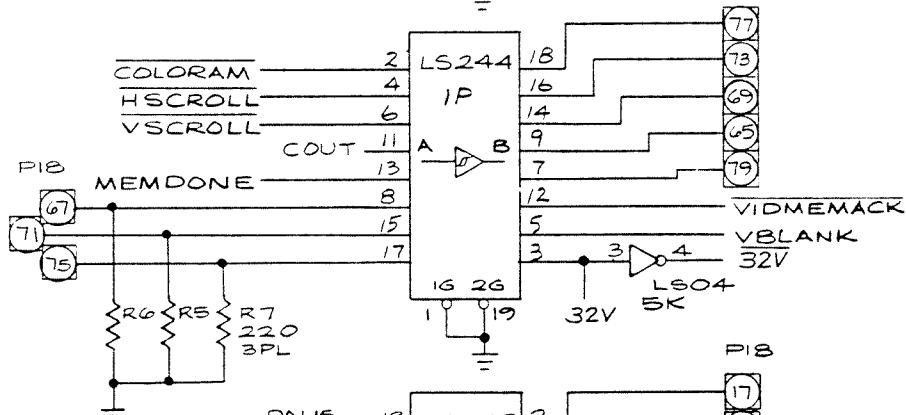
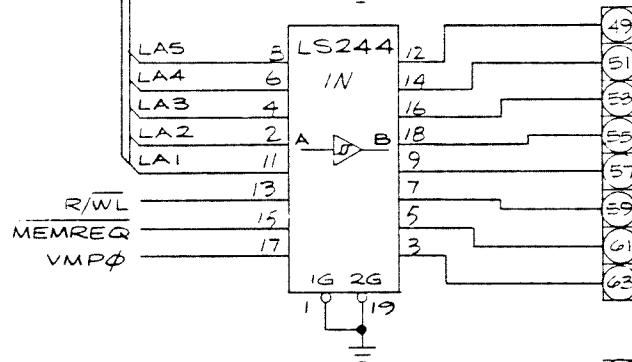
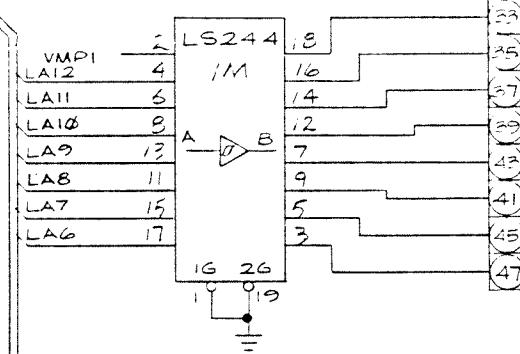
# **APB™ CPU PCB Schematic Diagram**

© 1987 Atari Games Corporation

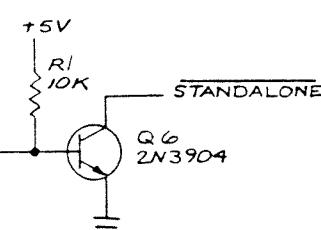
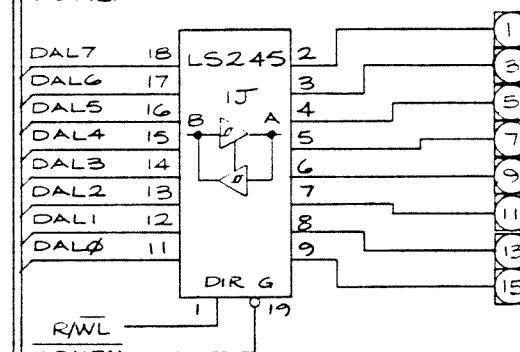
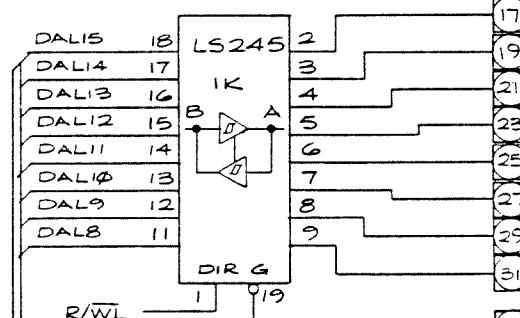
SP-308 Sheet 6A  
1st printing

See  
Sheets  
4B, 5A  
& 6A

P18

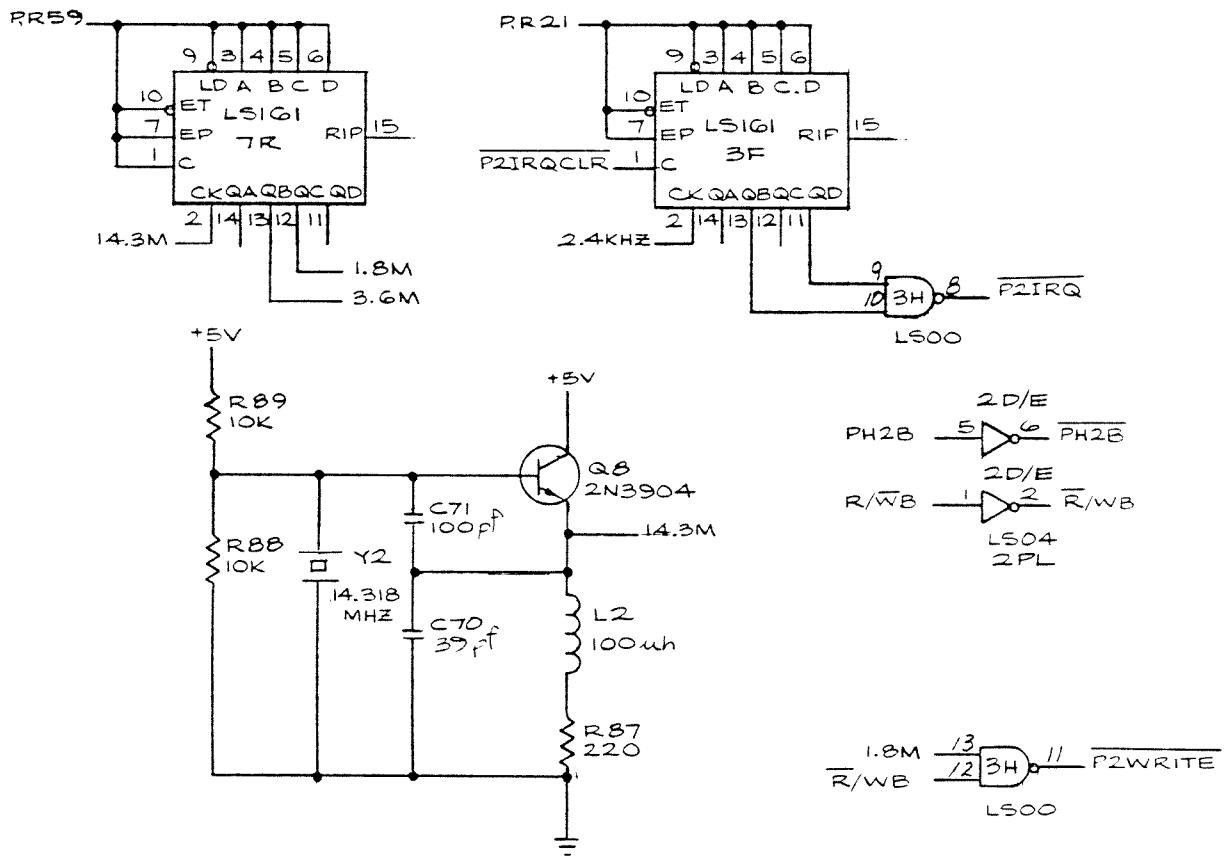


P18



See  
Sheet 6A

CPU/Video Buffers



## Clock and Control Signals

**NOTICE TO ALL PERSONS  
RECEIVING THIS DRAWING**

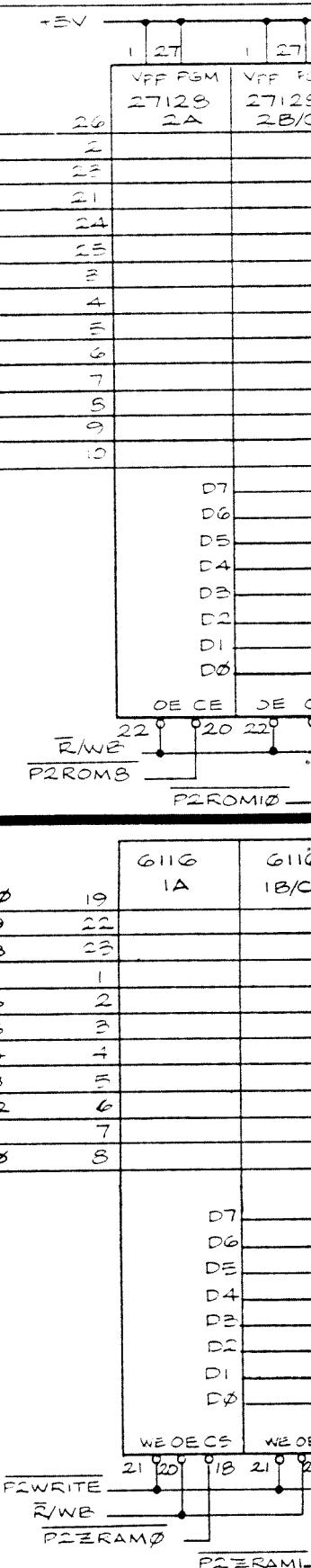
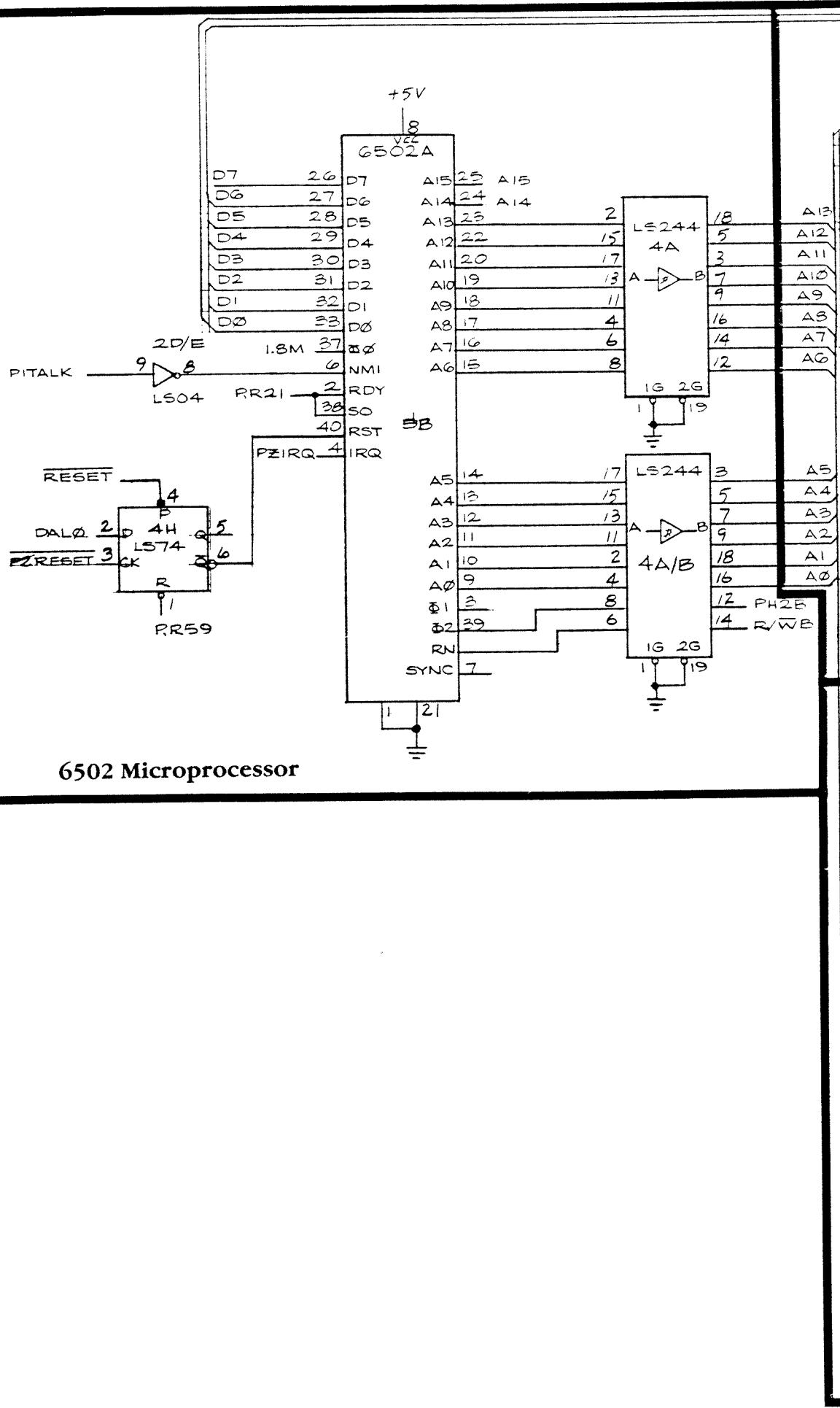
**RECEIVING THIS DRAWING**  
**CONFIDENTIAL:** Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.



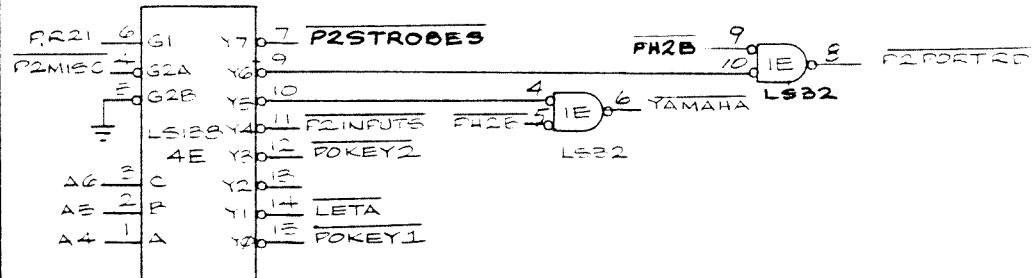
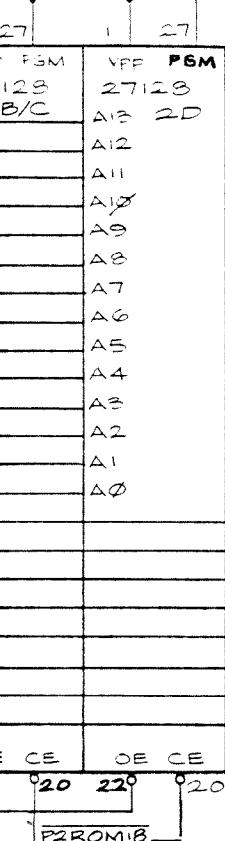
# **APB™ CPU PCB Schematic Diagram**

© 1987 Atari Games Corporation

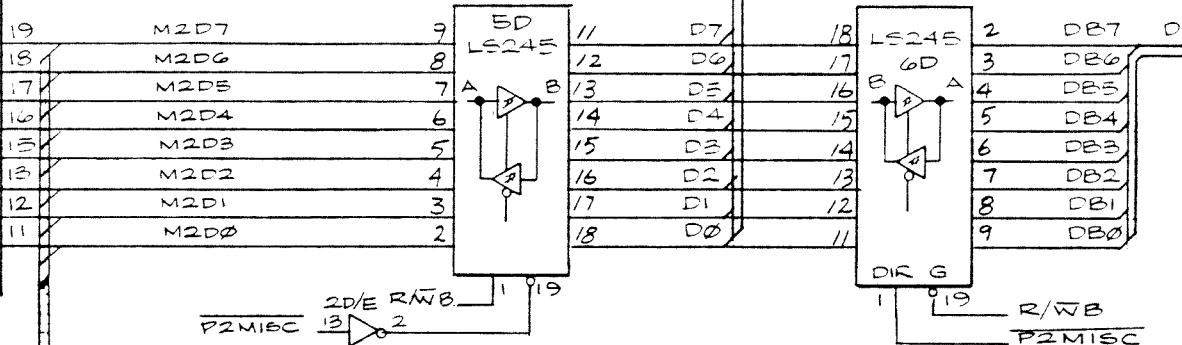
**SP-308 Sheet 6B**  
**1st printing**



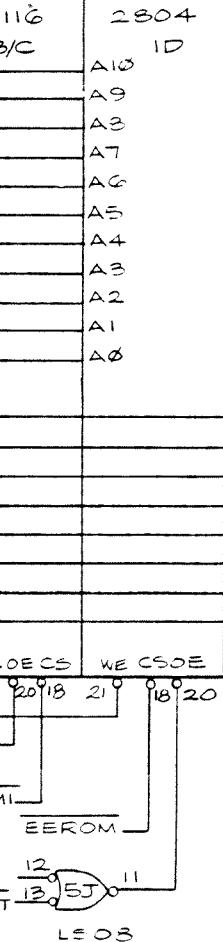
## Address Decoding



## Program Memory



See  
Sheets  
6A, 8A,  
& 8B



## Zero Page RAM and EEPROM

### NOTICE TO ALL PERSONS RECEIVING THIS DRAWING

CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

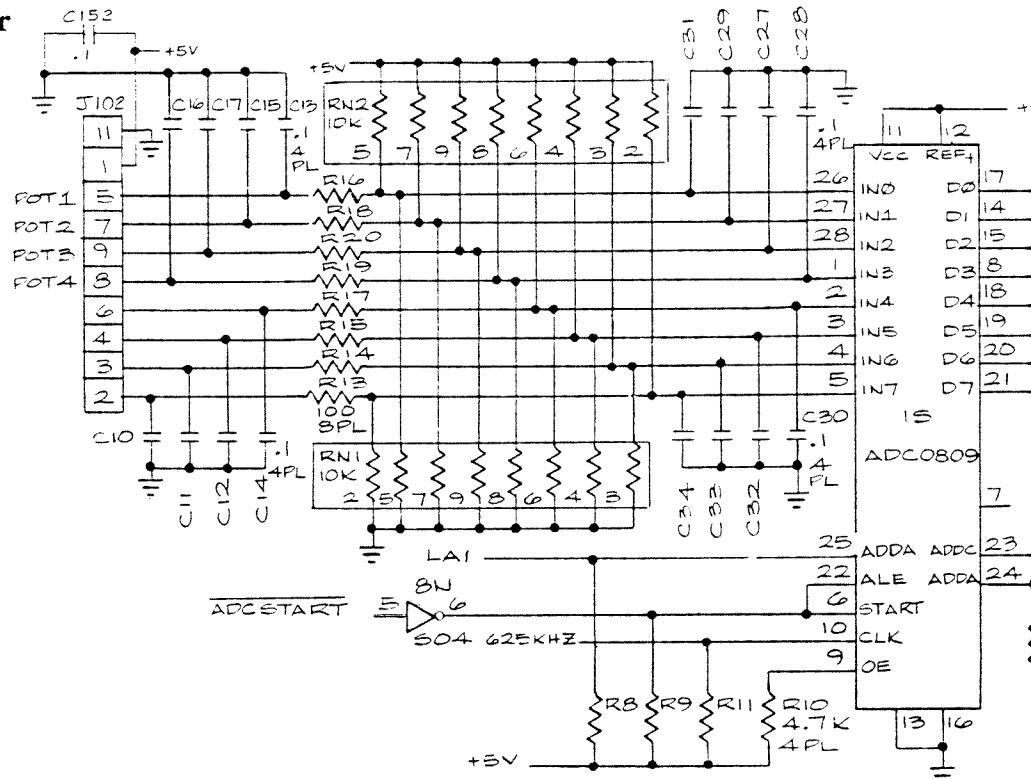
## APB™ CPU PCB Schematic Diagram



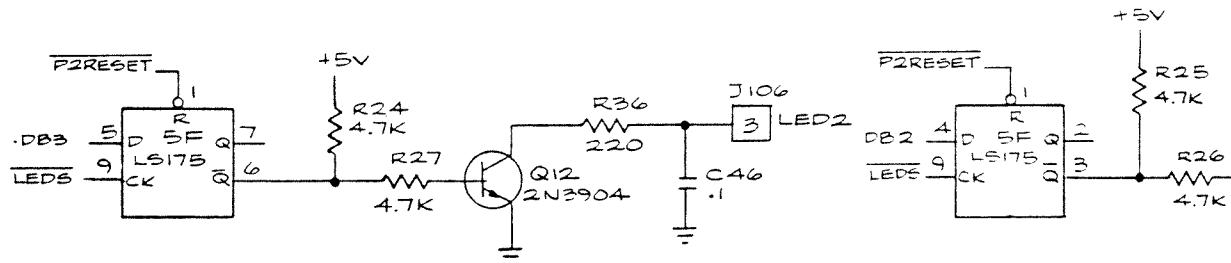
© 1987 Atari Games Corporation

SP-308 Sheet 7A  
1st printing

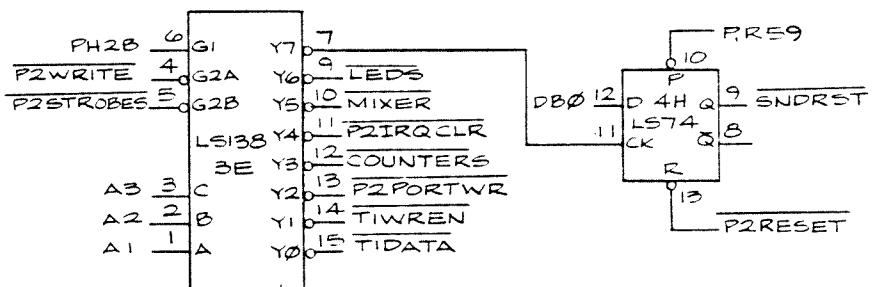
## A/D Converter



## LED Drivers

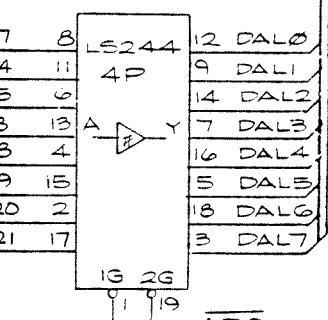


## Address Decoding

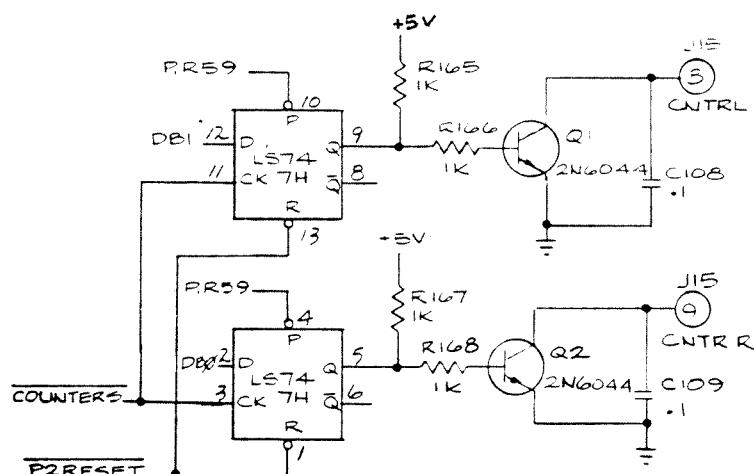


See  
Sheets  
4B, 5B, DALØ-DAL7

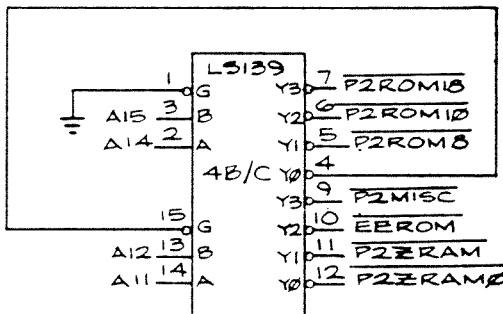
- + 2 v



## Coin Counters



## Address Decoding

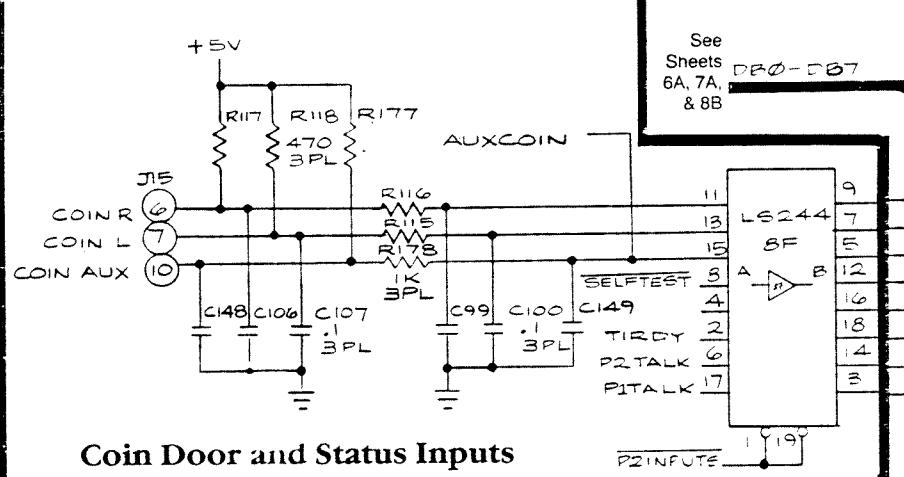


**NOTICE TO ALL PERSONS  
RECEIVING THIS DRAWING**

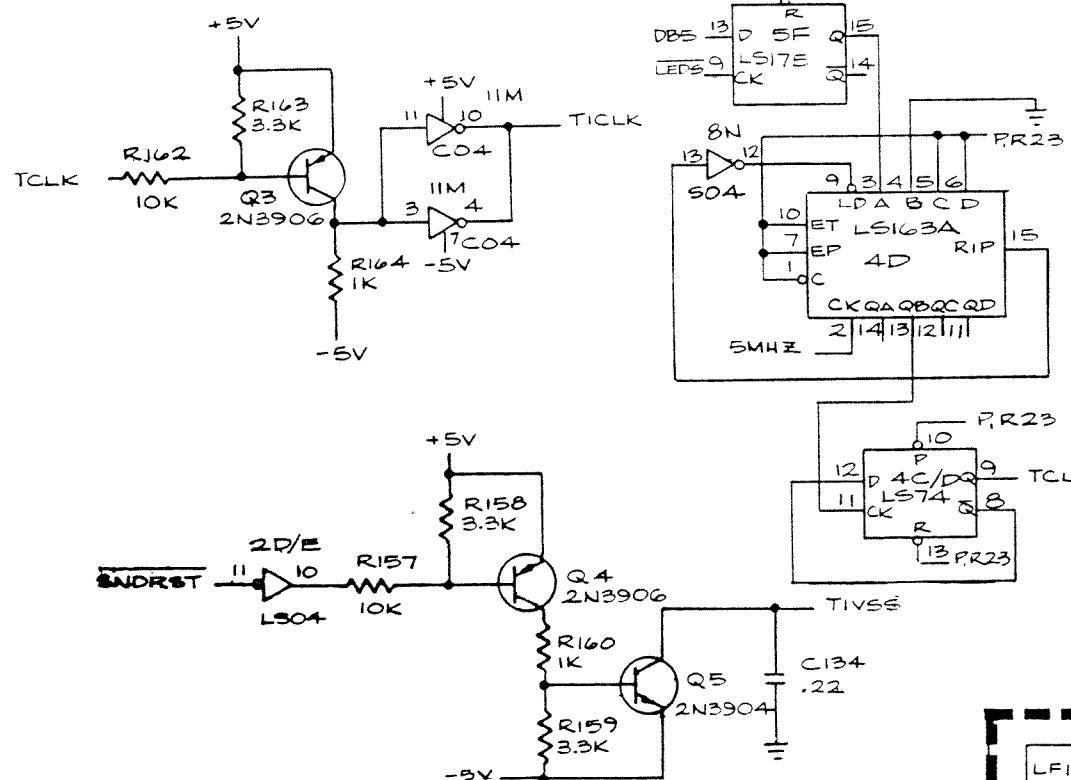
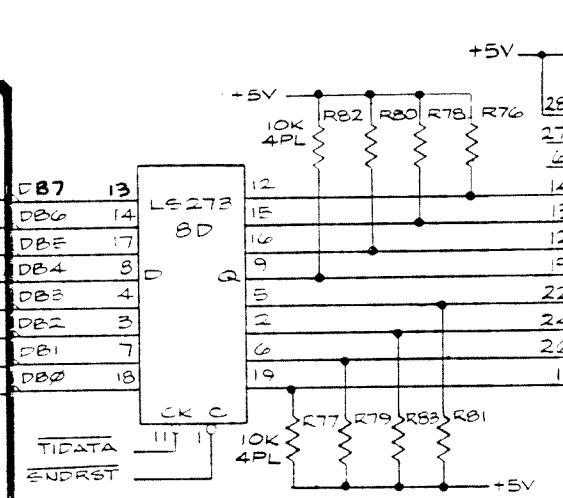
**CONFIDENTIAL:** Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to, use the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.



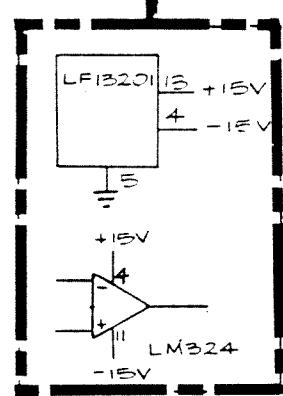
**TM**  
**APB™ CPU PCB**  
**Schematic Diagram**



## Coin Door and Status Inputs

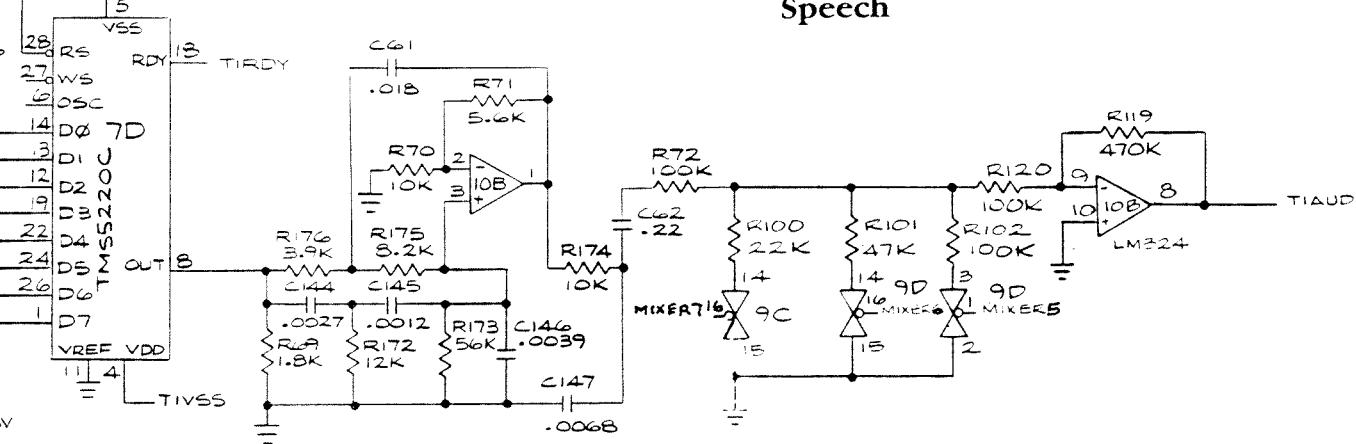


## Speech

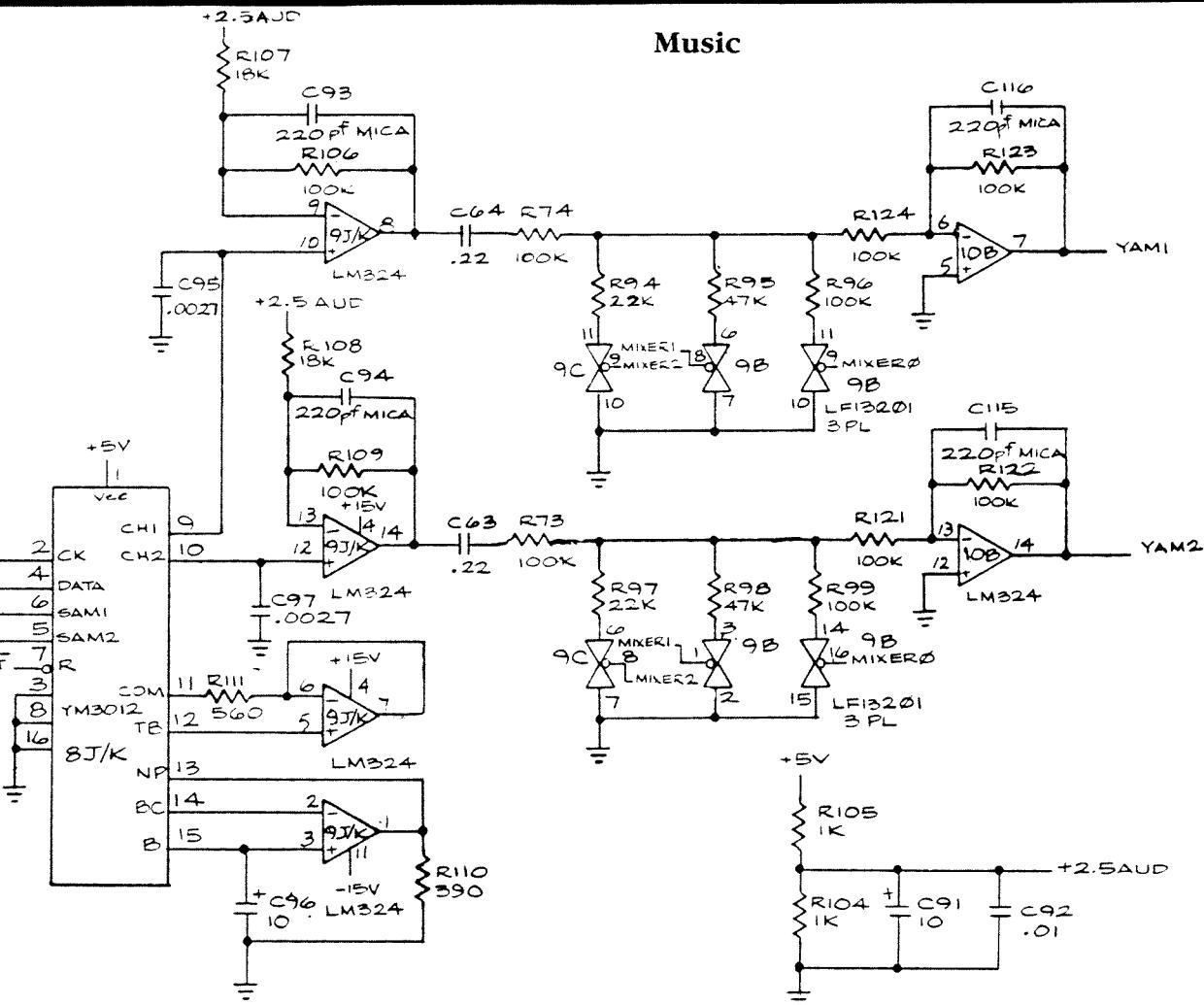


## Power Connection

## Speech



## Music



### NOTICE TO ALL PERSONS RECEIVING THIS DRAWING

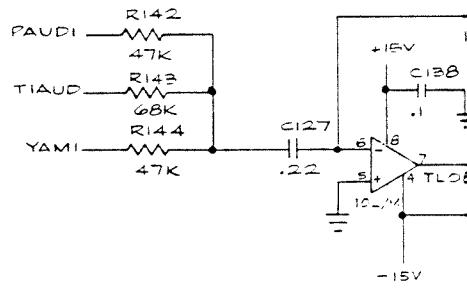
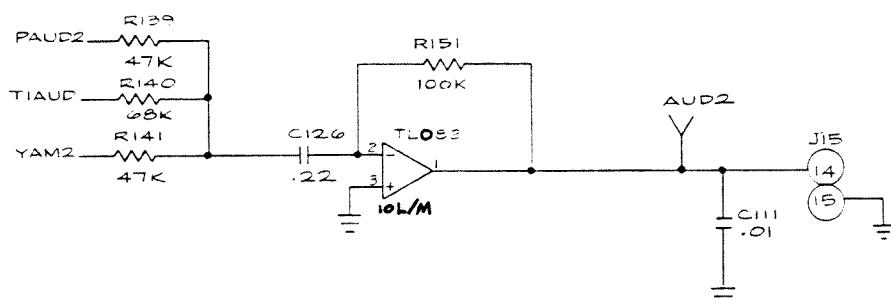
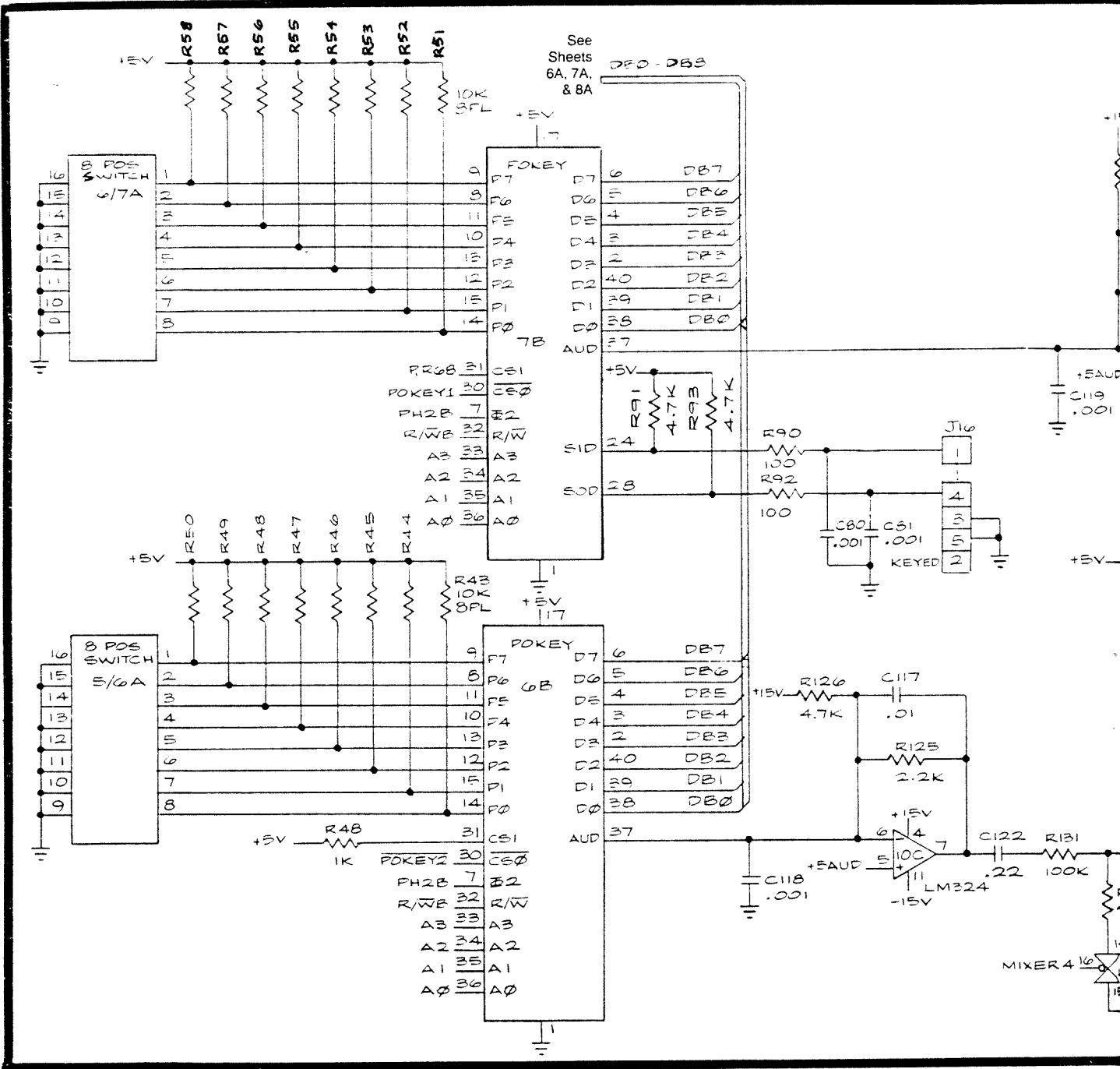
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

## APB™ CPU PCB Schematic Diagram



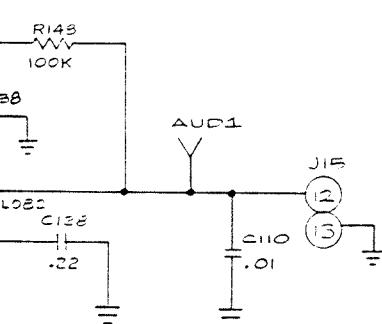
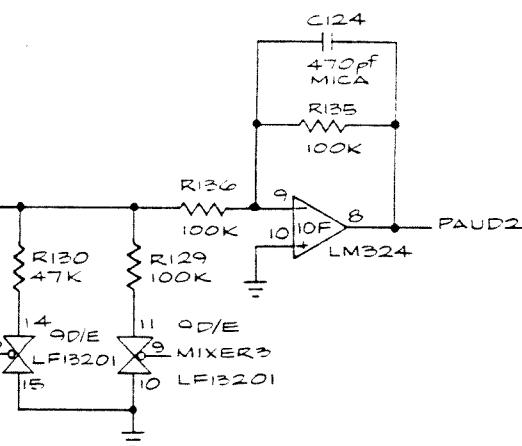
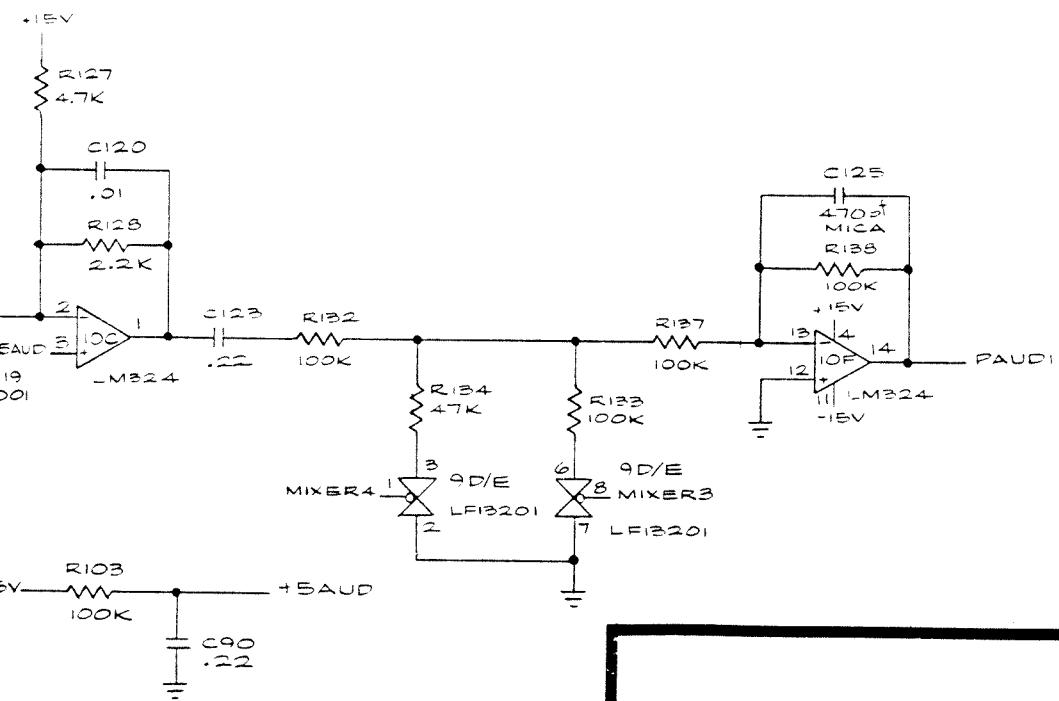
© 1987 Atari Games Corporation

SP-308 Sheet 8A  
1st printing



Audio Output Dr

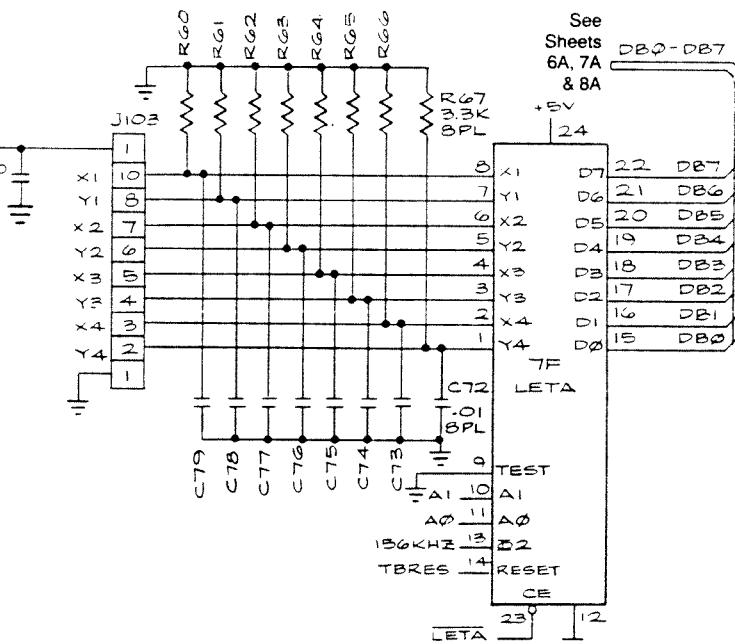
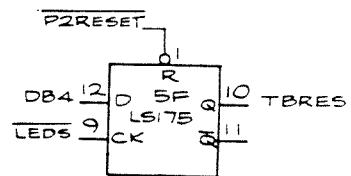
## Sound Effects Option Switches



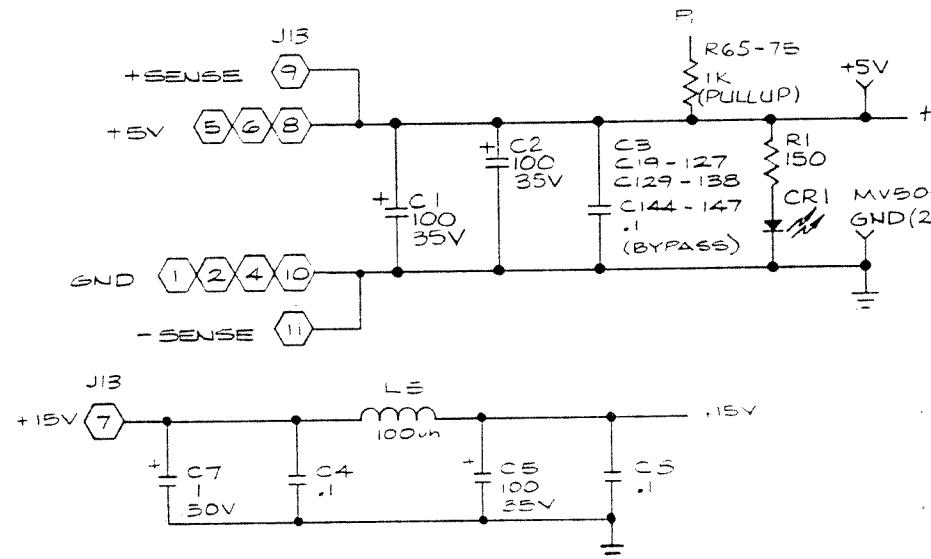
## NOTICE TO ALL PERSONS RECEIVING THIS DRAWING

CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

## Steering Wheel Inputs



## Power In

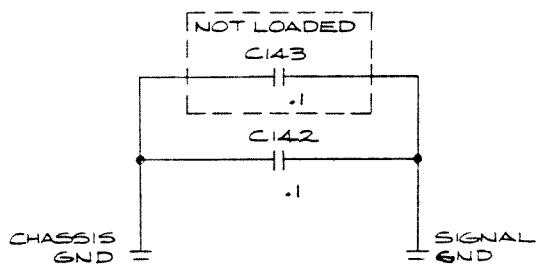


er Input

+5V

V5053  
ID(2)

- DESIGNATES CONNECTOR J18
- DESIGNATES CONNECTOR J13
- DESIGNATES CONNECTOR J19



**NOTICE TO ALL PERSONS  
RECEIVING THIS DRAWING**

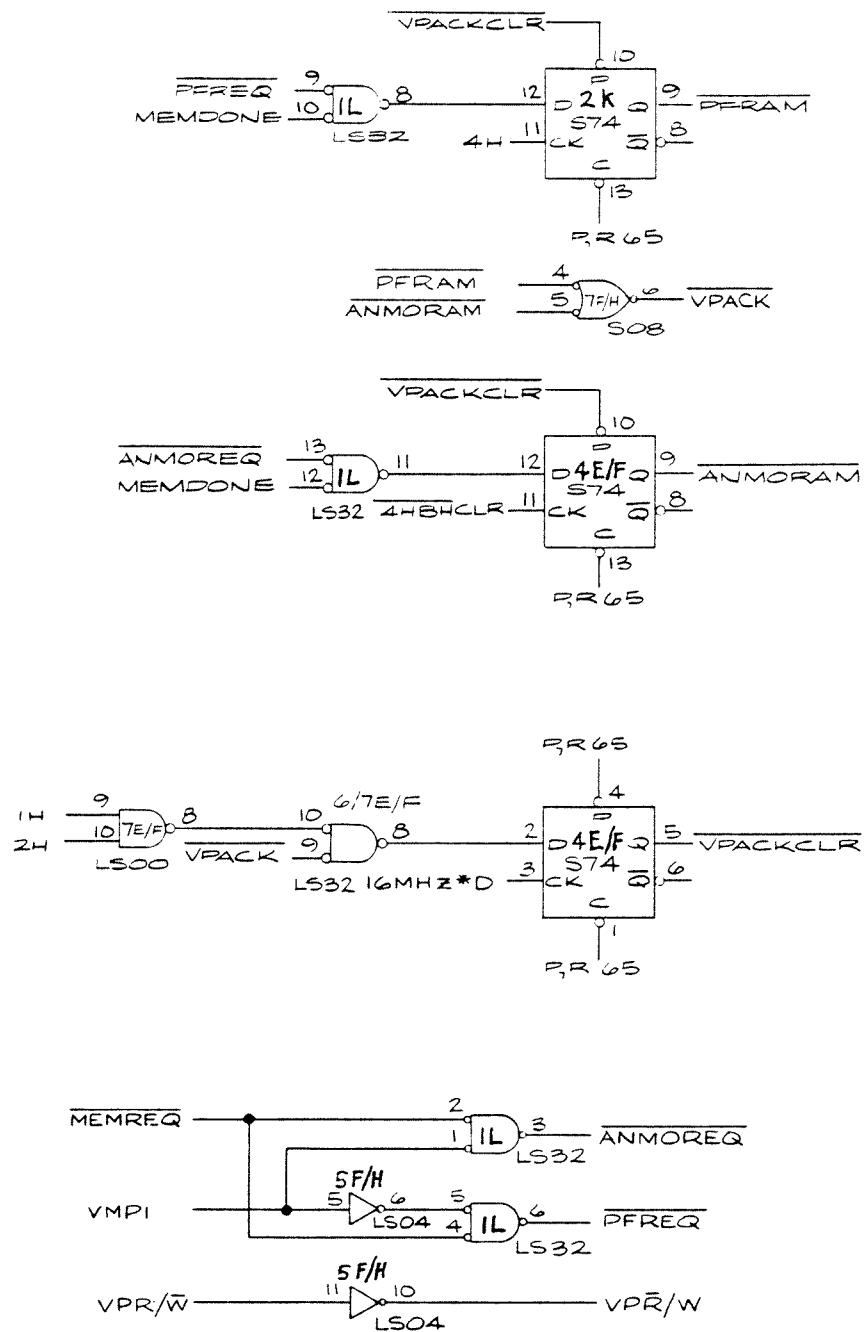
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.



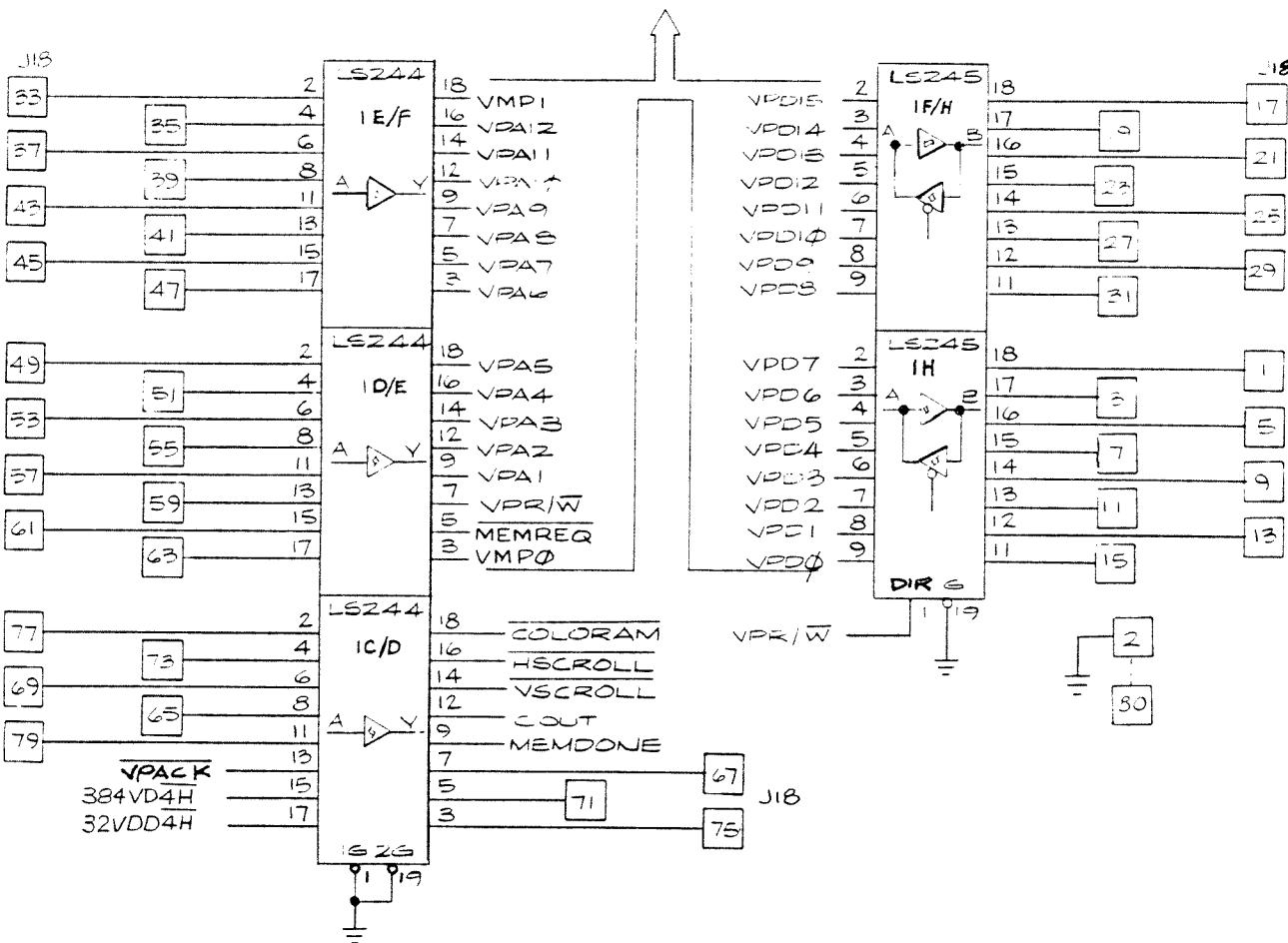
**APB™ Video PCB  
Schematic Diagram**

© 1987 Atari Games Corporation

**SP-308 Sheet 9A  
1st printing**



Address Decoding Control Signals



### **Video/CPU Buffers**

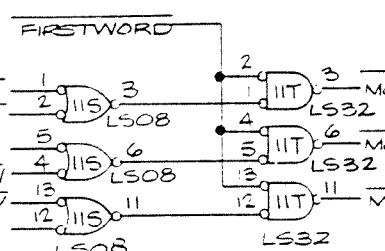
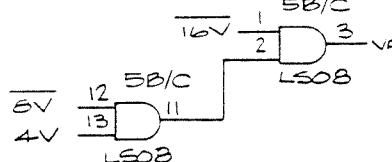
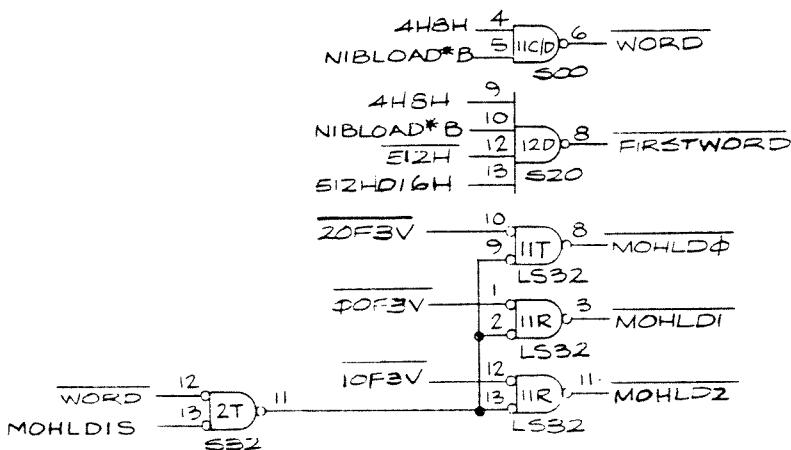
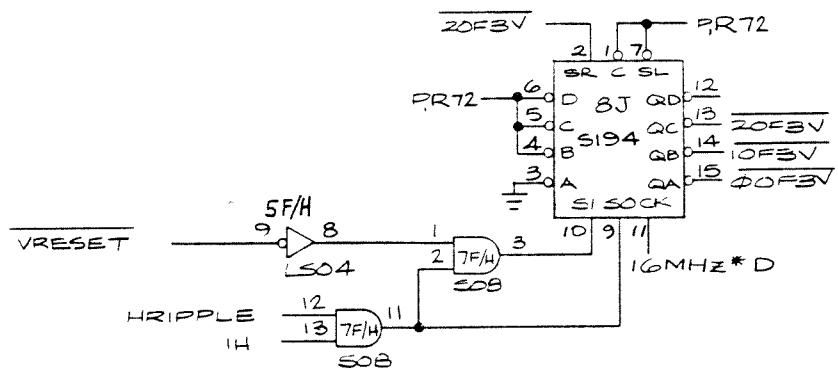
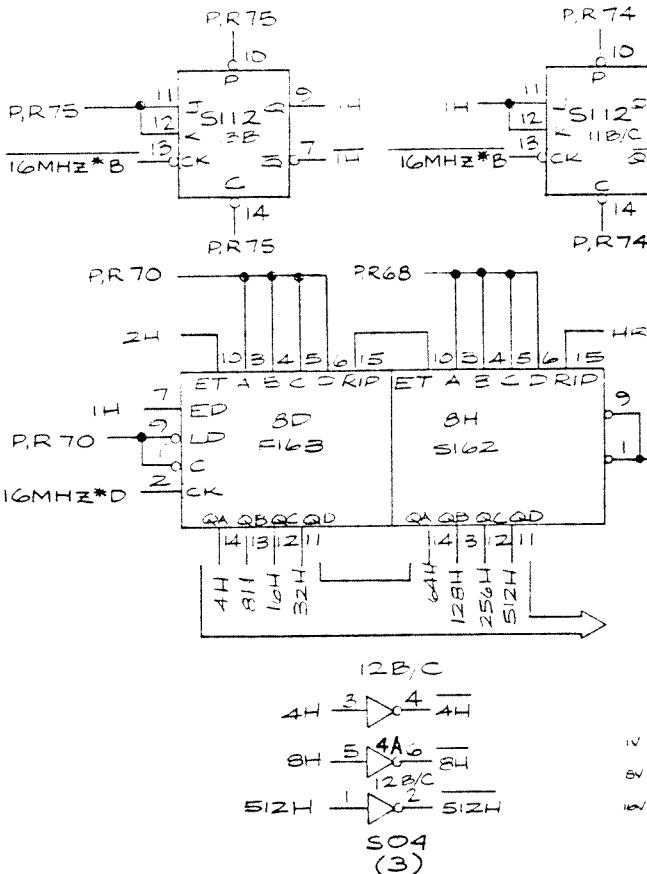
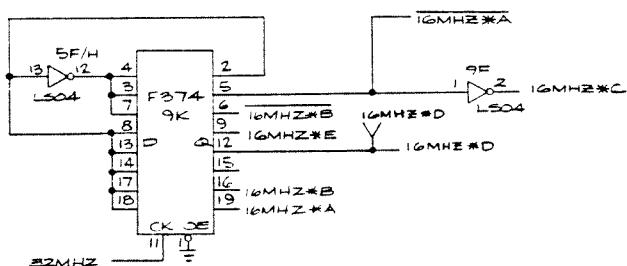
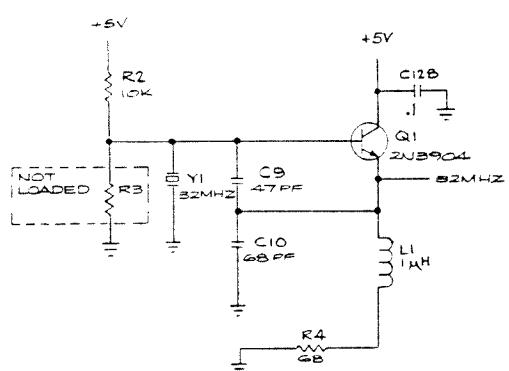
**NOTICE TO ALL PERSONS  
RECEIVING THIS DRAWING**

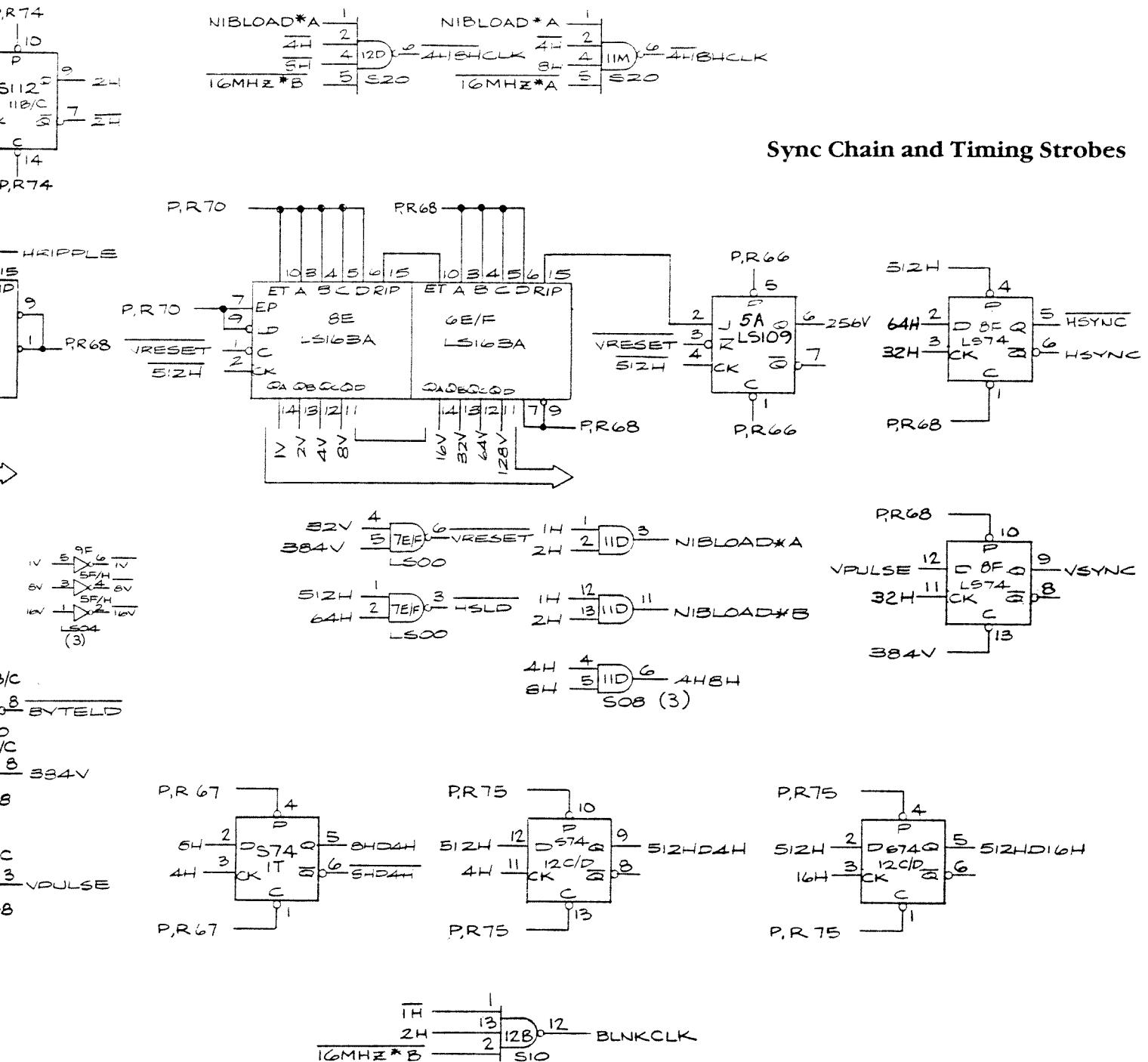
**RECEIVING THIS DRAWING**  
**CONFIDENTIAL:** Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.



# **TM APB Video PCB Schematic Diagram**

## Video Clock



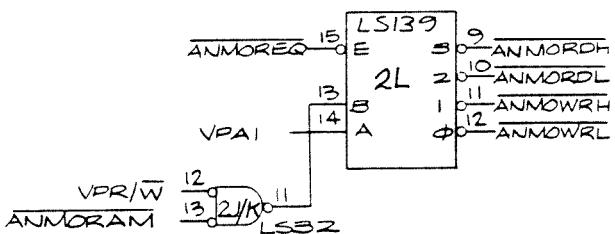
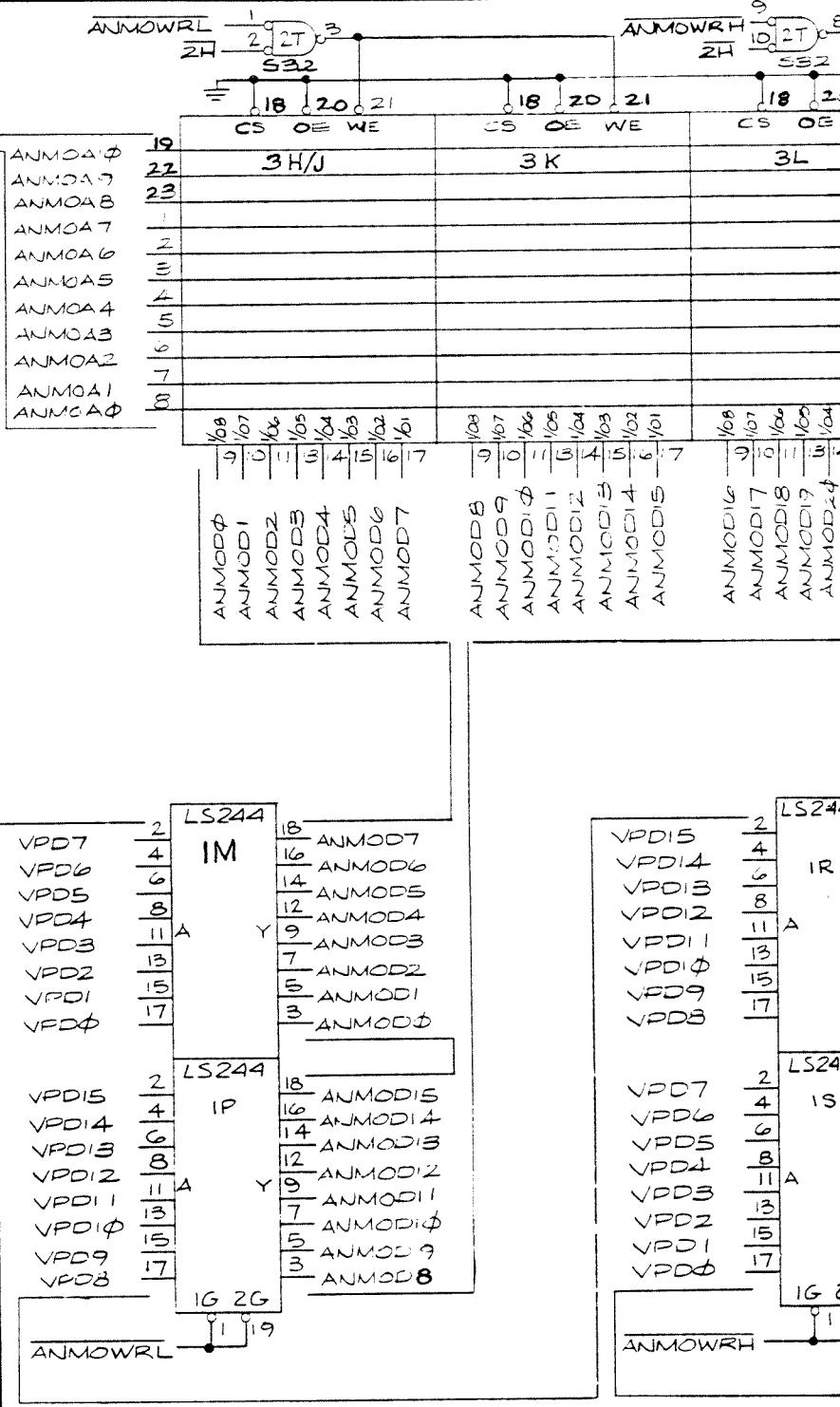
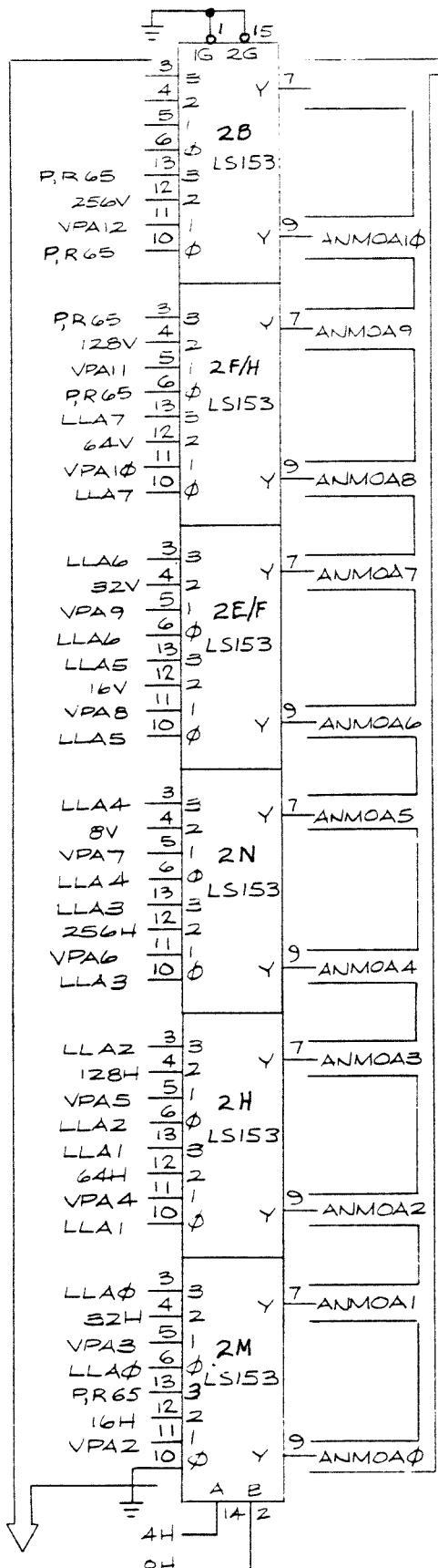


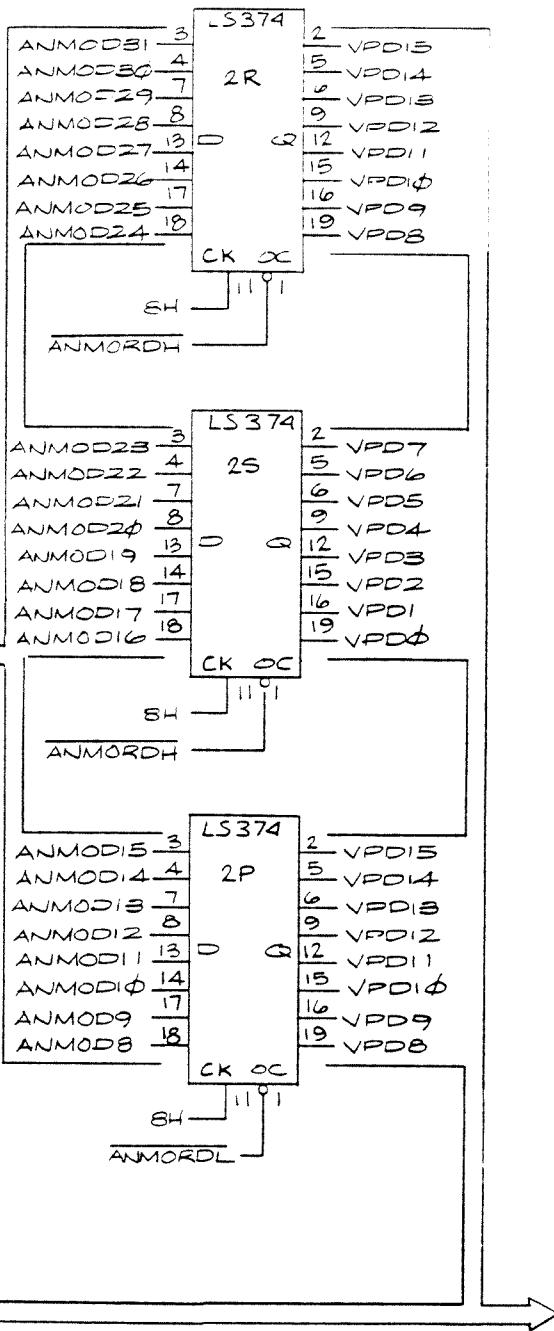
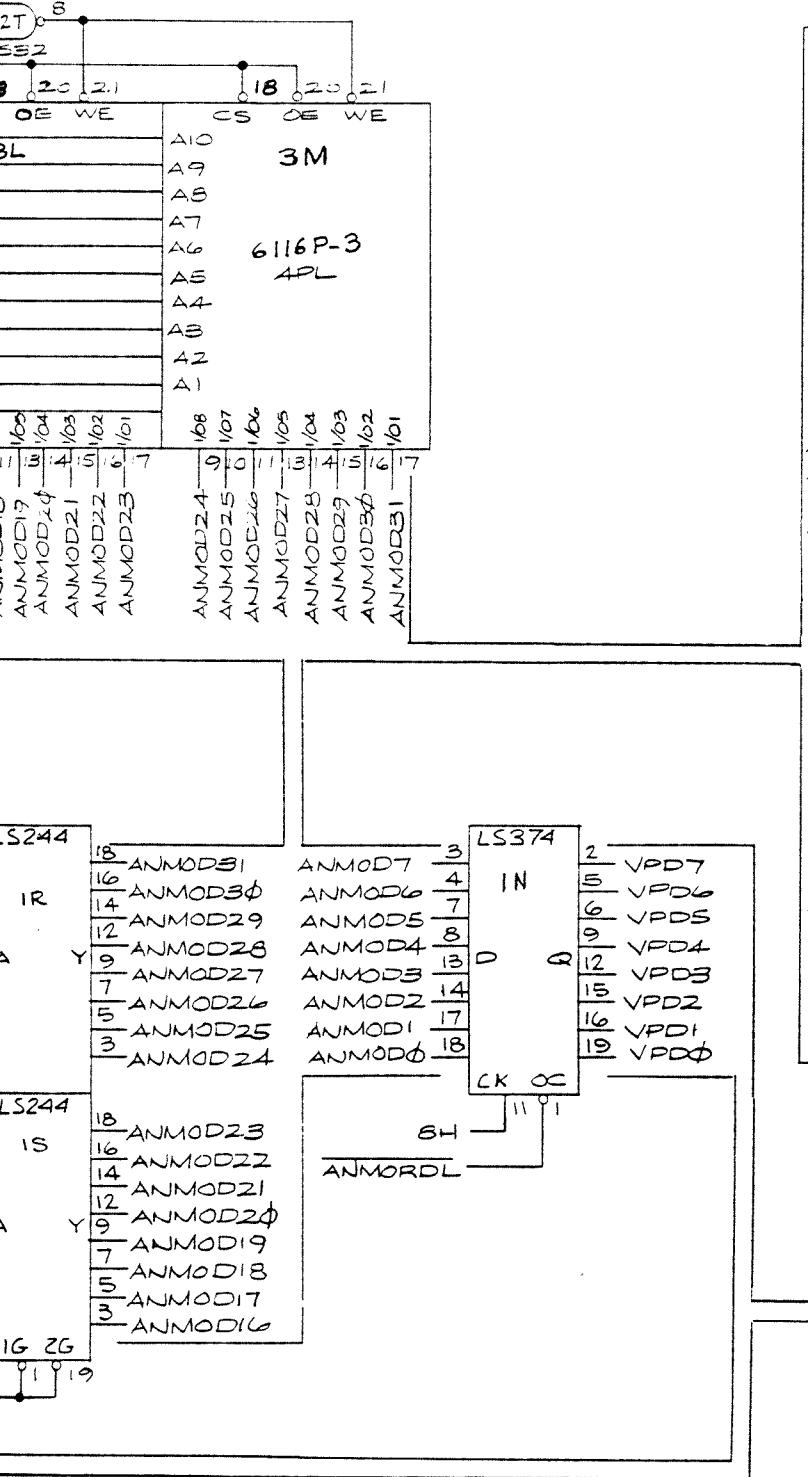
**NOTICE TO ALL PERSONS  
RECEIVING THIS DRAWING**

**RECEIVING THIS DRAWING**  
**CONFIDENTIAL:** Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.



# **APB™ Video PCB Schematic Diagram**





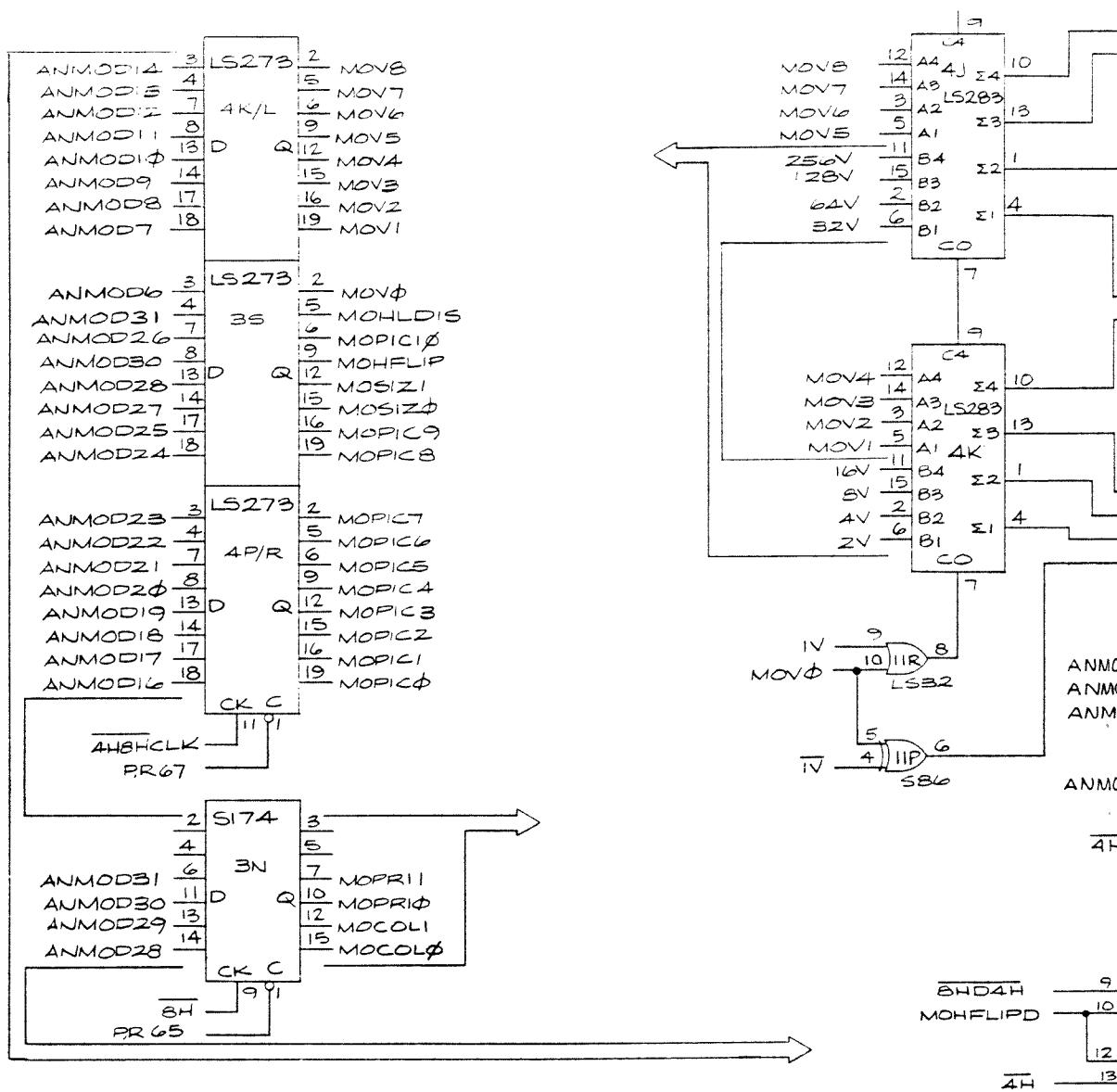
## Alphanumeric/Motion Object RAM

**NOTICE TO ALL PERSONS  
RECEIVING THIS DRAWING**

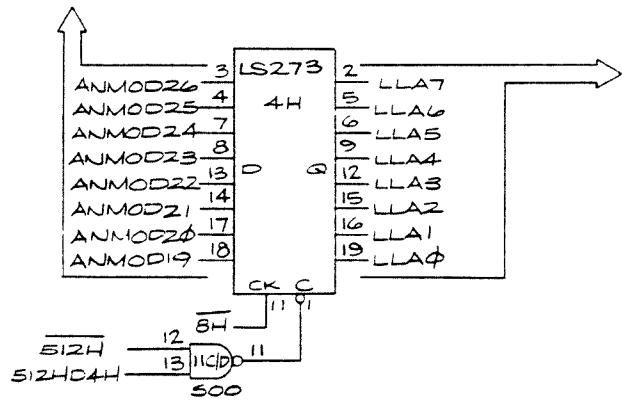
**CONFIDENTIAL:** Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.



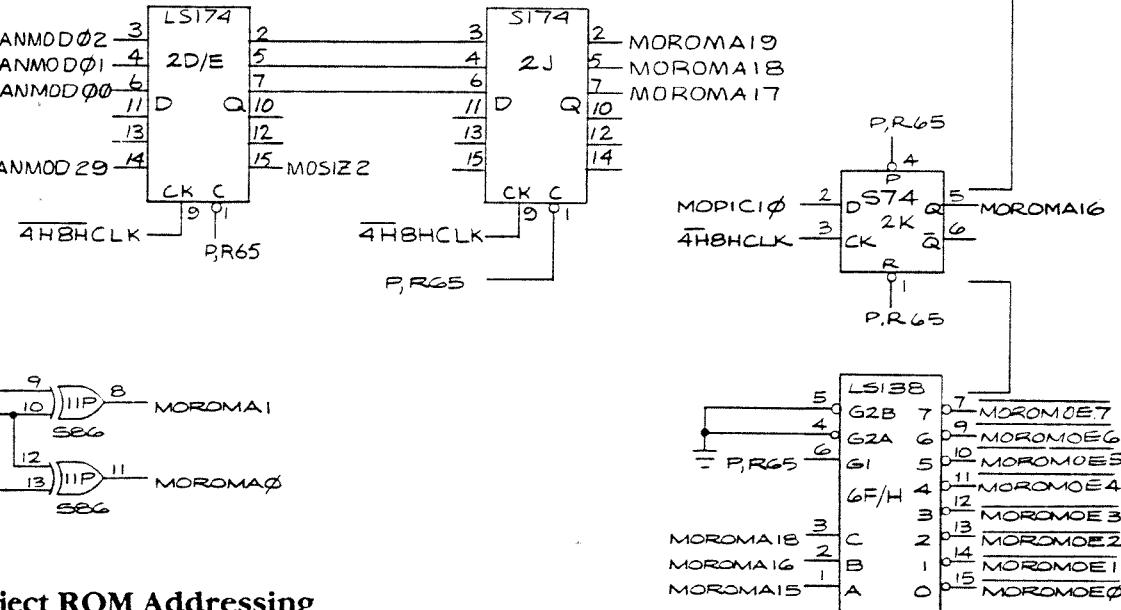
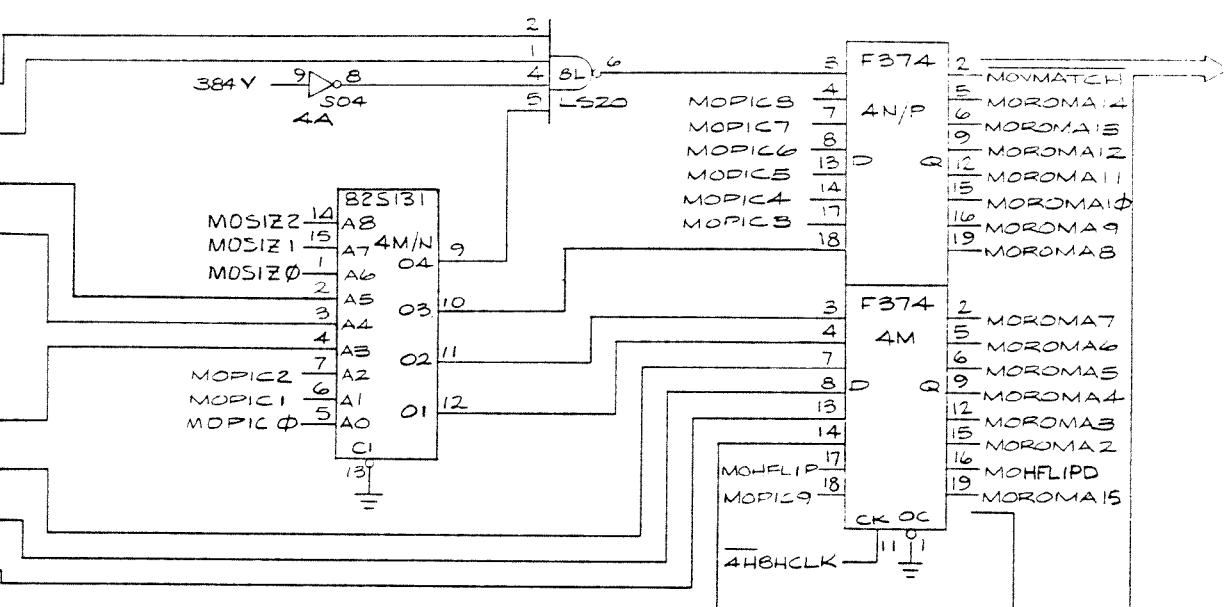
# **APB™ Video PCB Schematic Diagram**



## Motion Object



Link List Address Latch



## ject ROM Addressing

### NOTICE TO ALL PERSONS RECEIVING THIS DRAWING

CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

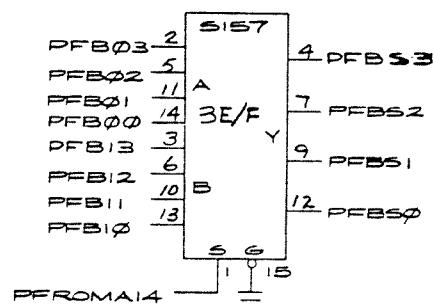
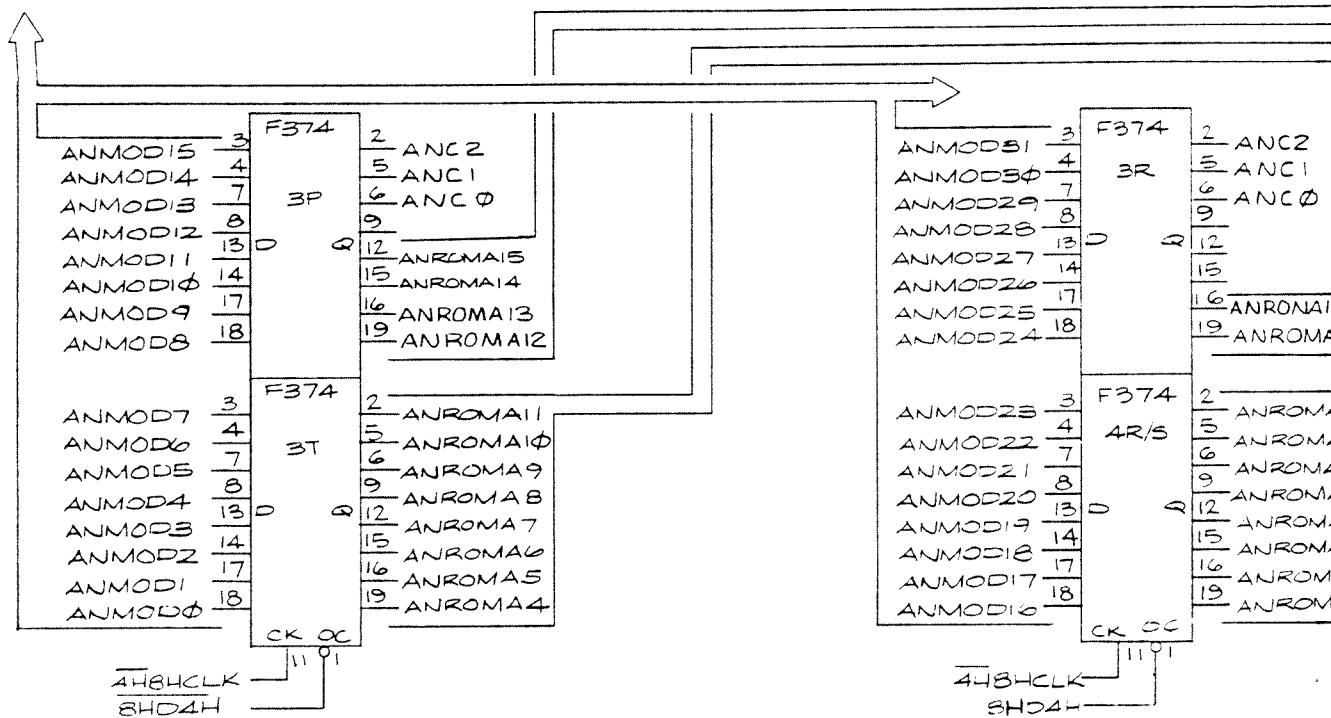


### APB™ Video PCB Schematic Diagram

© 1987 Atari Games Corporation

SP-308 Sheet 11A  
1st printing

## Alphanumeric ROM Addressing

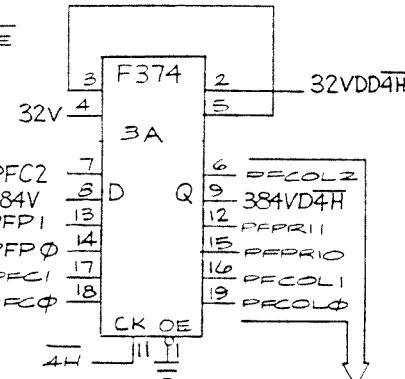
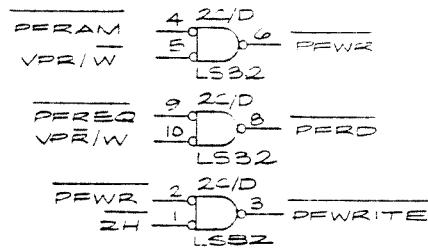


**Playfield Bank Select**

C2  
C1  
C0

DNA13  
ROMA12

ROMA11  
ROMA10  
ROMA9  
ROMA8  
ROMA7  
ROMA6  
ROMA5  
ROMA4



### Playfield Data Latch Strobes

#### NOTICE TO ALL PERSONS RECEIVING THIS DRAWING

CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

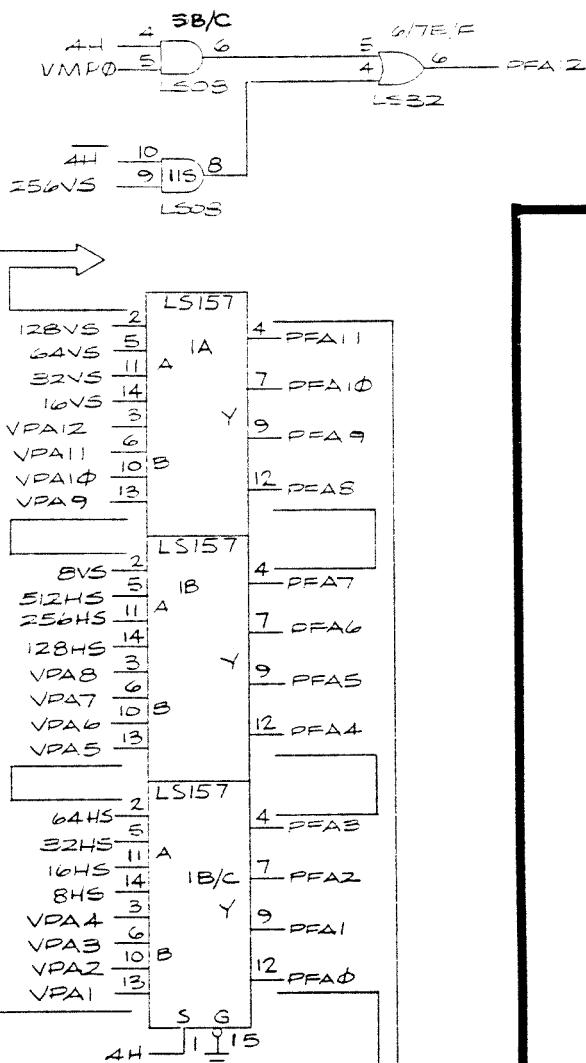


### APB™ Video PCB Schematic Diagram

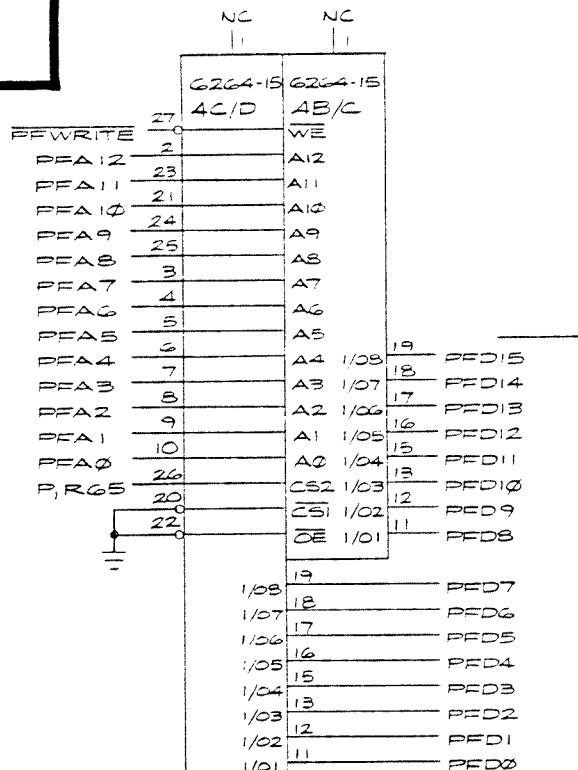
© 1987 Atari Games Corporation

SP-308 Sheet 11B  
1st printing

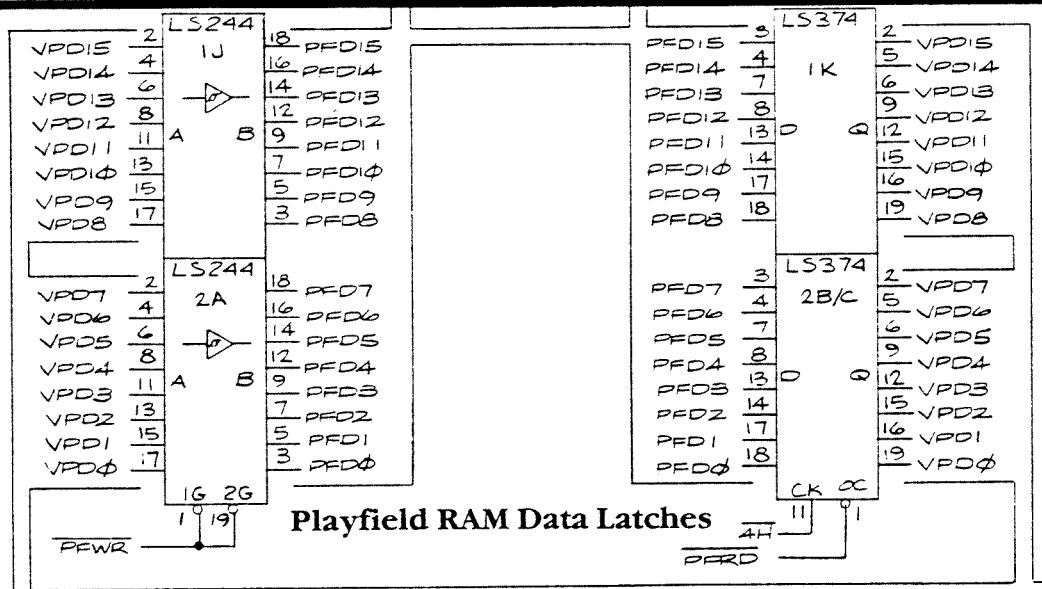
## Playfield RAM Addressing

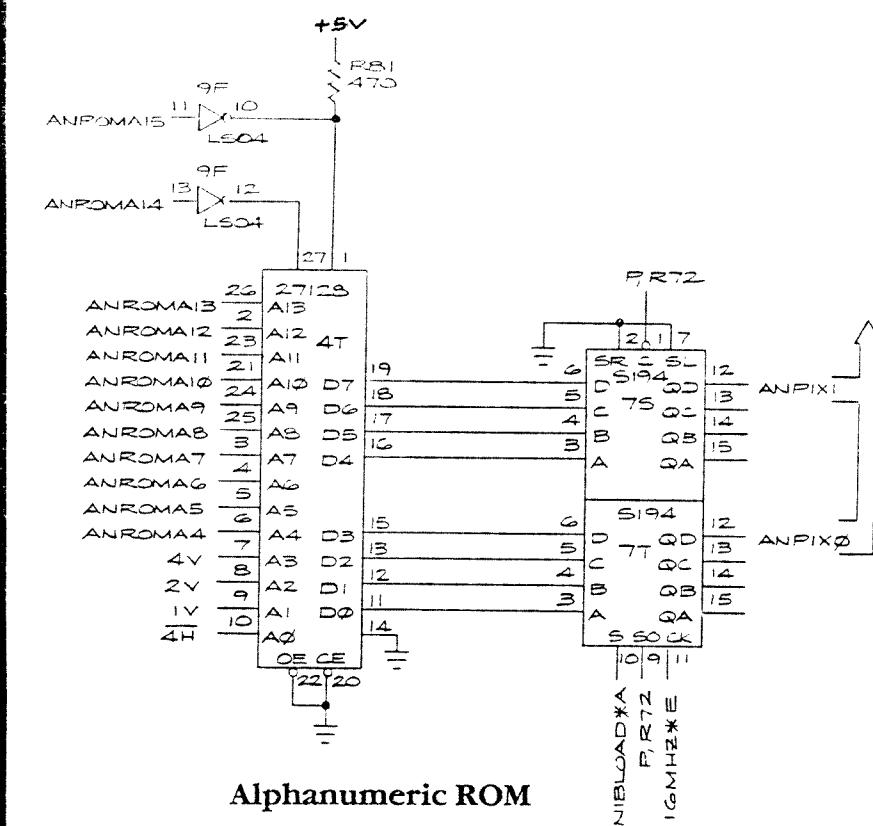


## Playfield RAM

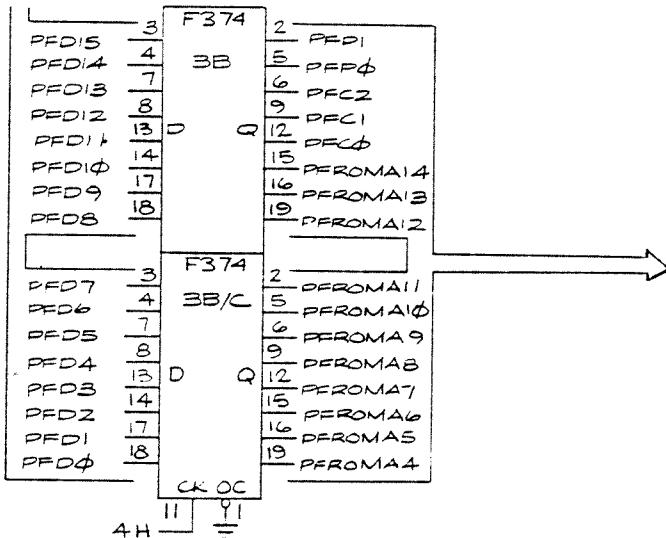


## **Playfield RAM Data Latches**





## Alphanumeric ROM



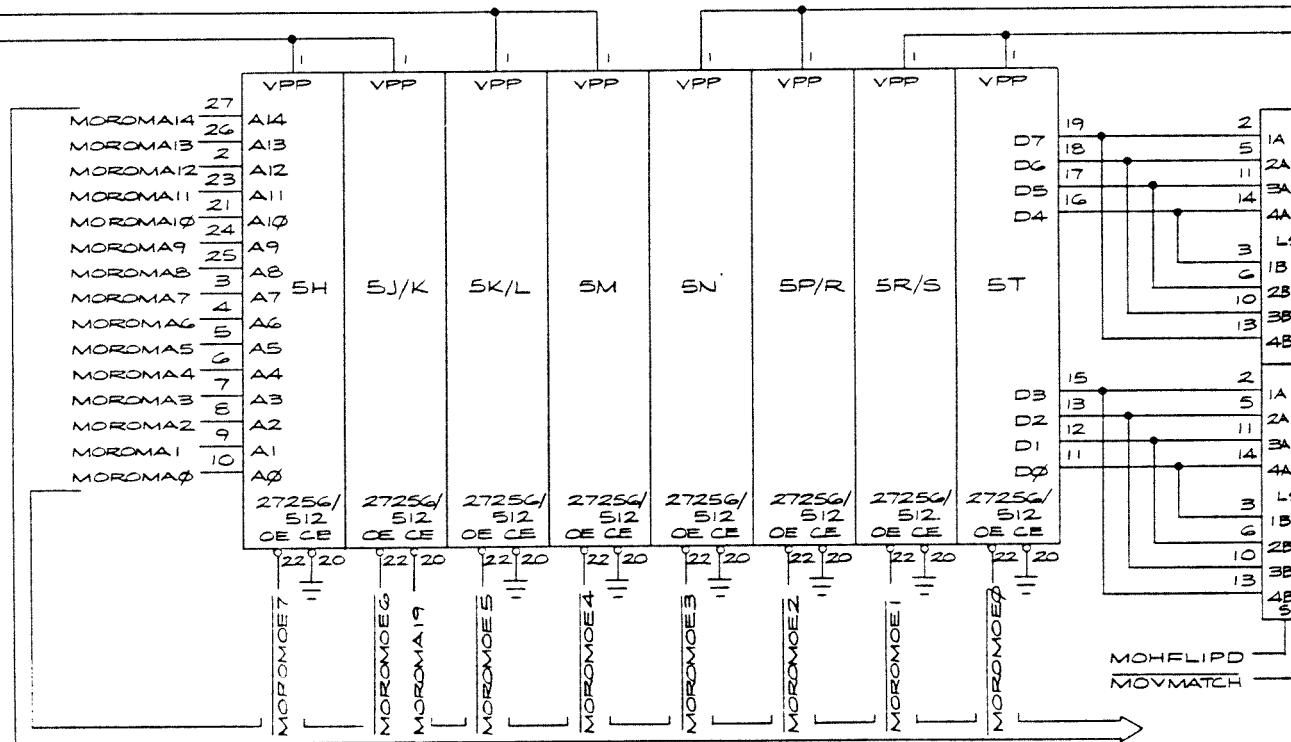
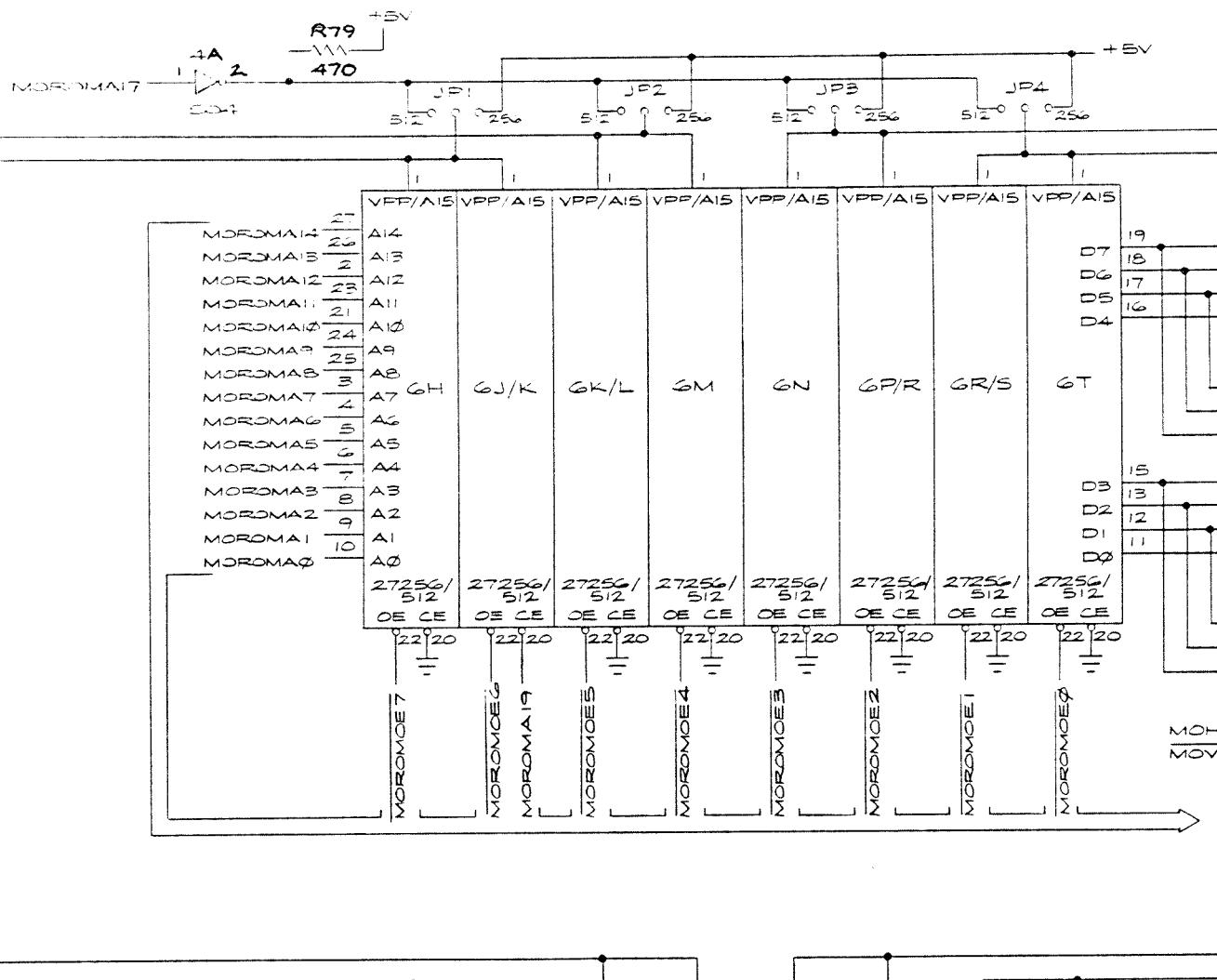
## Playfield ROM Addressing

**NOTICE TO ALL PERSONS  
RECEIVING THIS DRAWING**

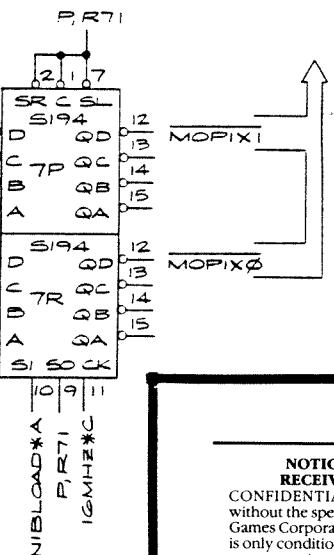
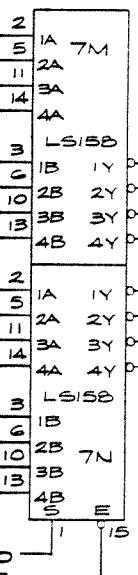
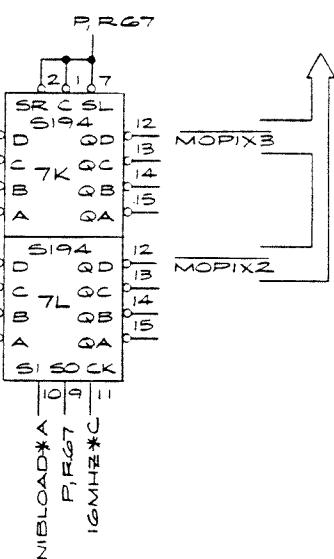
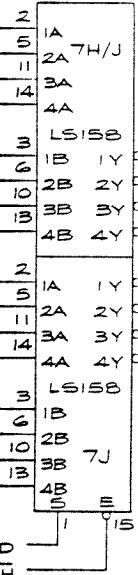
**CONFIDENTIAL:** Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.



# **APB™ Video PCB Schematic Diagram**



## Motion Object ROM



### NOTICE TO ALL PERSONS RECEIVING THIS DRAWING

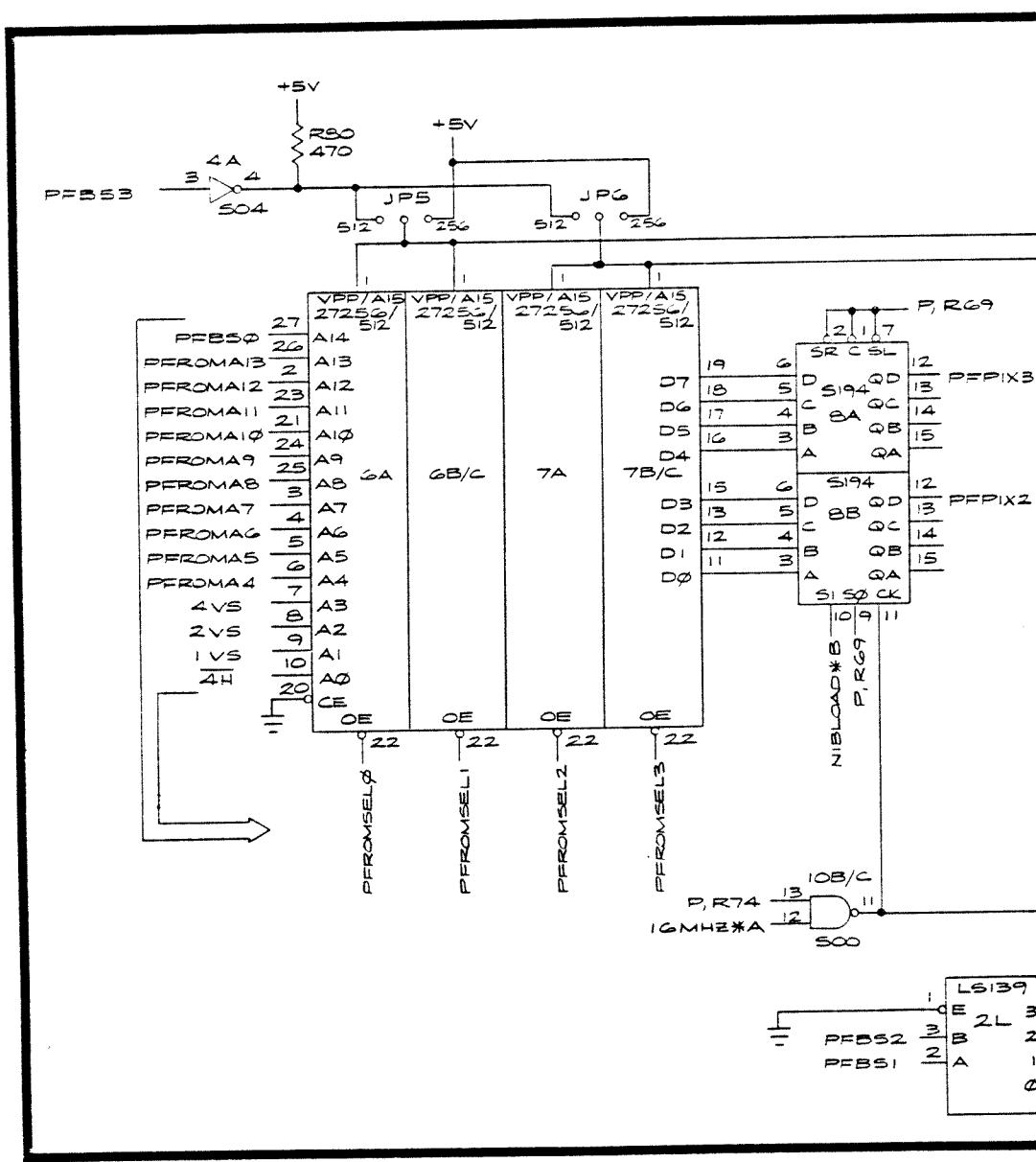
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

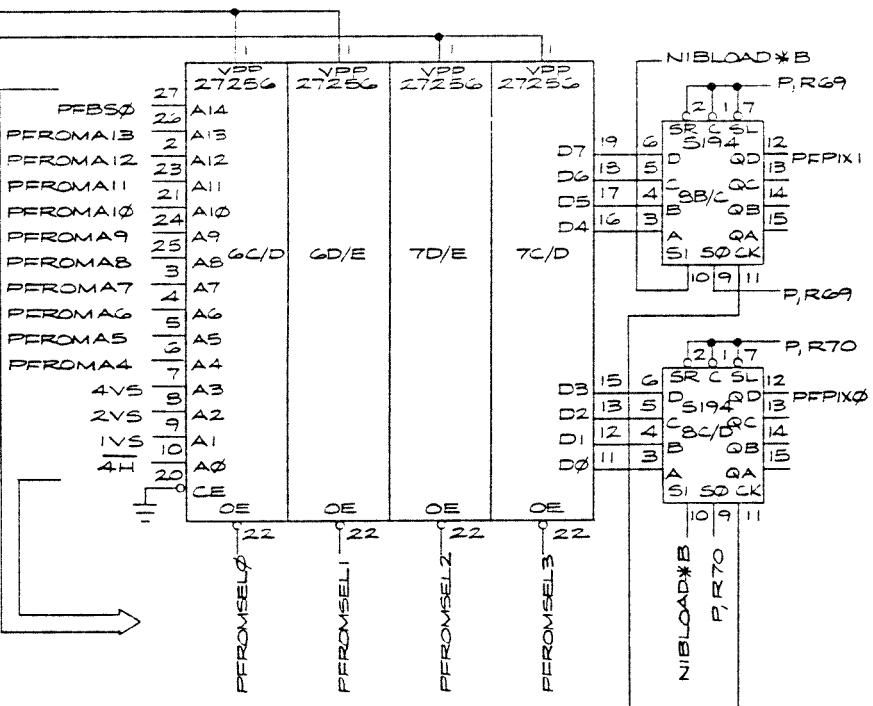


### APB™ Video PCB Schematic Diagram

© 1987 Atari Games Corporation

SP-308 Sheet 12B  
1st printing





### Playfield ROM

5139	7	
2L	3	PROMSEL3
3	2	PROMSEL2
4	1	PROMSEL1
5	0	PROMSEL0

#### NOTICE TO ALL PERSONS RECEIVING THIS DRAWING

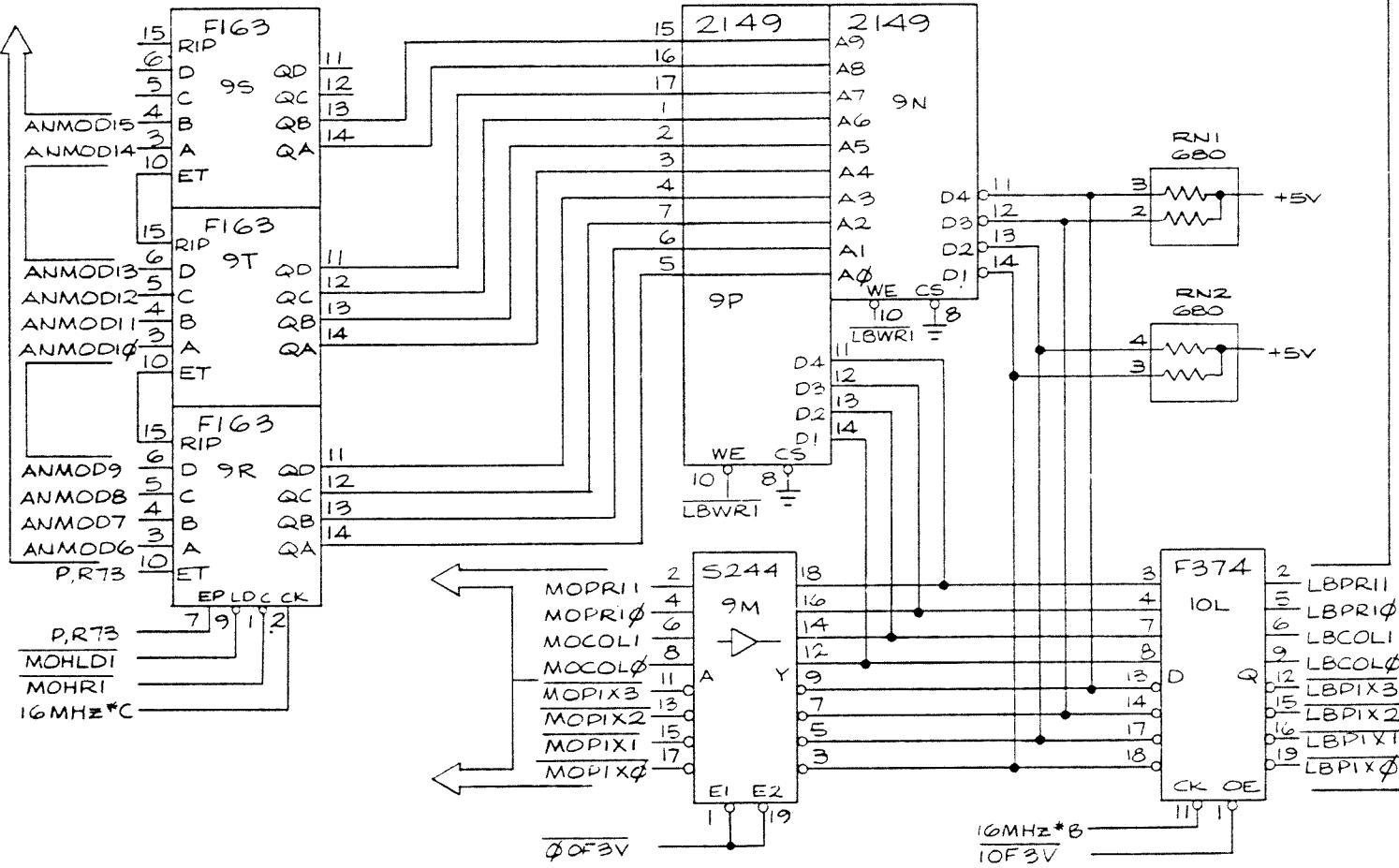
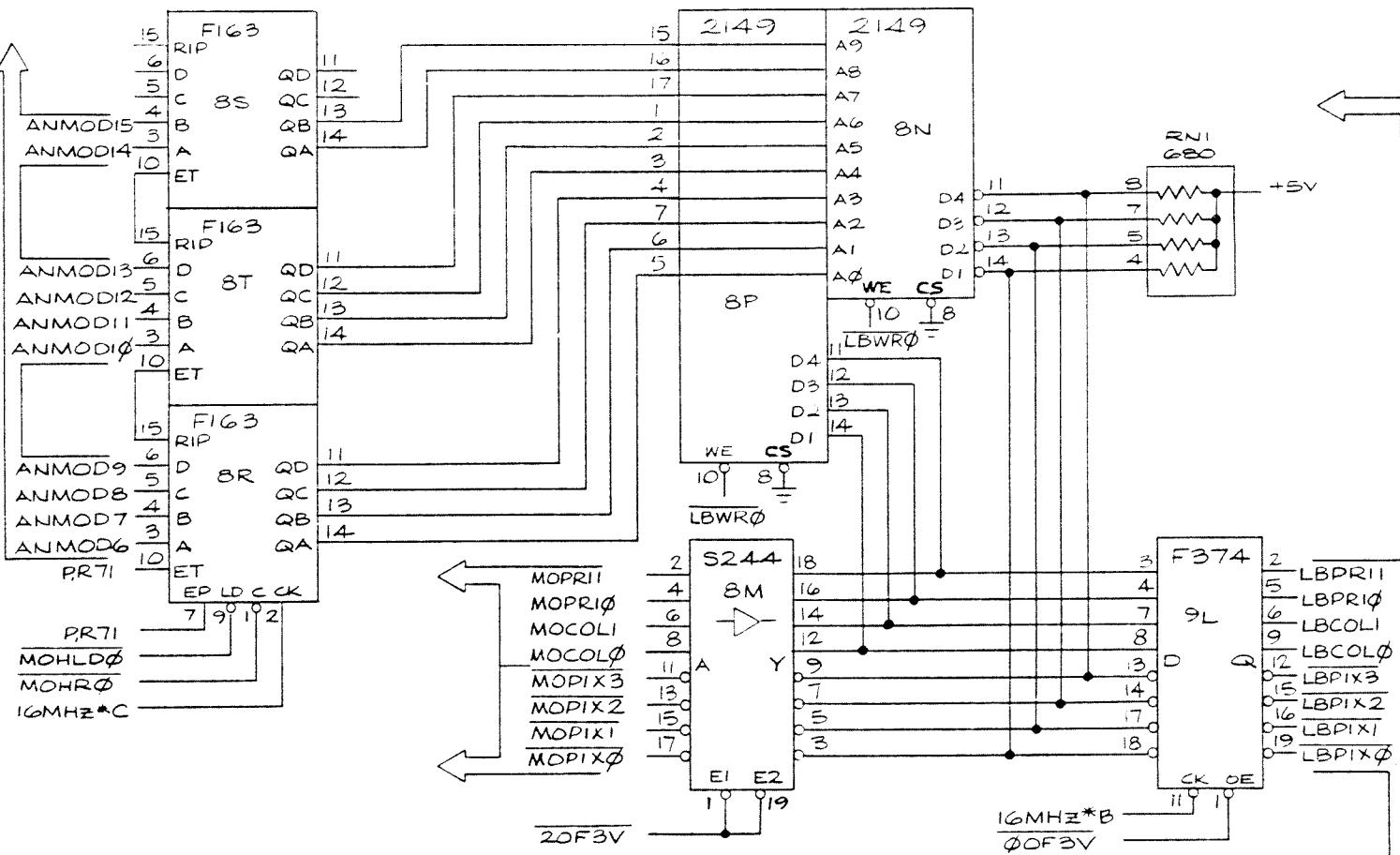
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

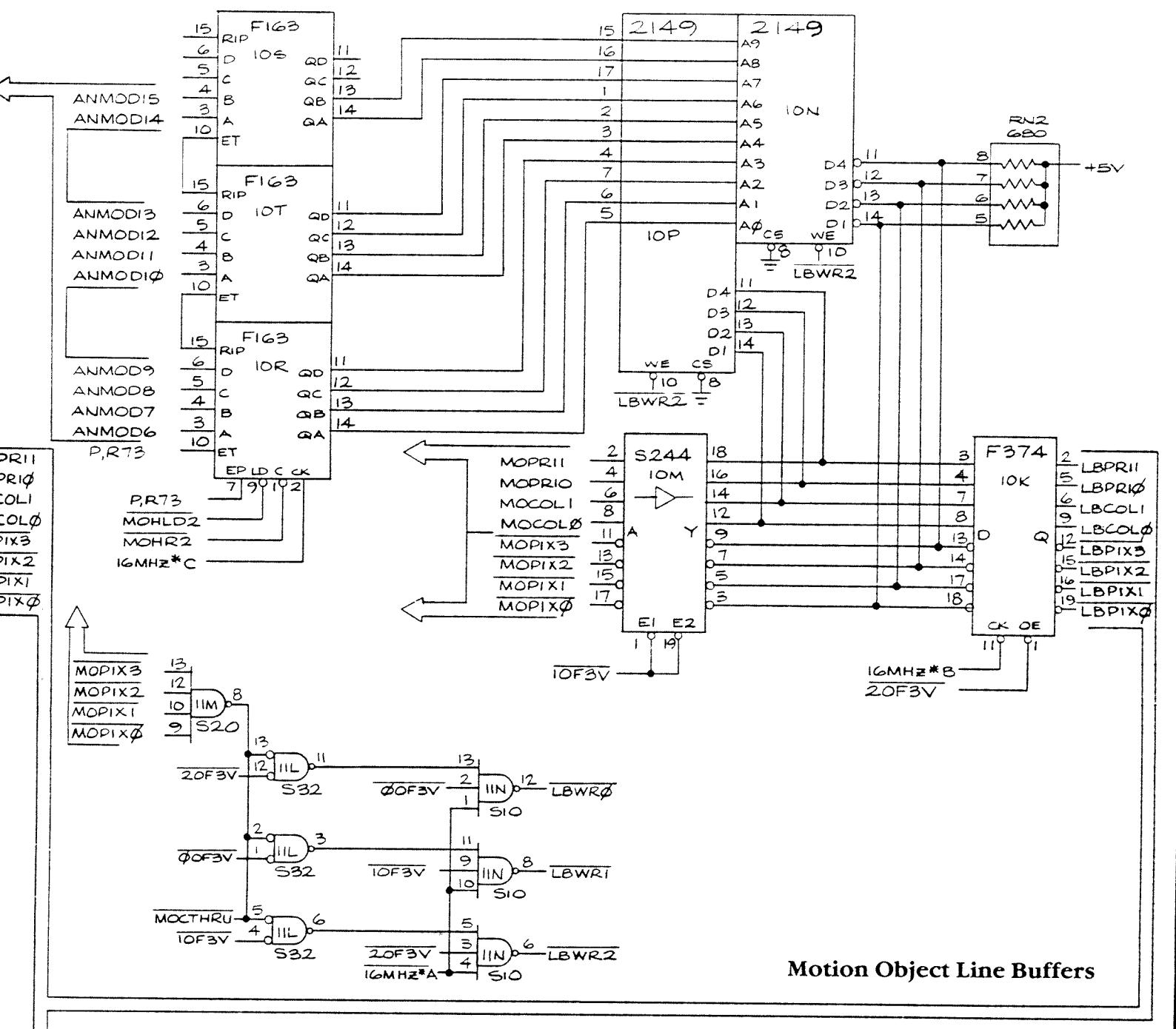


### APB™ Video PCB Schematic Diagram

© 1987 Atari Games Corporation

SP-308 Sheet 13A  
1st printing





Motion Object Line Buffers

**NOTICE TO ALL PERSONS RECEIVING THIS DRAWING**

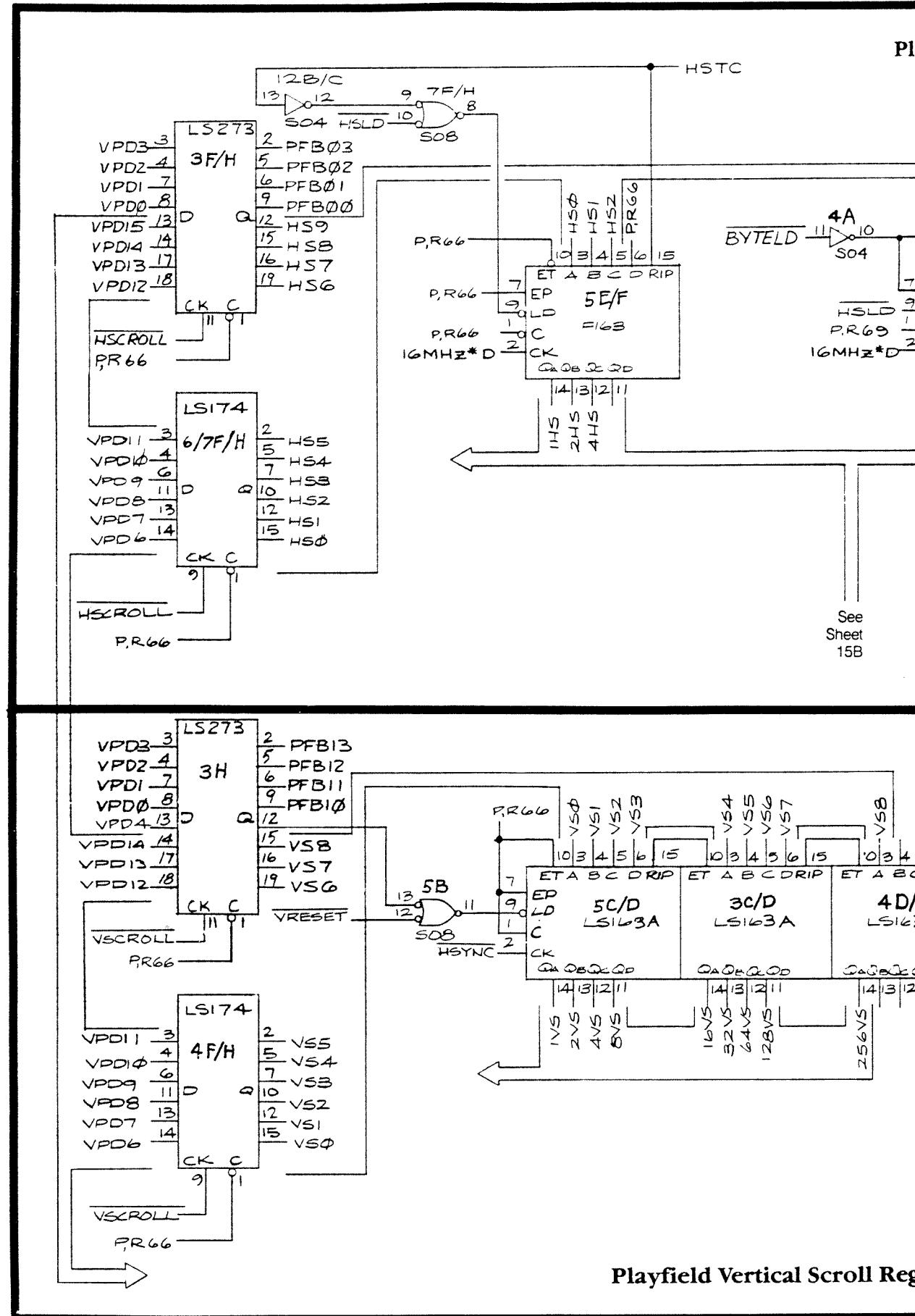
CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.



**APB™ Video PCB  
Schematic Diagram**

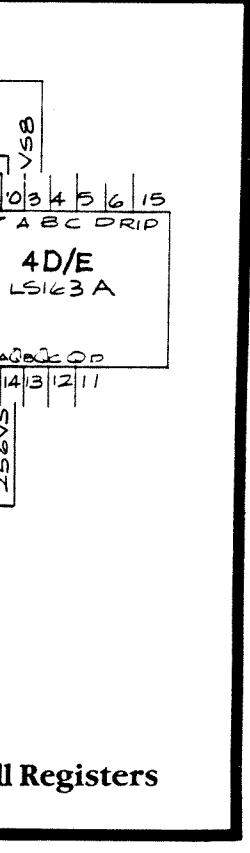
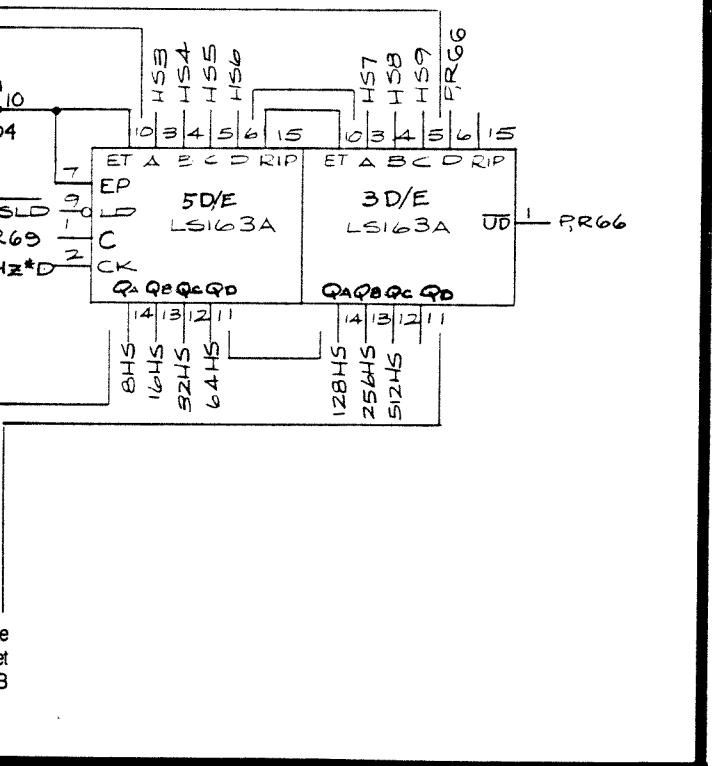
© 1987 Atari Games Corporation

SP-308 Sheet 13B  
1st printing



Playfield Vertical Scroll Reg

# Playfield Horizontal Scroll Registers



## NOTICE TO ALL PERSONS RECEIVING THIS DRAWING

CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with written permission from the corporation.

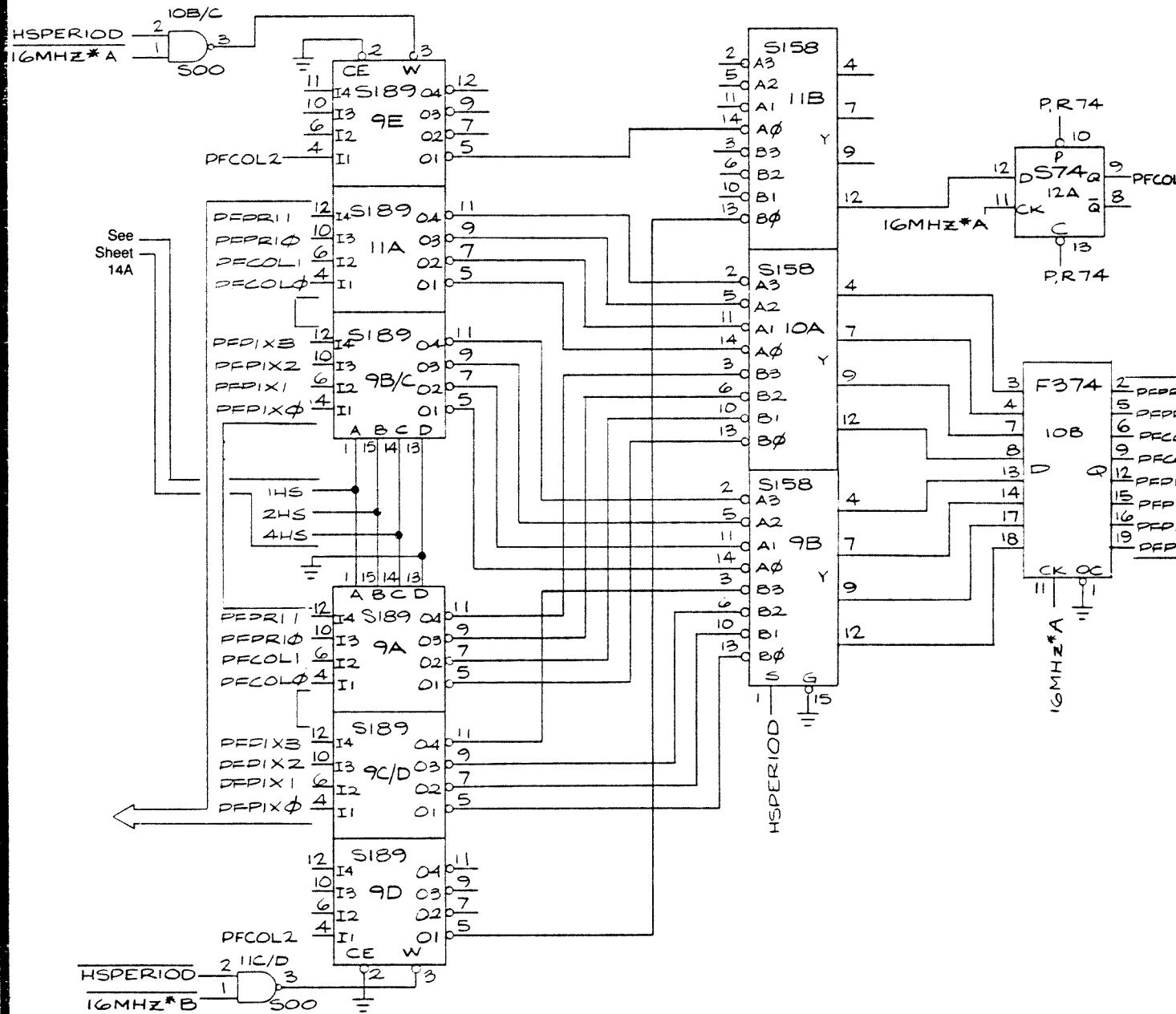
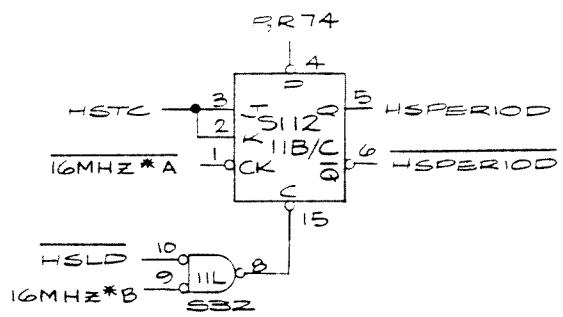


## APB™ Video PCB Schematic Diagram

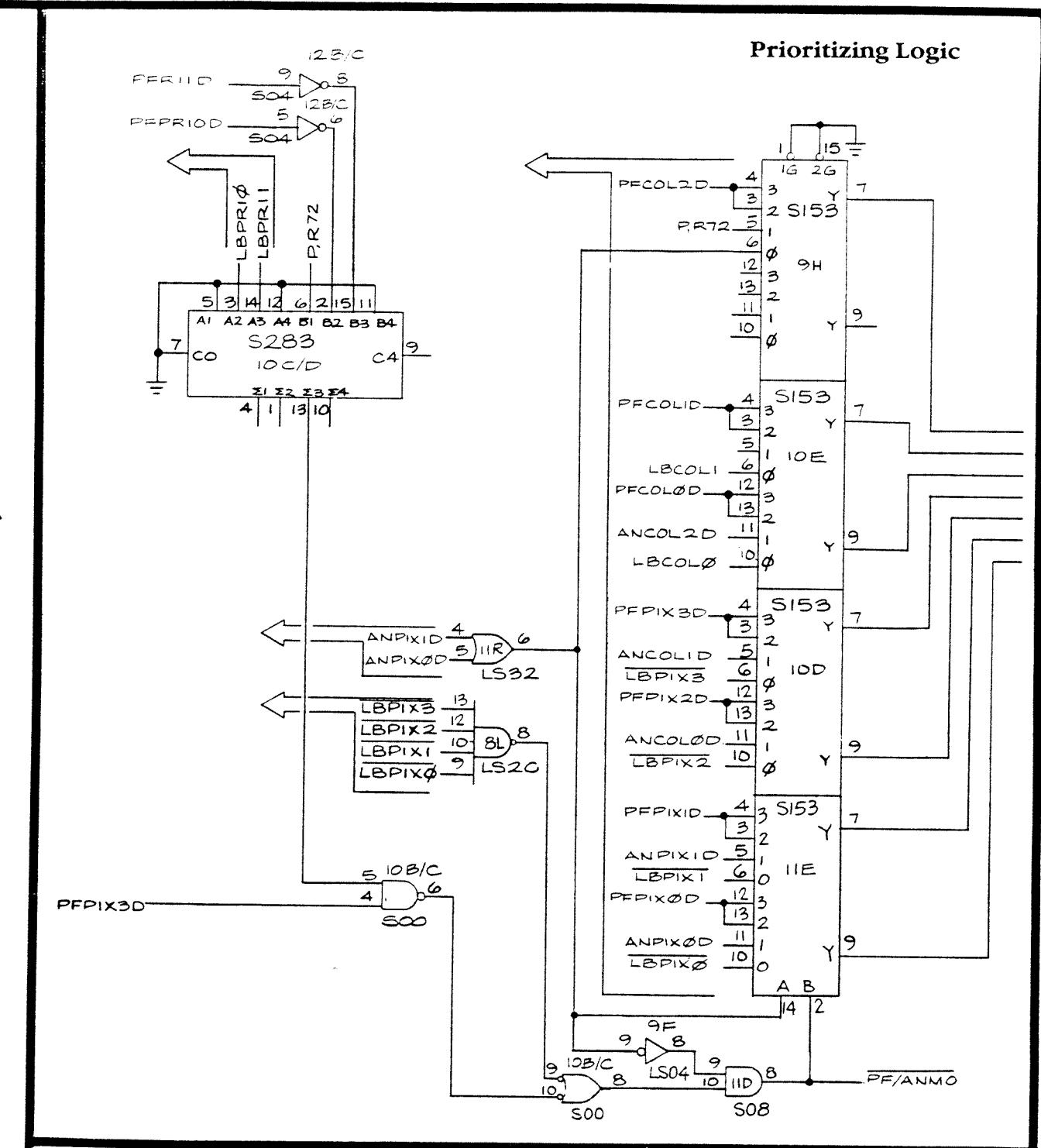
© 1987 Atari Games Corporation

SP-308 Sheet 14A  
1st printing

## Playfield Scrolling



## Prioritizing Logic



Continued on  
Sheet  
15A

**NOTICE TO ALL PERSONS RECEIVING THIS DRAWING**  
 CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

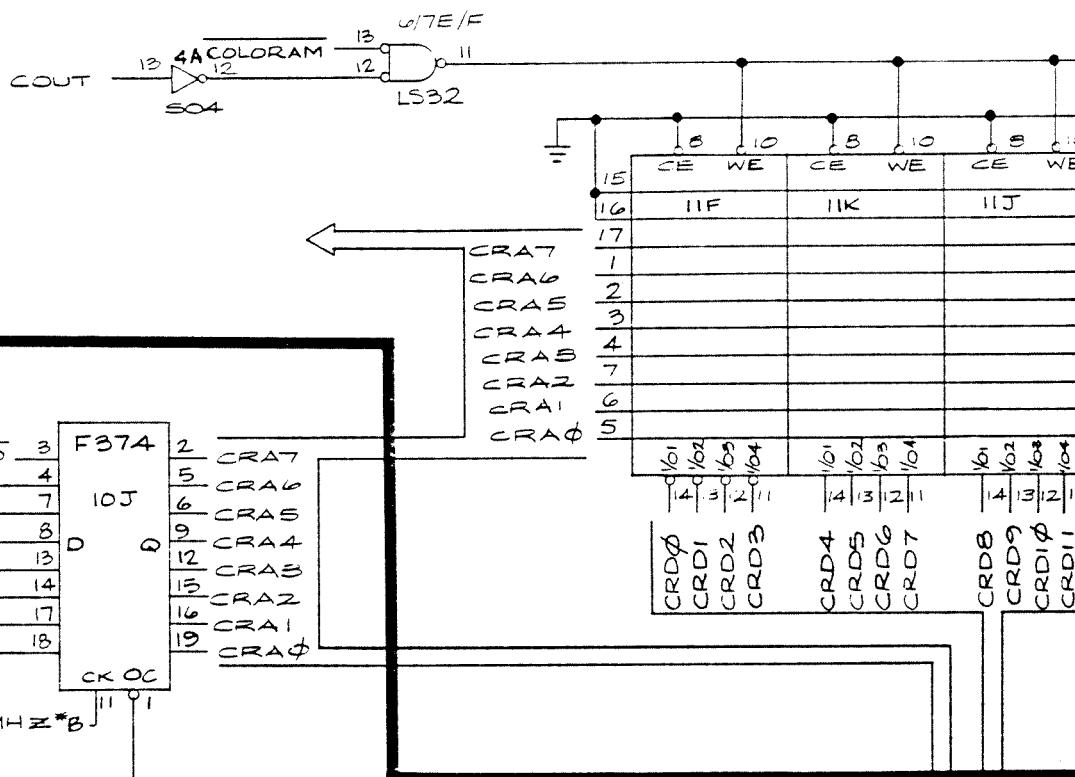


**APB™ Video PCB Schematic Diagram**

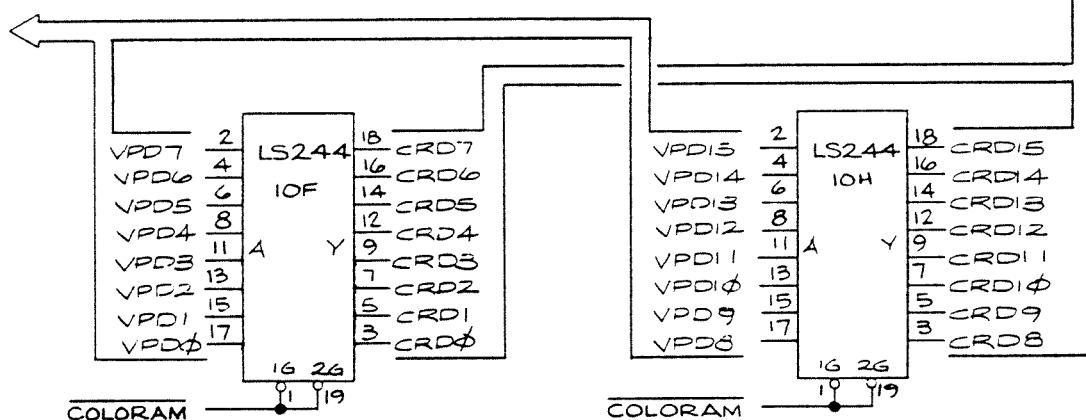
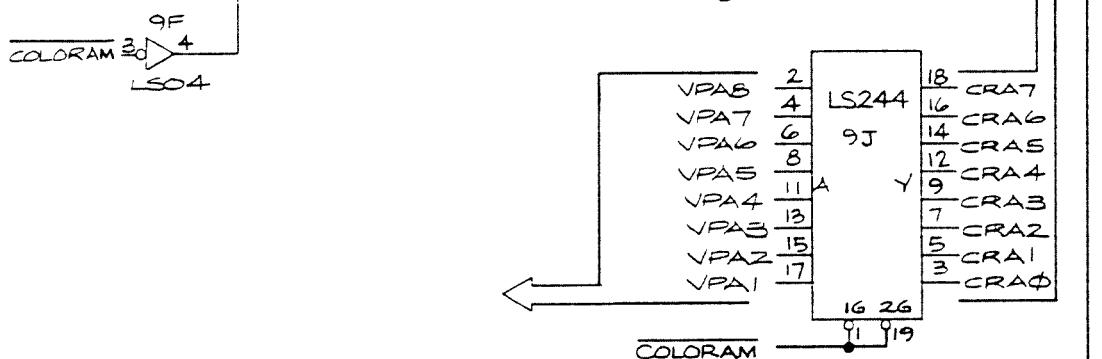
© 1987 Atari Games Corporation

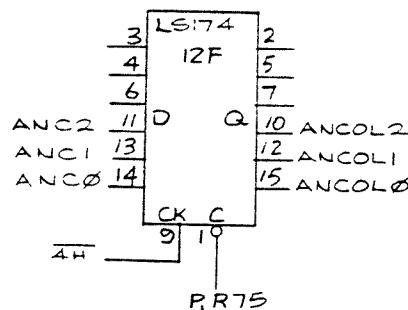
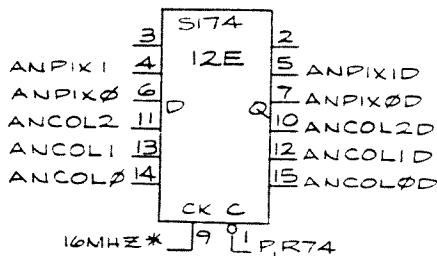
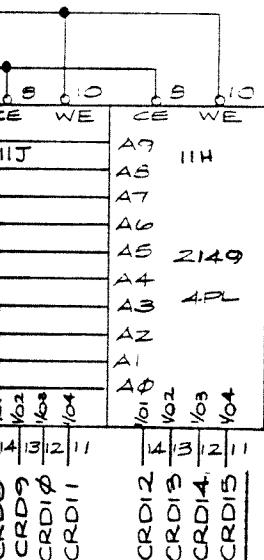
**SP-308 Sheet 14B**  
**1st printing**

## Color RAM



## Color RAM Addressing and Data Buffers





### Alphanumeric Color Palettes Selects

#### NOTICE TO ALL PERSONS RECEIVING THIS DRAWING

CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

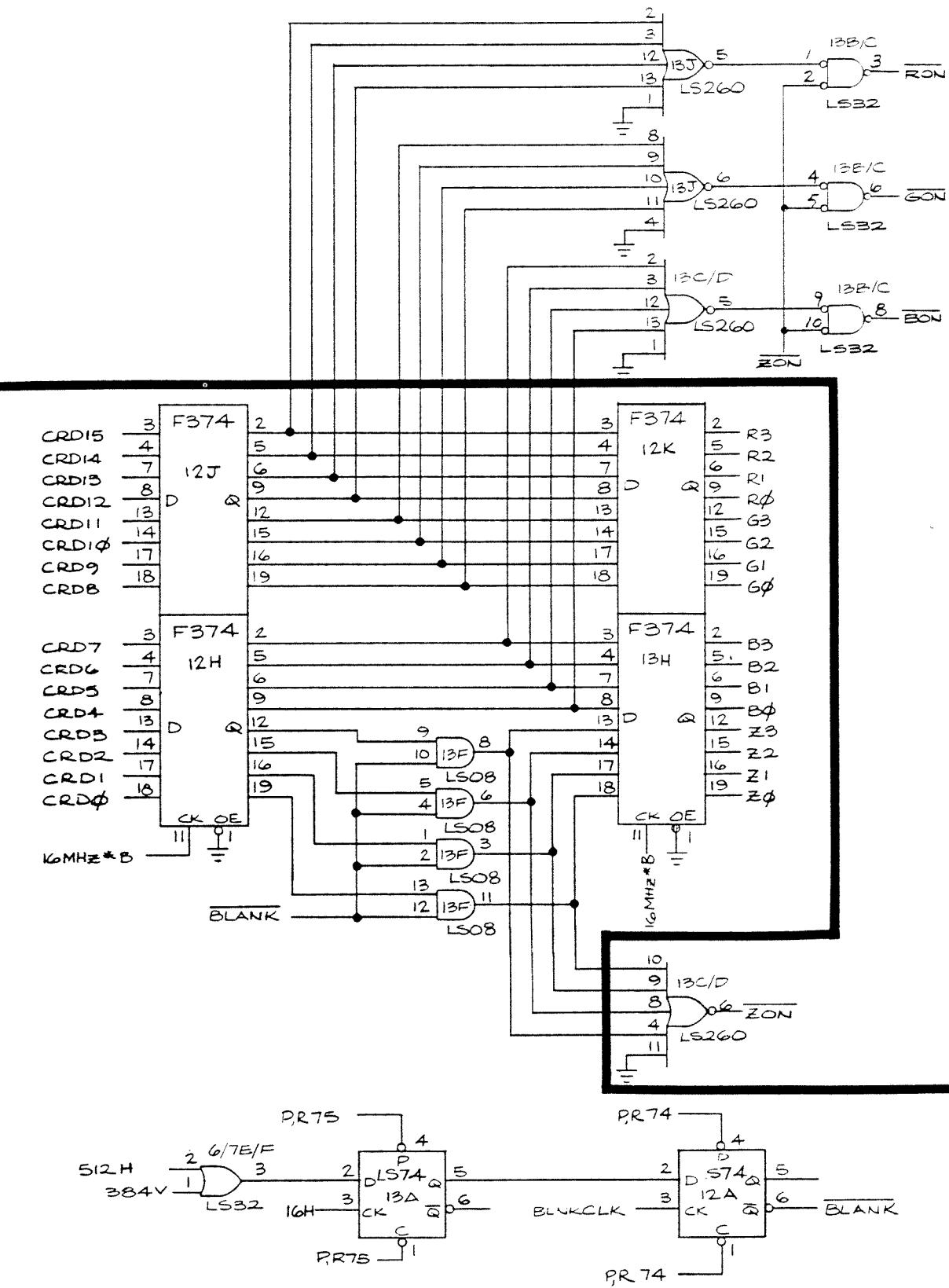


**APB™ Video PCB  
Schematic Diagram**

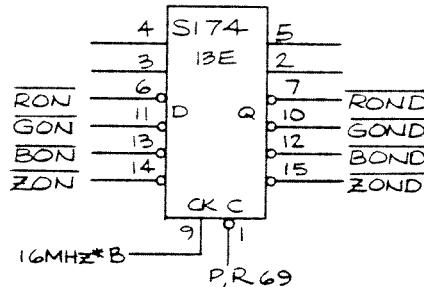
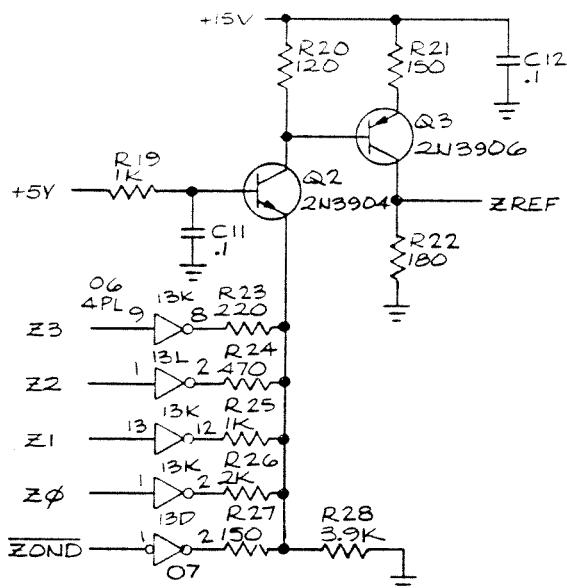
© 1987 Atari Games Corporation

SP-308 Sheet 15A  
1st printing

## Video Intensity Control and Driver Enables



## Data Latches and Blanking



**NOTICE TO ALL PERSONS  
RECEIVING THIS DRAWING**

CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

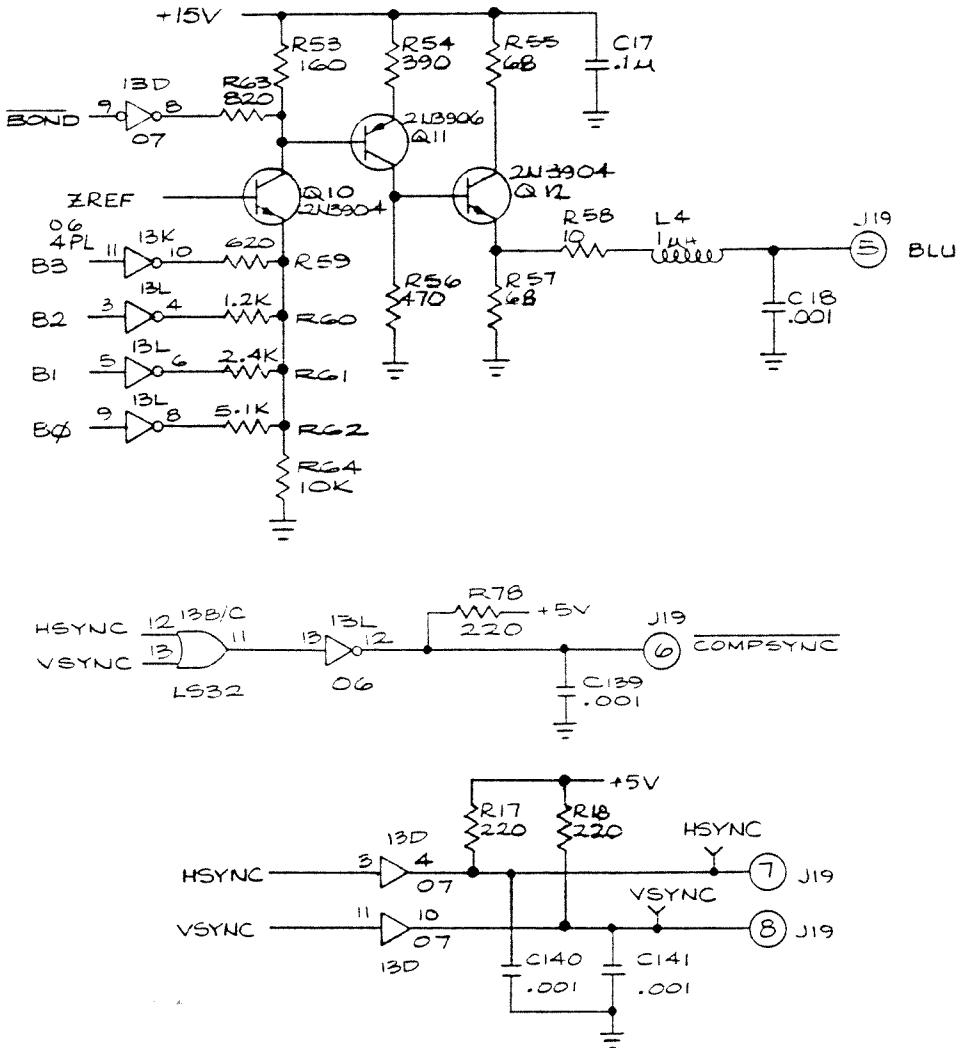


**APB™ Video PCB  
Schematic Diagram**

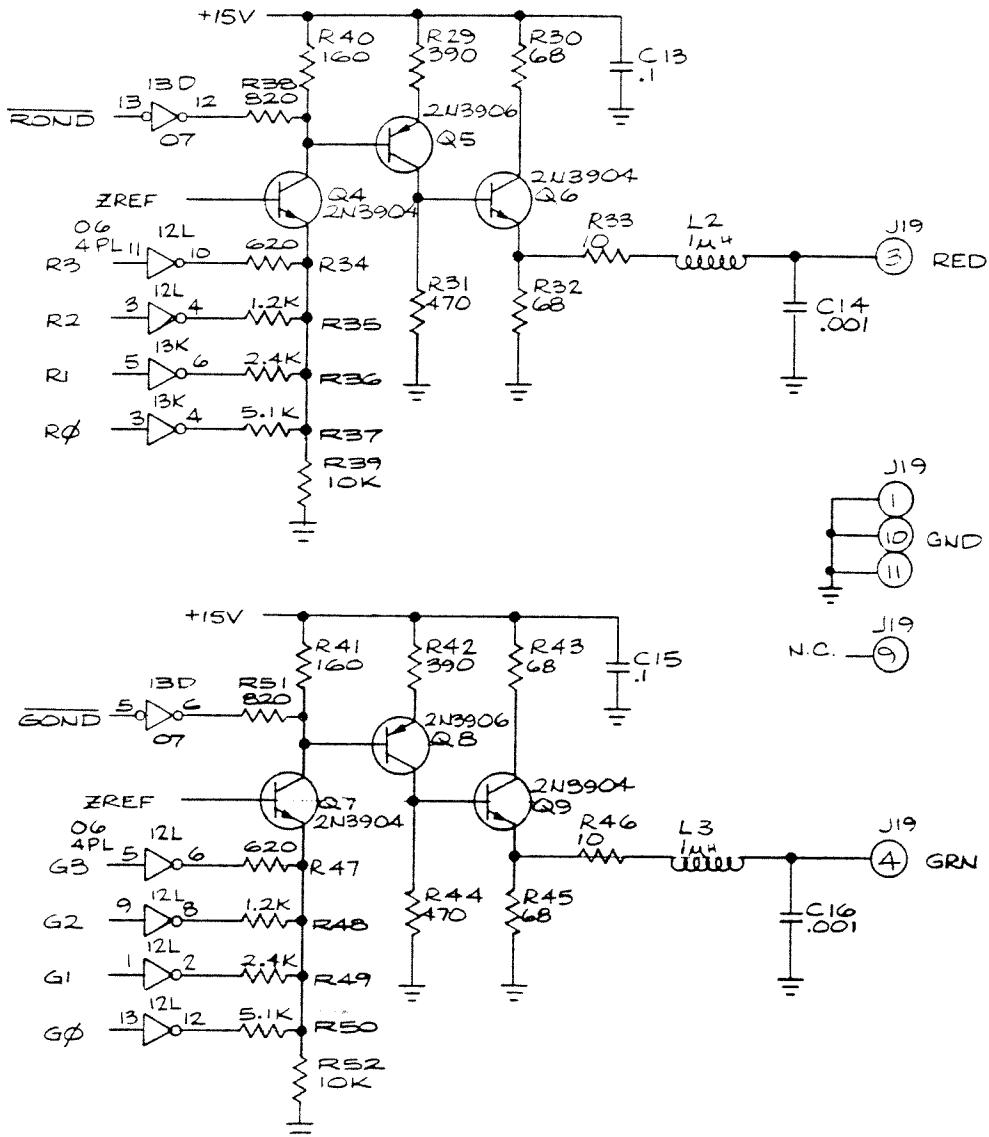
© 1987 Atari Games Corporation

**SP-308 Sheet 15B  
1st printing**

## Output D



## Input Drivers



### NOTICE TO ALL PERSONS RECEIVING THIS DRAWING

CONFIDENTIAL: Reproduction forbidden without the specific written permission of Atari Games Corporation, Milpitas, CA. This drawing is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the drawing or any design or technical information shown thereon, nor any right to reproduce this drawing or any part thereof. Except for manufacture by vendors of Atari Games Corporation, and for manufacture under the corporation's written license, no right is granted to reproduce this drawing or the subject matter thereof, unless by written agreement with or written permission from the corporation.

**APB™ Video PCB  
Schematic Diagram**



© 1987 Atari Games Corporation

SP-308 Sheet 16A  
1st printing