

16-10159.1  
OCTOBER, 1995

# **WPC-95 SCHEMATIC MANUAL**

**WILLIAMS ELECTRONICS GAMES, INC.  
MIDWAY MANUFACTURING COMPANY  
3401 NORTH CALIFORNIA AVENUE  
CHICAGO, ILLINOIS 60618**

## TABLE OF CONTENTS

(manual revised 10/31/95)

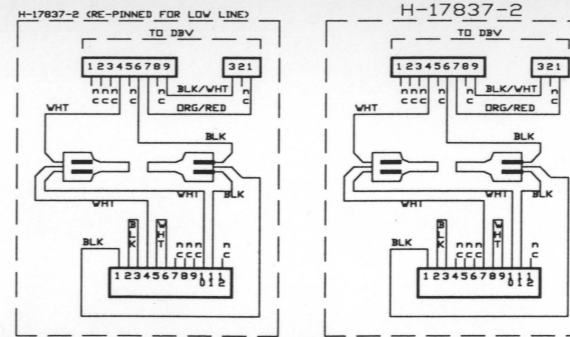
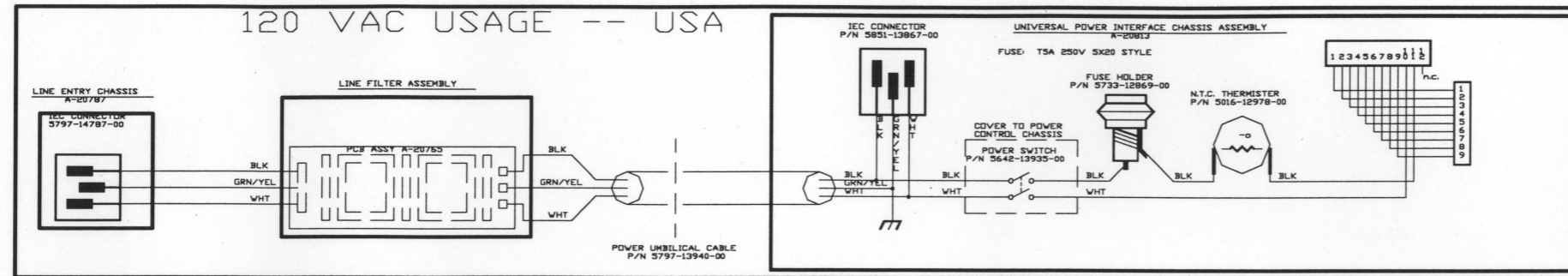
|  |    |
|--|----|
| Power Wiring Diagram.....                                | 1  |
| CPU Board Schematic.....                                 | 3  |
| Power Driver Board Schematic.....                        | 4  |
| Audio Visual Board Schematic.....                        | 6  |
| Dot Matrix Display Driver Board Schematic (Babcock)..... | 10 |
| Dot Matrix Display Driver Board Schematic (Cherry).....  | 11 |

Williams Electronics Games, Inc. reserves the rights to make modifications and improvements to its products. The specifications and parts identified in this manual are subject to change without notice.

Midway Manufacturing Company reserves the rights to make modifications and improvements to its products. The specifications and parts identified in this manual are subject to change without notice.

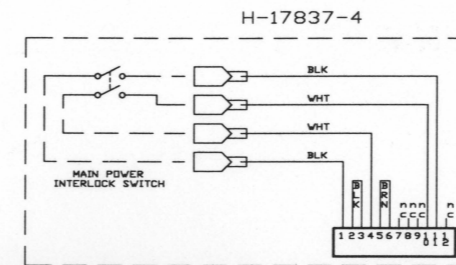
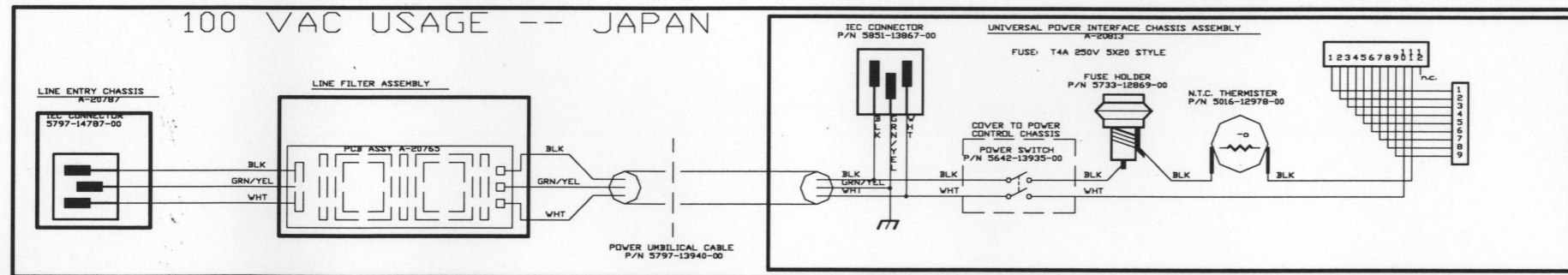
CISPR14 LINE FILTER POWER ASSEMBLY  
A-20764

120 VAC USAGE -- USA



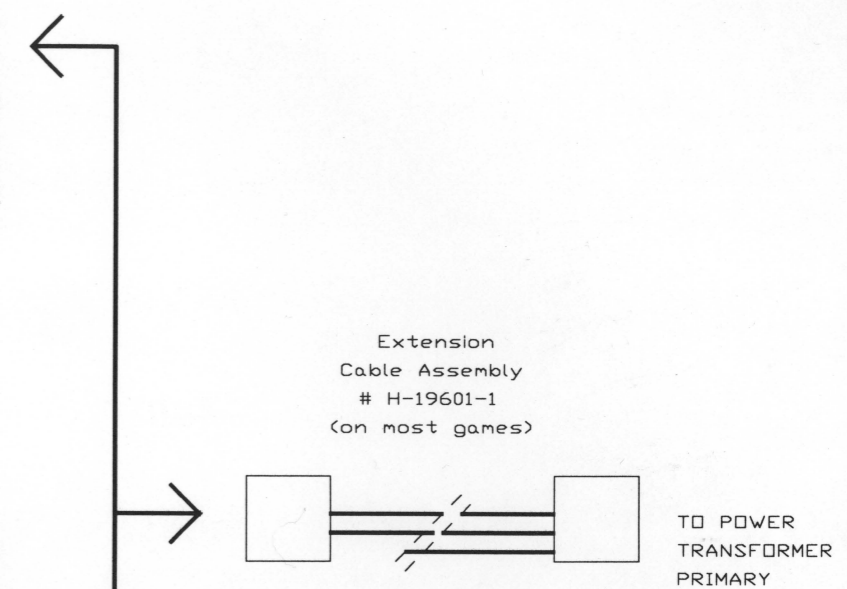
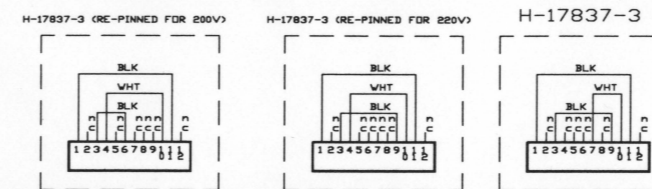
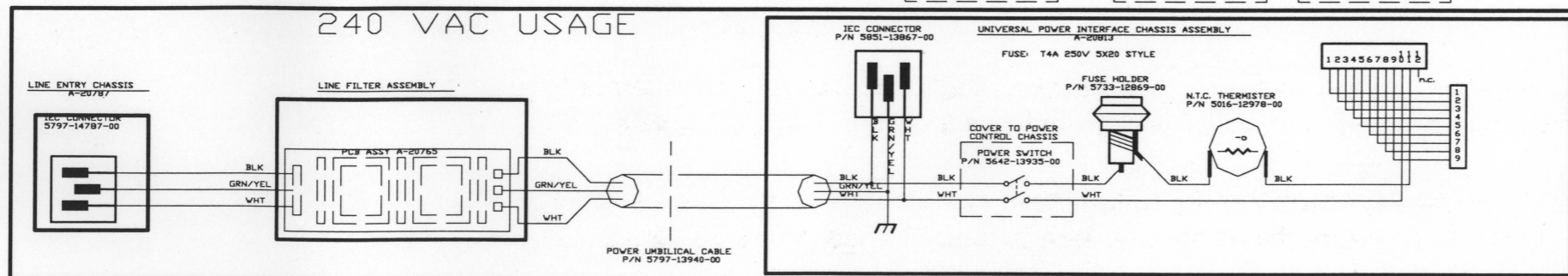
CISPR14 LINE FILTER POWER ASSEMBLY  
A-20764

100 VAC USAGE -- JAPAN

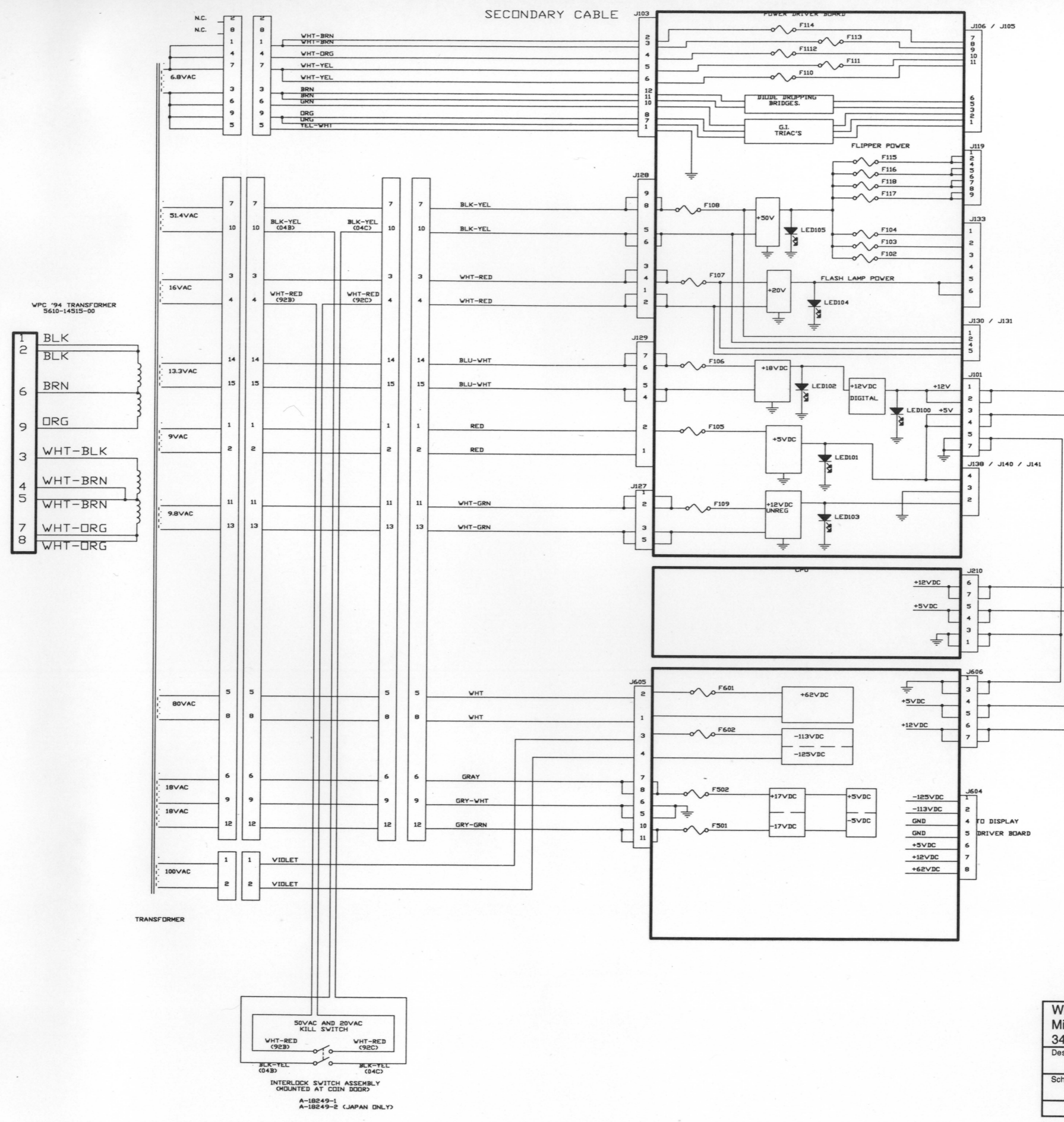


CISPR14 LINE FILTER POWER ASSEMBLY  
A-20764

240 VAC USAGE



|  |                      |
|--|----------------------|
| Williams Electronics Games, Inc.<br>Midway Manufacturing Company<br>3401 N. California Avenue, Chicago, Illinois 60618 |                      |
| Description:   | Power Wiring Diagram |
| Schematic Part Number:   | none                 |
| Sheet 1 of 2   | Revision Level 5     |
| Page 1   |                      |



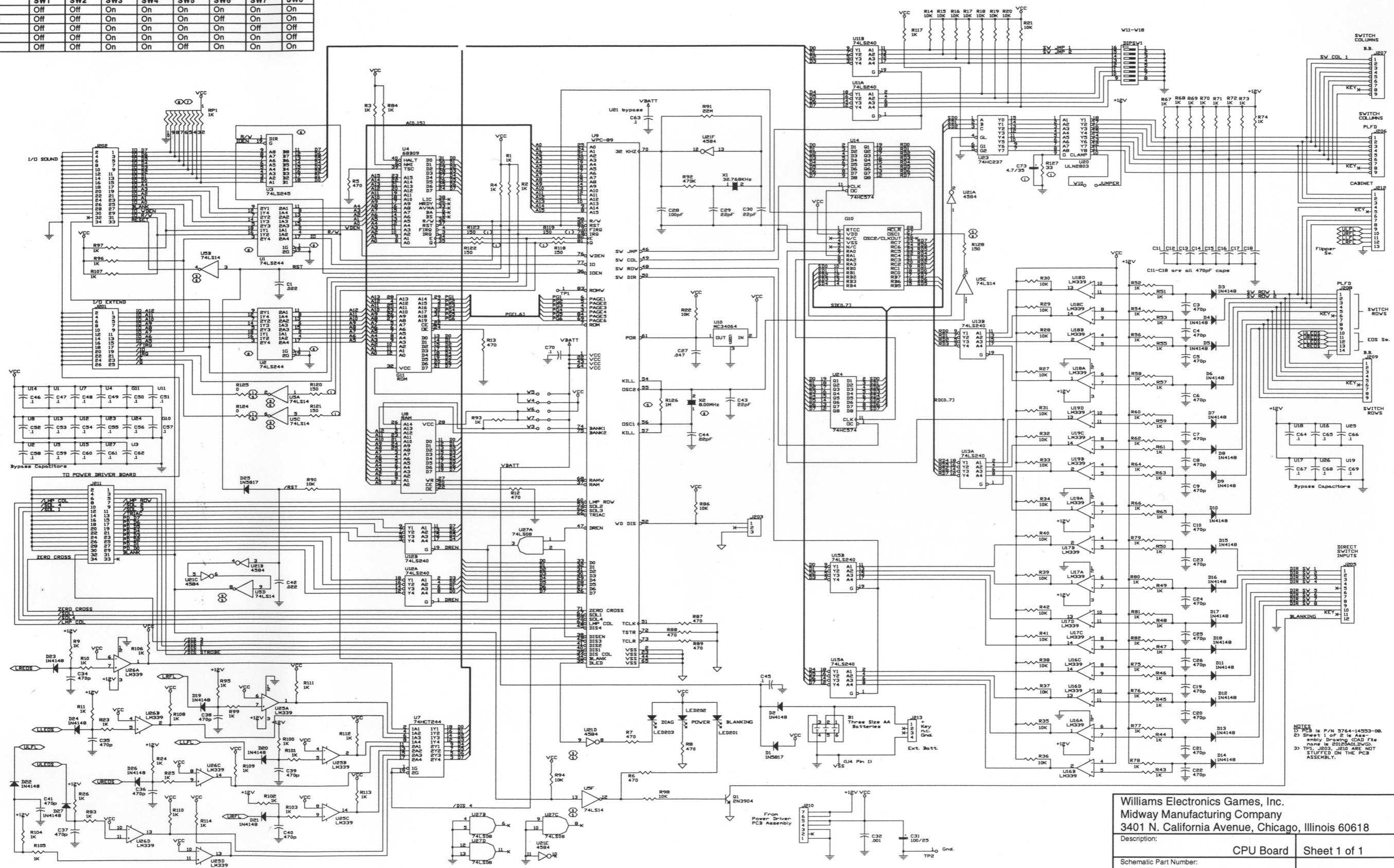
|  |                      |
|--|----------------------|
| Williams Electronics Games, Inc.<br>Midway Manufacturing Company<br>3401 N. California Avenue, Chicago, Illinois 60618 |                      |
| Description:   | Power Wiring Diagram |
| Schematic Part Number:   | none                 |
|  | Sheet 2 of 2         |
|  | Revision Level 4     |
|  | Page 2               |

DIP SWITCH SETTINGS AND JUMPERS

| EPROM Jumper Settings for U6 |     | W1  | W2  |
|------------------------------|-----|-----|-----|
| 1MEG, 2MEG, 4 MEG EPROM      |     | In  | Out |
| SW1                          | SW2 | SW3 | SW4 |
| SW5                          | SW6 | SW7 | SW8 |

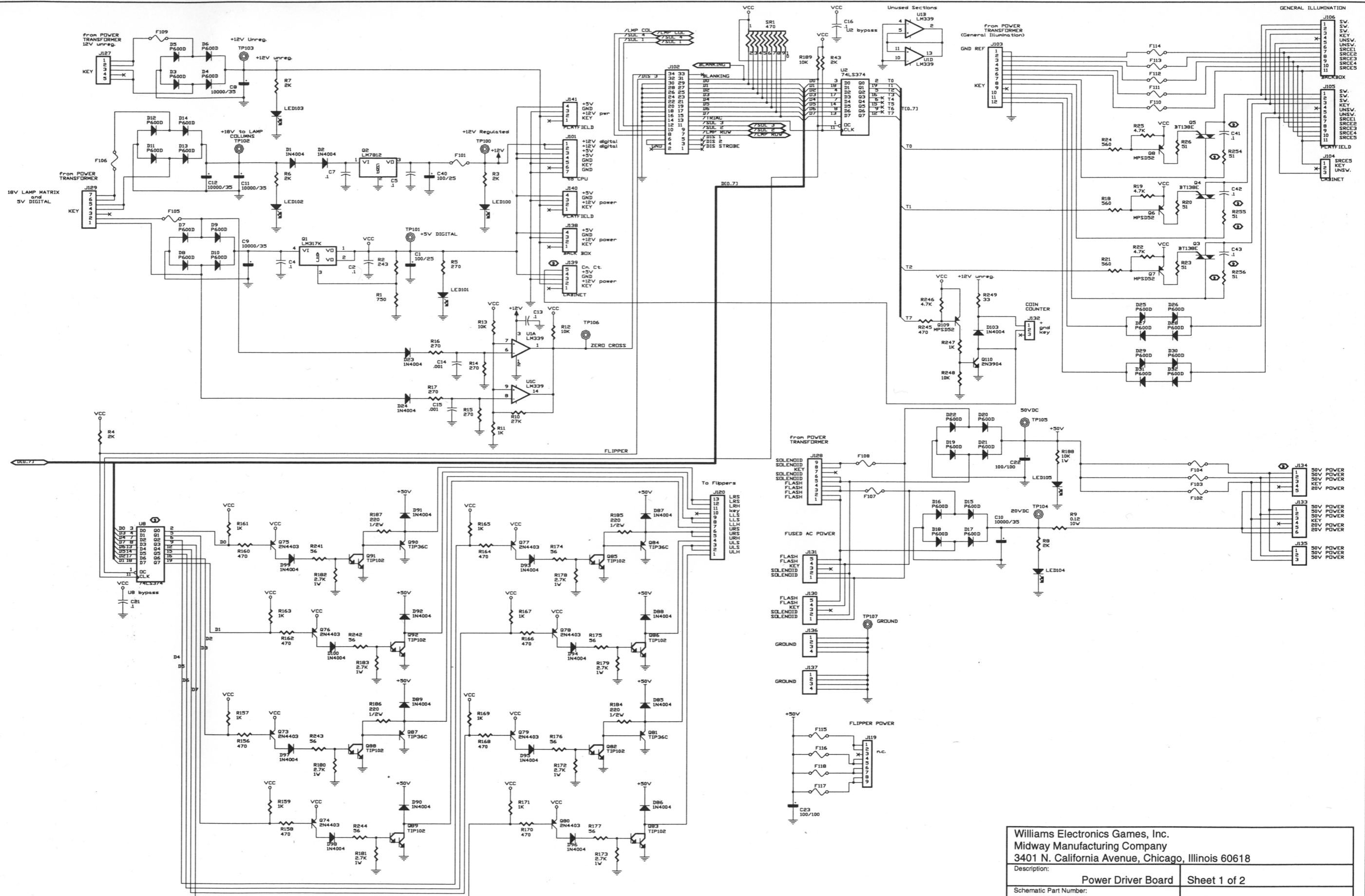
DIP Switch Chart

| COUNTRY  | SW1 | SW2 | SW3 | SW4 | SW5 | SW6 | SW7 | SW8 |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|
| AMERICA  | Off | Off | On  | On  | On  | On  | On  | On  |
| EUROPEAN | Off | Off | On  | On  | On  | Off | On  | On  |
| FRENCH   | Off | Off | On  | On  | On  | On  | Off | Off |
| GERMAN   | Off | Off | On  | On  | On  | On  | On  | Off |
| SPAIN    | Off | Off | On  | On  | Off | On  | On  | On  |



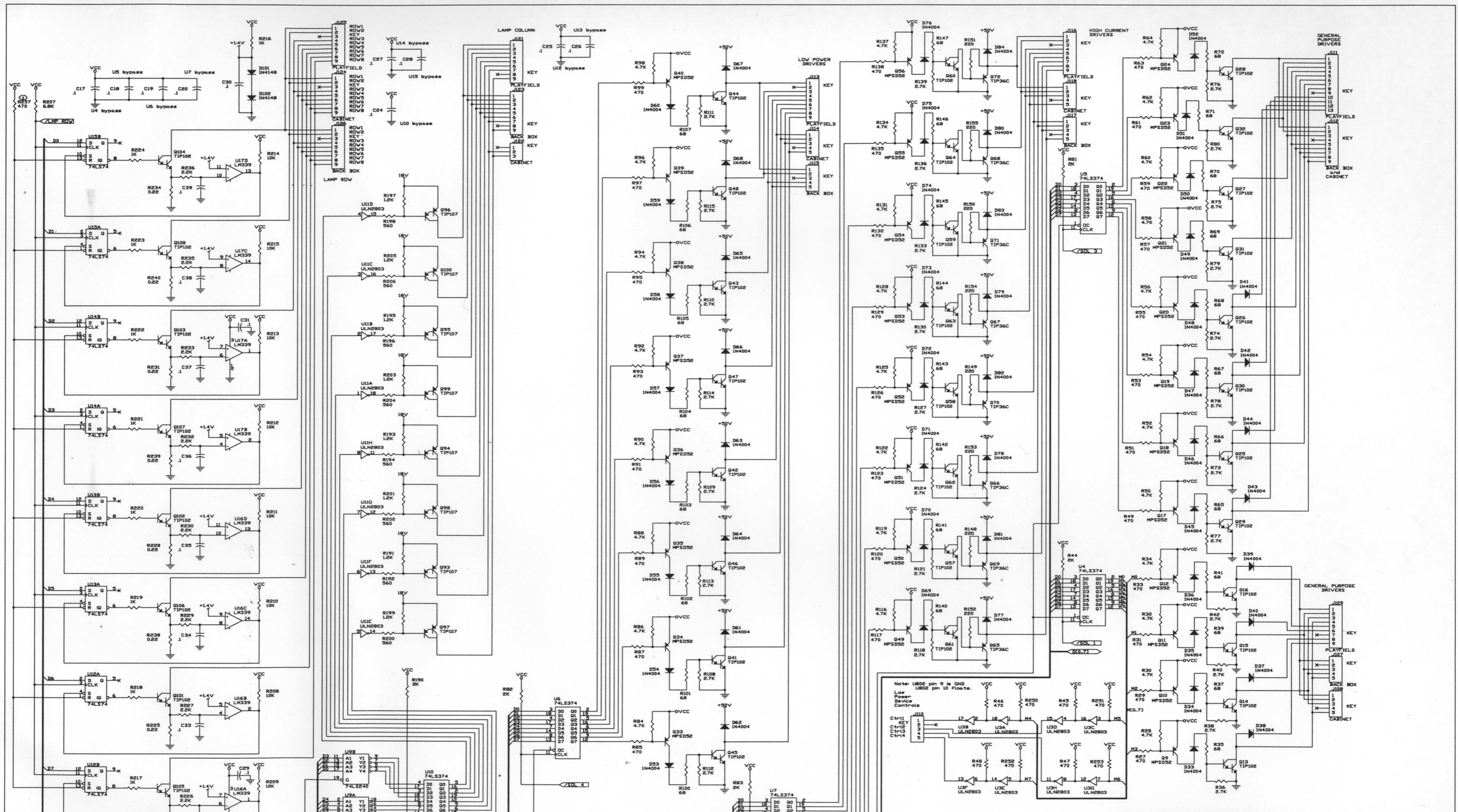
NOTES  
 1) PCB is P/N 3764-14533-08.  
 2) Sheet 1 of 2 is Asst-  
 mbrly Drawing CAD File  
 name is 20119.DWG  
 3) TPL, JSD, JSD ARE NOT  
 STUFFED ON THE PCB  
 ASSEMBLY.

|  |           |                      |
|--|-----------|----------------------|
| Williams Electronics Games, Inc.<br>Midway Manufacturing Company<br>3401 N. California Avenue, Chicago, Illinois 60618 |           |                      |
| Description:   | CPU Board | Sheet 1 of 1         |
| Schematic Part Number:   | none      | Revision Level 8     |
|  |           | A-20119-XXXXX Page 3 |

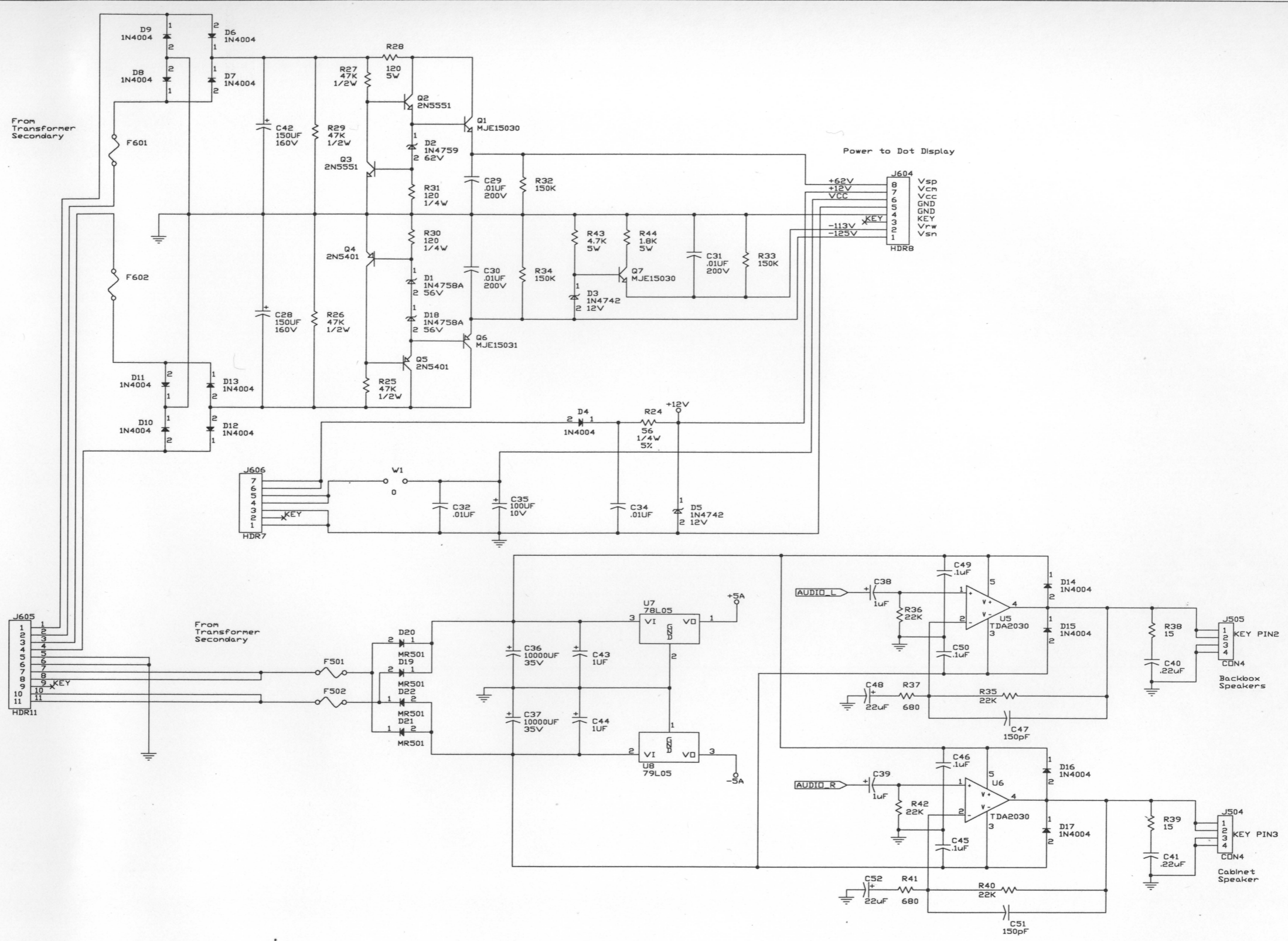


Williams Electronics Games, Inc.  
 Midway Manufacturing Company  
 3401 N. California Avenue, Chicago, Illinois 60618

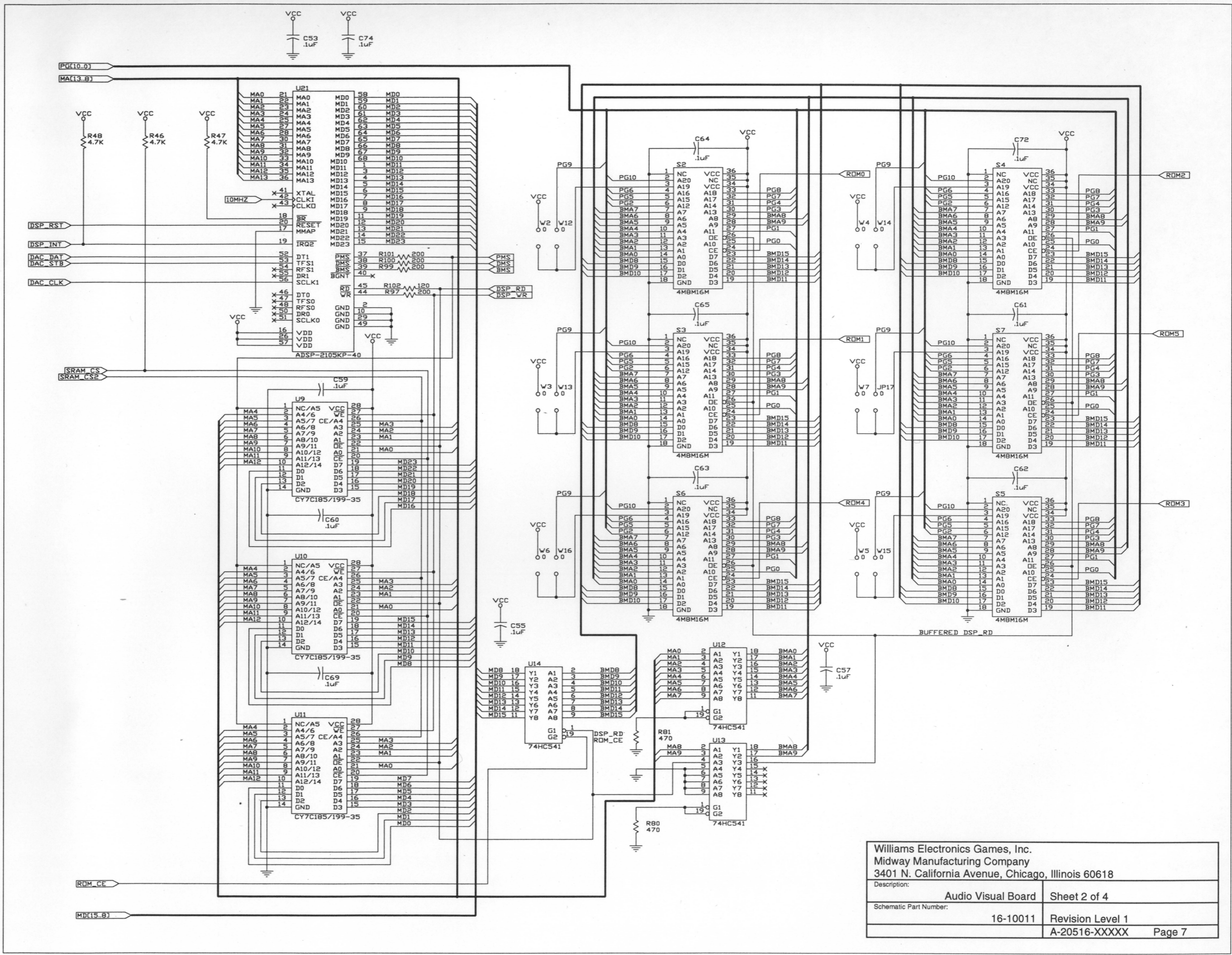
|                        |                    |                  |
|------------------------|--------------------|------------------|
| Description:           | Power Driver Board | Sheet 1 of 2     |
| Schematic Part Number: | none               | Revision Level 6 |
|                        | A-20028            | Page 4           |



|  |                    |
|--|--------------------|
| Williams Electronics Games, Inc.<br>Midway Manufacturing Company<br>3401 N. California Avenue, Chicago, Illinois 60618 |                    |
| Description:   | Power Driver Board |
| Schematic Part Number:   | none               |
|  | Revision Level 7   |
|  | A-20028            |
|  | Page 5             |

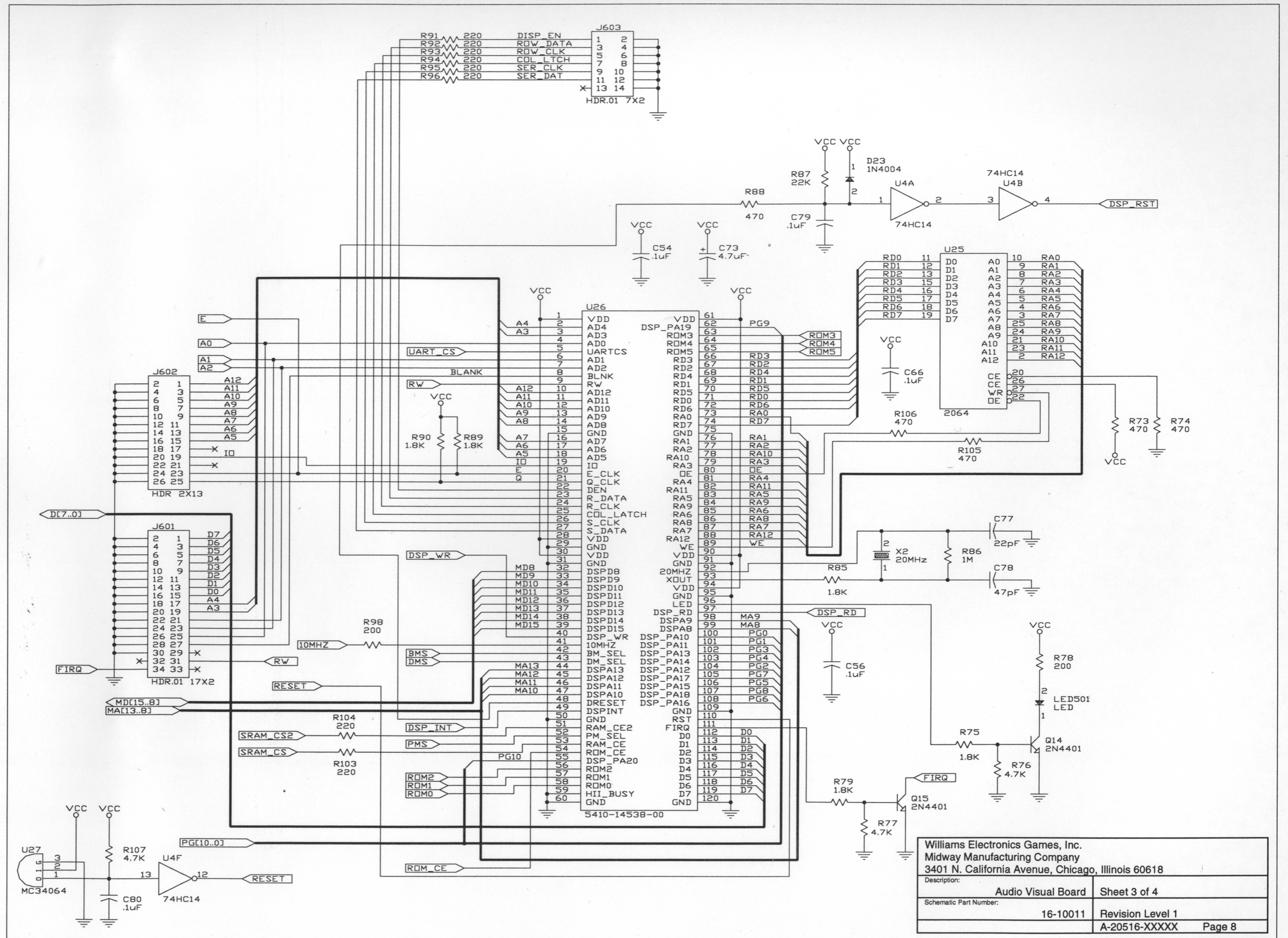


|  |                      |
|--|----------------------|
| Williams Electronics Games, Inc.<br>Midway Manufacturing Company<br>3401 N. California Avenue, Chicago, Illinois 60618 |                      |
| Description:   | Audio Visual Board   |
| Schematic Part Number:   | 16-10011             |
|  | Sheet 1 of 4         |
|  | Revision Level 1     |
|  | A-20516-XXXXX Page 6 |

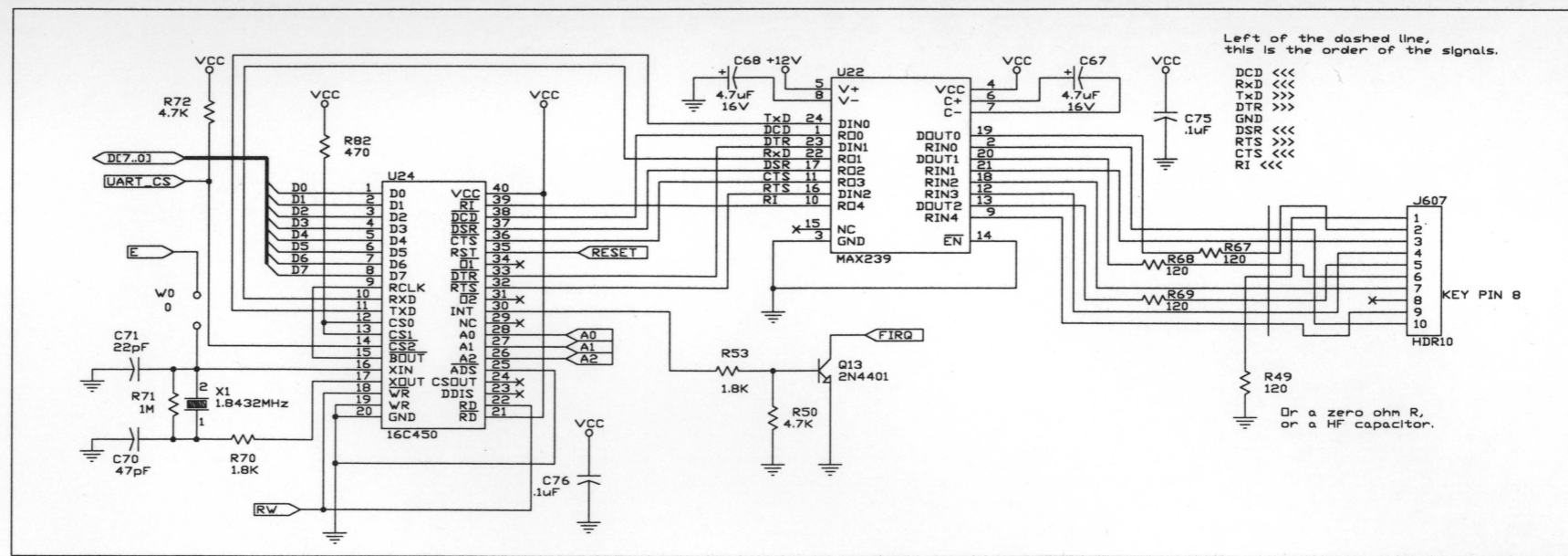


Williams Electronics Games, Inc.  
 Midway Manufacturing Company  
 3401 N. California Avenue, Chicago, Illinois 60618

|                        |                    |                  |
|------------------------|--------------------|------------------|
| Description:           | Audio Visual Board | Sheet 2 of 4     |
| Schematic Part Number: | 16-10011           | Revision Level 1 |
|                        | A-20516-XXXXX      | Page 7           |



|  |                    |
|--|--------------------|
| Williams Electronics Games, Inc.<br>Midway Manufacturing Company<br>3401 N. California Avenue, Chicago, Illinois 60618 |                    |
| Description:   | Audio Visual Board |
| Schematic Part Number:   | 16-10011           |
|  | Revision Level 1   |
|  | A-20516-XXXXX      |
|  | Sheet 3 of 4       |
|  | Page 8             |

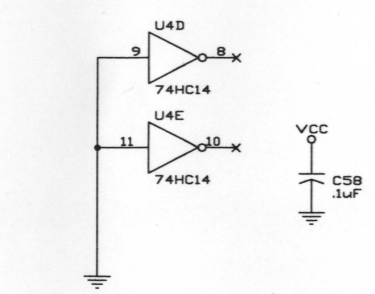
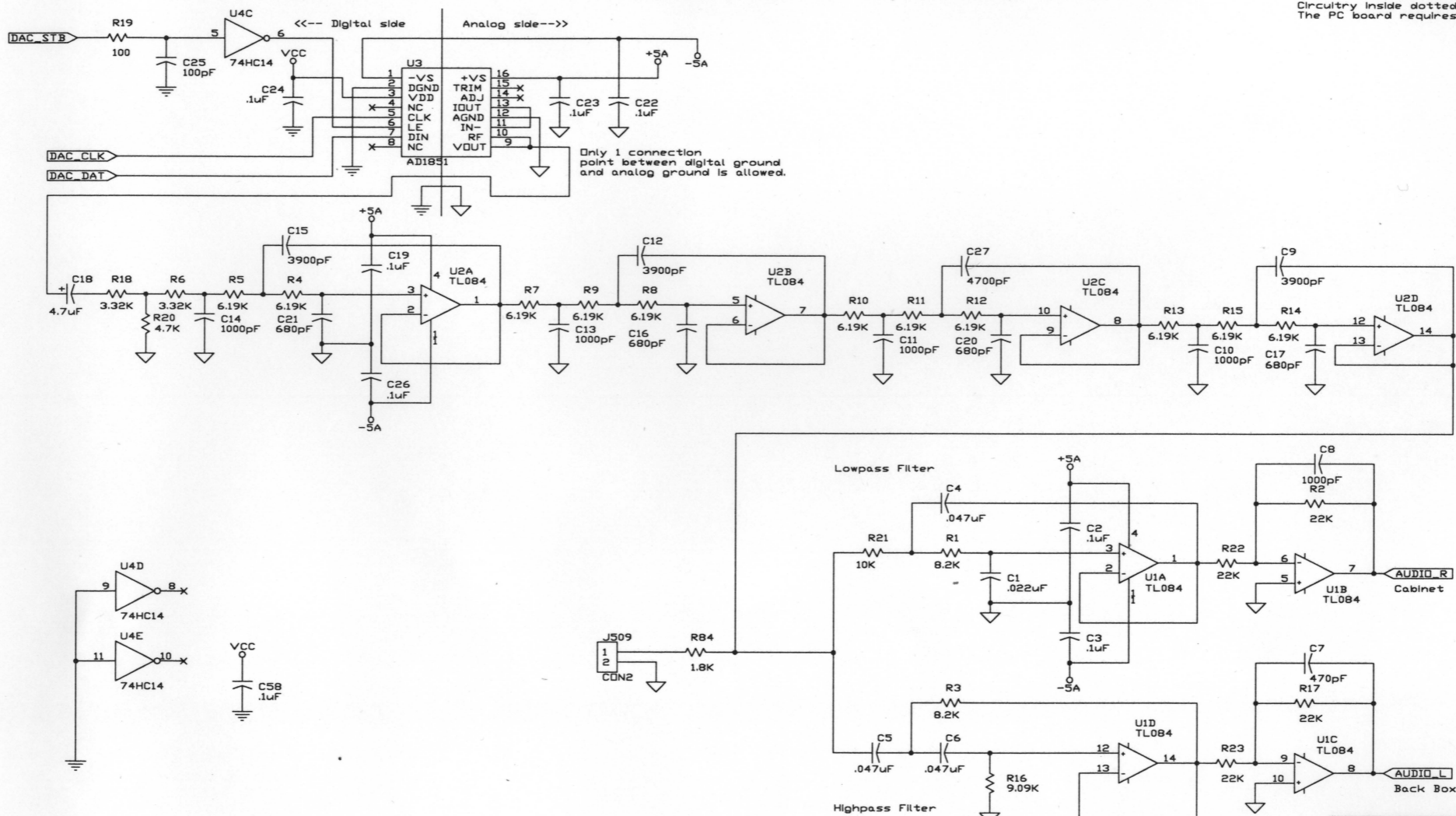


Left of the dashed line, this is the order of the signals.

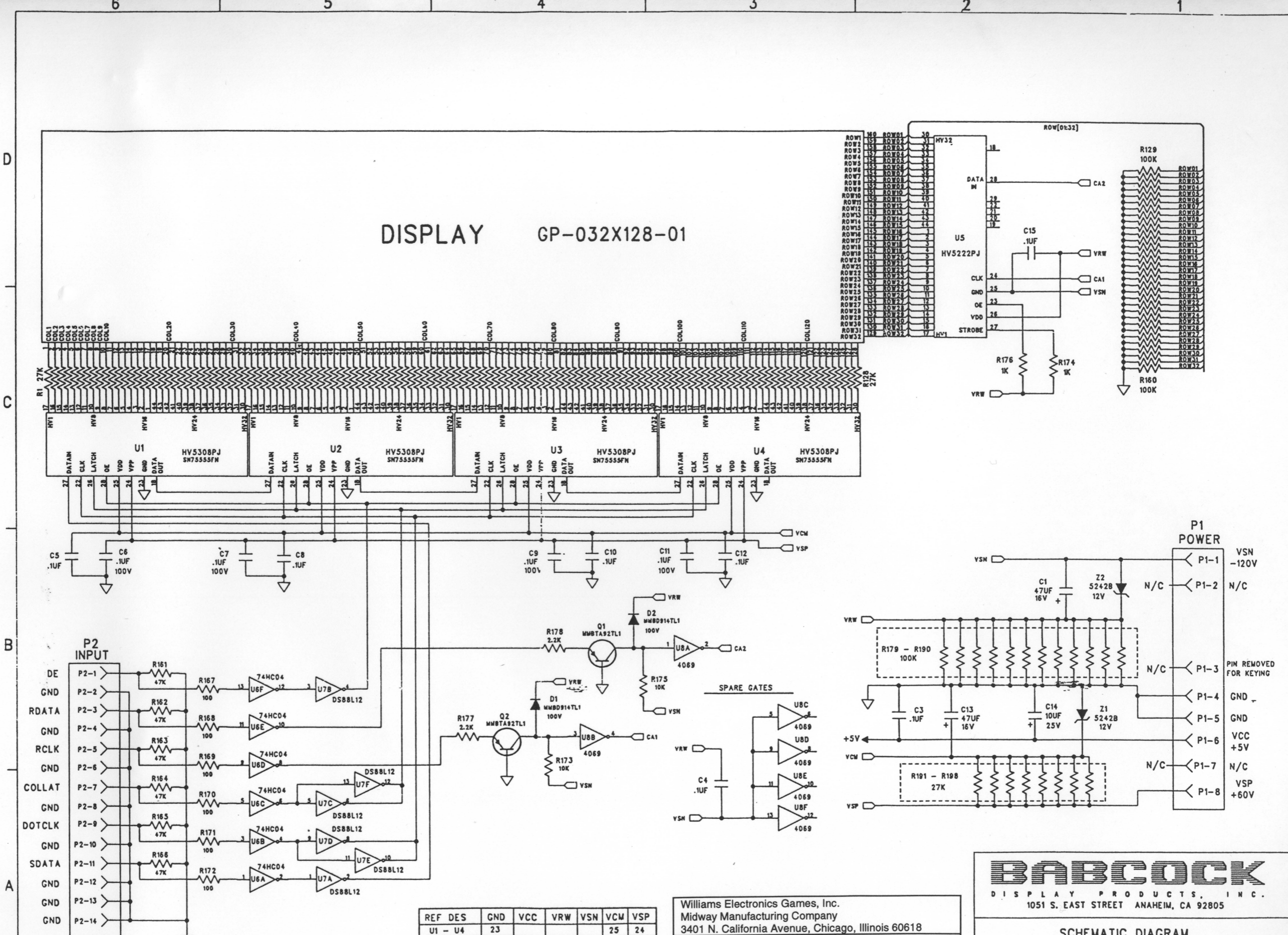
- DCJ <<<
- RxD <<<
- TxD >>>
- DTR >>>
- GND
- DSR <<<
- RTS >>>
- CTS <<<
- RI <<<

Or a zero ohm R, or a HF capacitor.

Circuitry inside dotted box is RS232 option. The PC board requires U22 and U24 be added for the serial port to work.



|  |                      |
|--|----------------------|
| Williams Electronics Games, Inc.<br>Midway Manufacturing Company<br>3401 N. California Avenue, Chicago, Illinois 60618 |                      |
| Description:   | Audio Visual Board   |
| Schematic Part Number:   | 16-10011             |
|  | Revision Level 1     |
|  | A-20516-XXXXX Page 9 |



DISPLAY GP-032X128-01

2. RESISTOR VALUES ARE IN OHMS, 1/8 WATT, 5%.  
 1. CAPACITOR VOLTAGES ARE 50V, 20%.  
 NOTES: UNLESS OTHERWISE SPECIFIED.

| REF DES | GND | VCC | VRW | VSN | VCM | VSP |
|---------|-----|-----|-----|-----|-----|-----|
| U1 - U4 | 23  |     |     |     | 25  | 24  |
| U5      |     |     | 26  | 25  |     |     |
| U6      | 7   | 14  |     |     |     |     |
| U7      | 7   |     |     |     | 14  |     |
| U8      |     |     | 14  | 7   |     |     |

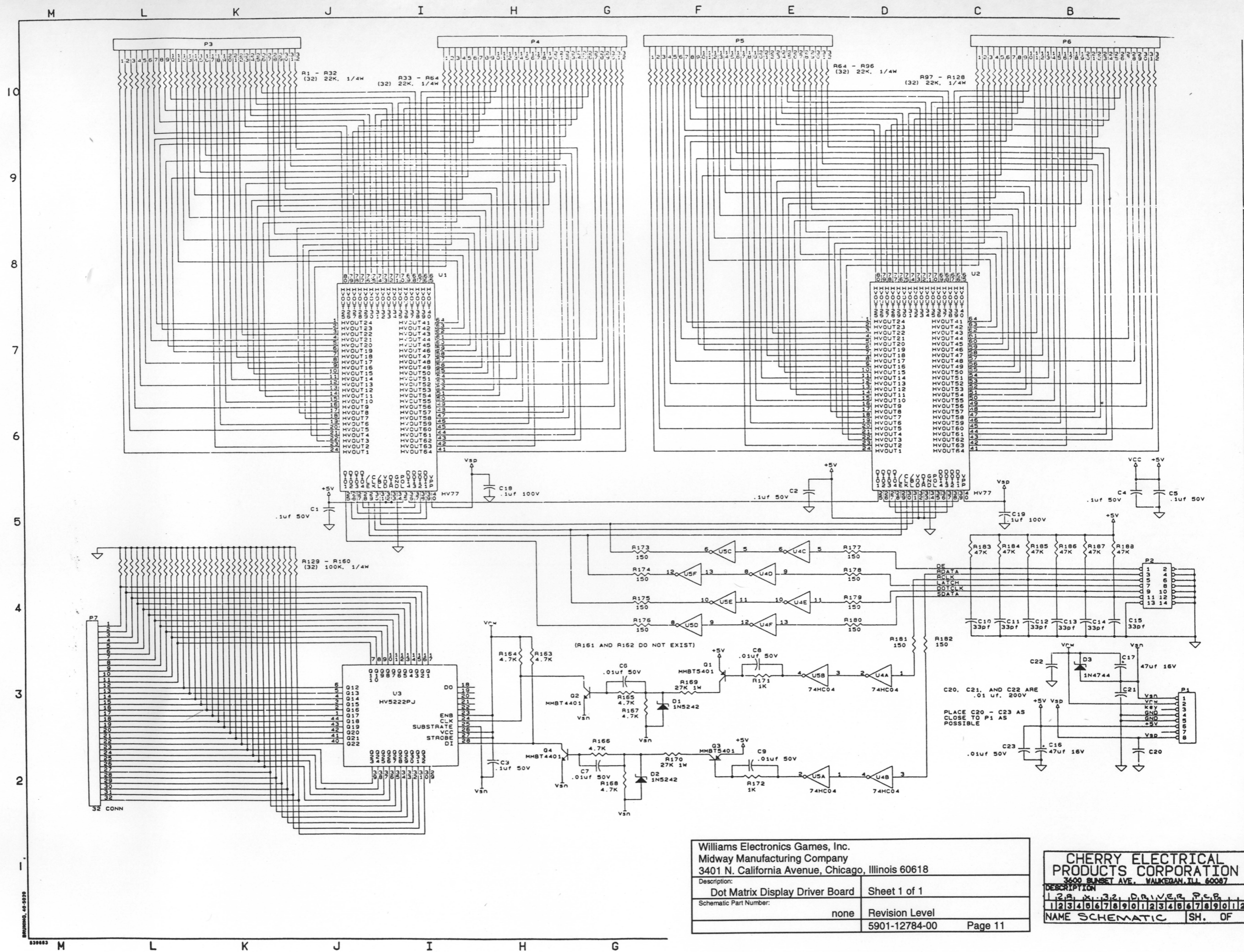
Williams Electronics Games, Inc.  
 Midway Manufacturing Company  
 3401 N. California Avenue, Chicago, Illinois 60618

Description:  
 Dot Matrix Display Driver Board Sheet 1 of 1

Schematic Part Number: none Revision Level  
 5901-12784-00 Page 10

**BABCOCK**  
 DISPLAY PRODUCTS, INC.  
 1051 S. EAST STREET ANAHEIM, CA 92805

SCHEMATIC DIAGRAM



Williams Electronics Games, Inc.  
 Midway Manufacturing Company  
 3401 N. California Avenue, Chicago, Illinois 60618

|                        |                                 |                       |
|------------------------|---------------------------------|-----------------------|
| Description:           | Dot Matrix Display Driver Board | Sheet 1 of 1          |
| Schematic Part Number: | none                            | Revision Level        |
|                        |                                 | 5901-12784-00 Page 11 |

**CHERRY ELECTRICAL PRODUCTS CORPORATION**  
 3600 SUNSET AVE., WALKERAN, ILL. 60087

|                |   |
|----------------|---|
| DESCRIPTION    | 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 |
| NAME SCHEMATIC | SH. OF                                      |

839882