

WPC SCHEMATIC MANUAL

WILLIAMS ELECTRONICS GAMES, INC.
MIDWAY MANUFACTURING COMPANY
3401 N. California Ave.
Chicago, IL 60618

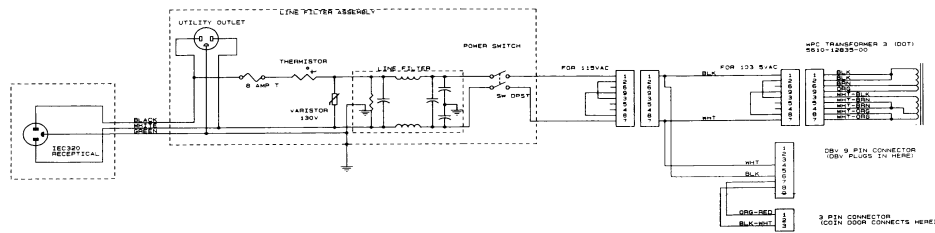
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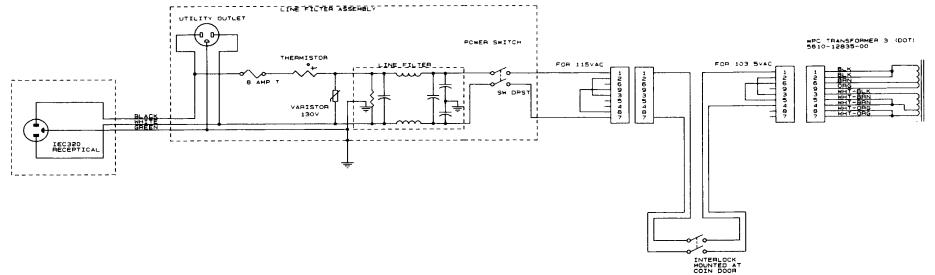
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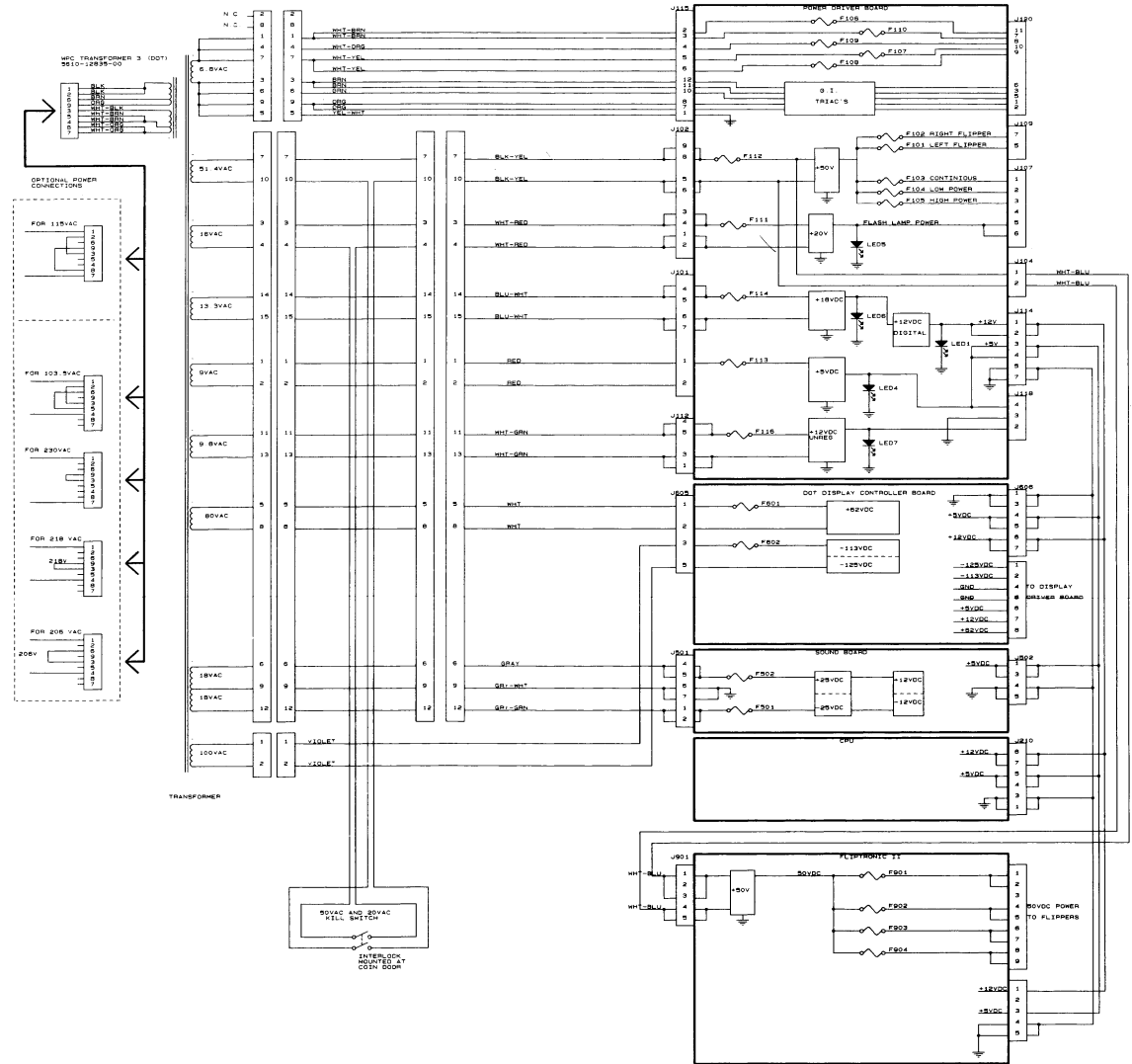
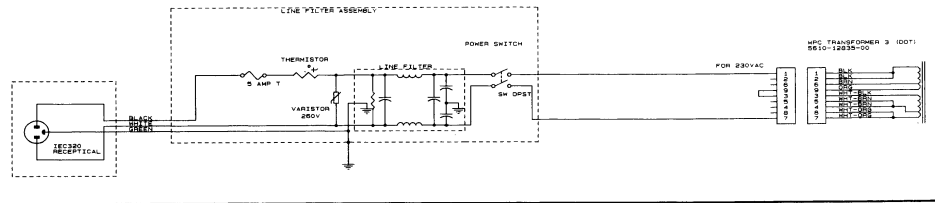
120VAC USAGE



100VAC USAGE



230VAC USAGE



Jumper Chart

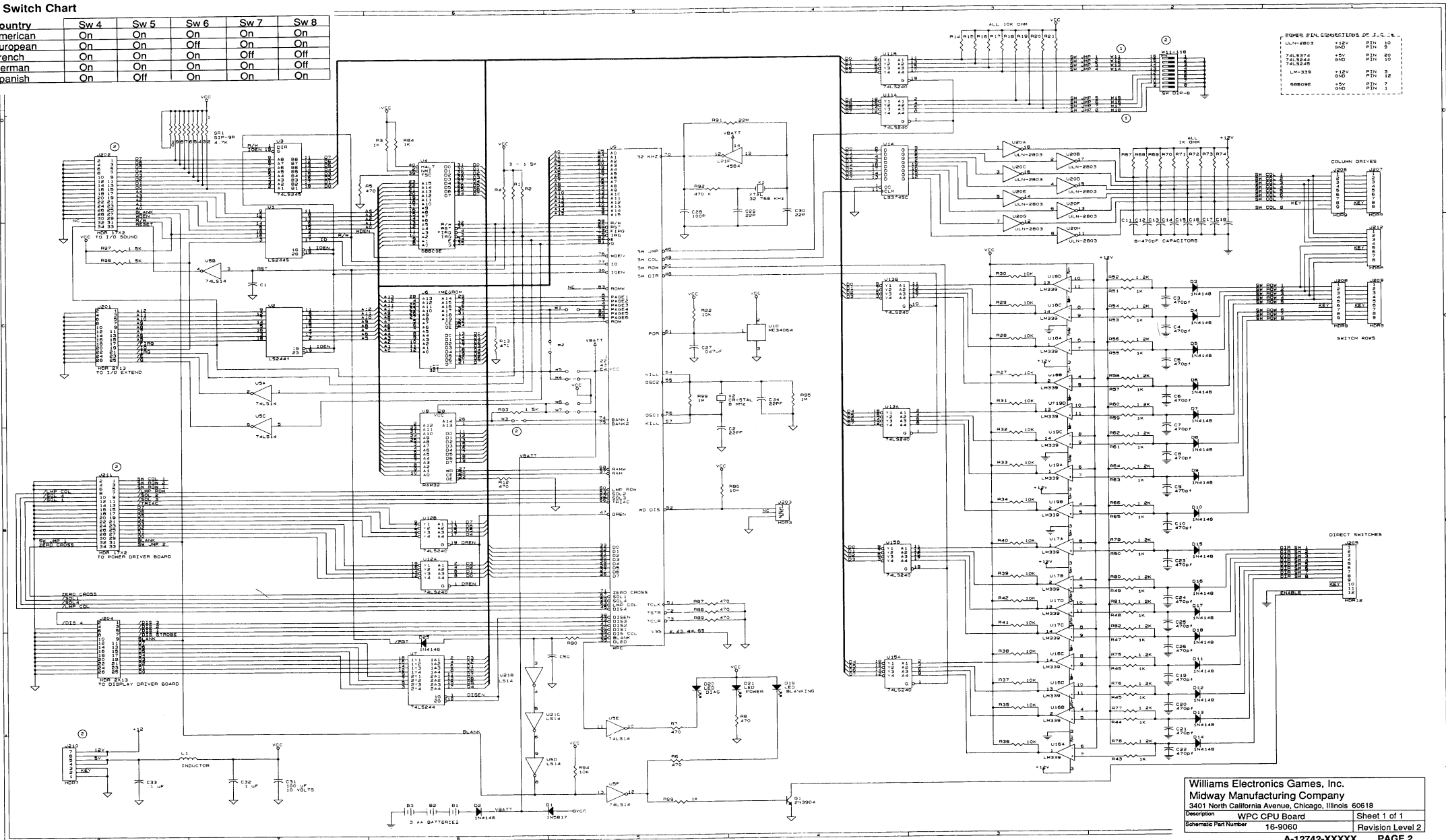
Display	W1	W2
1M/2M/4M ROM	In	Out
512K/1M ROM	Out	In

DIP Switch Chart

Country	Sw 4	Sw 5	Sw 6	Sw 7	Sw 8
American	On	On	On	On	On
European	On	On	Off	On	On
French	On	On	On	Off	Off
German	On	On	On	On	Off
Spanish	On	Off	On	On	On

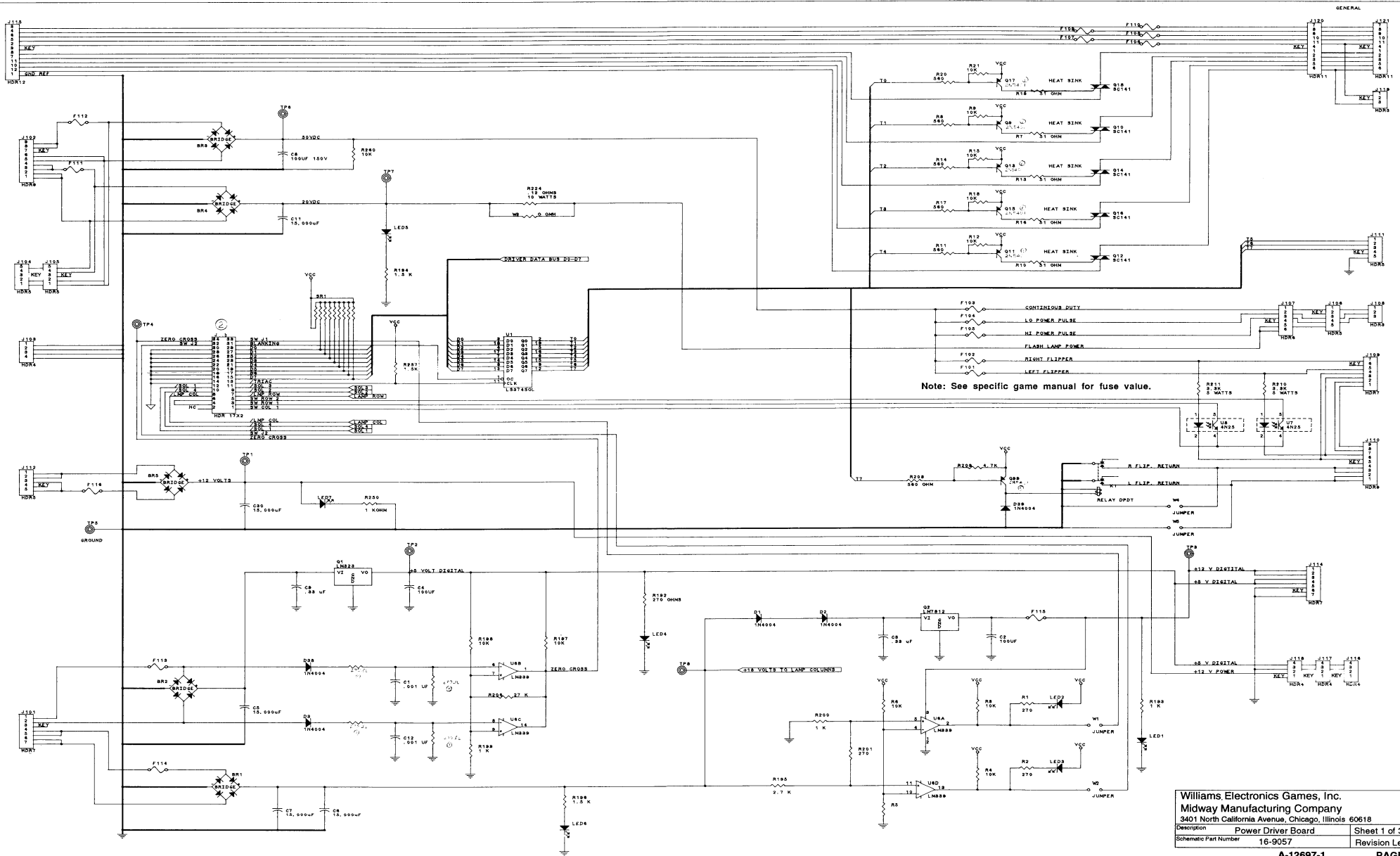
POWER PIN CONNECTIONS OF J.C.C. 4

74LS283	+5V	PIN 10
74LS244	GND	PIN 8
74LS245	+5V	PIN 20
74LS245	GND	PIN 15
LM-339	+12V	PIN 12
68808E	+5V	PIN 1
	GND	PIN 1

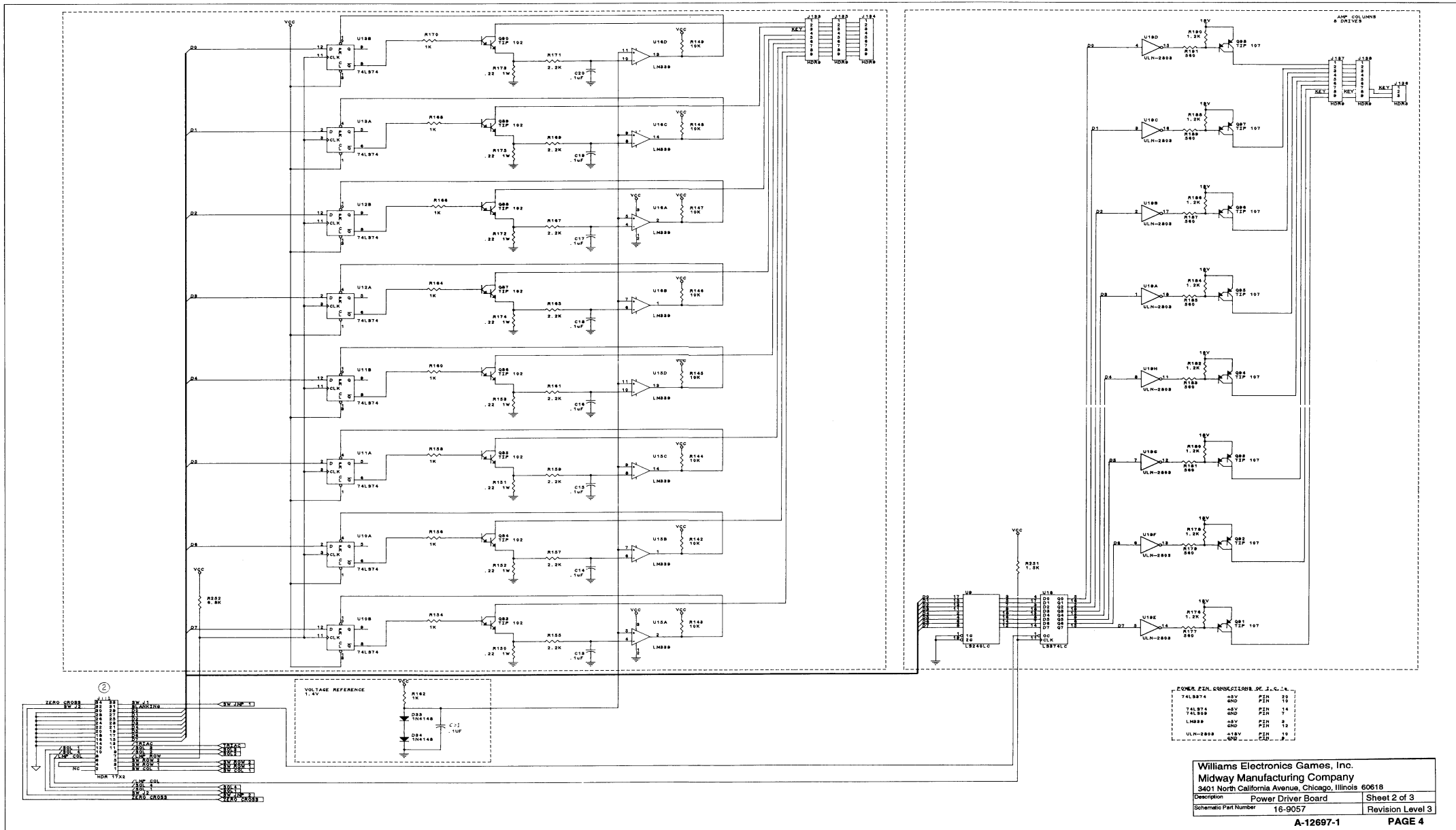


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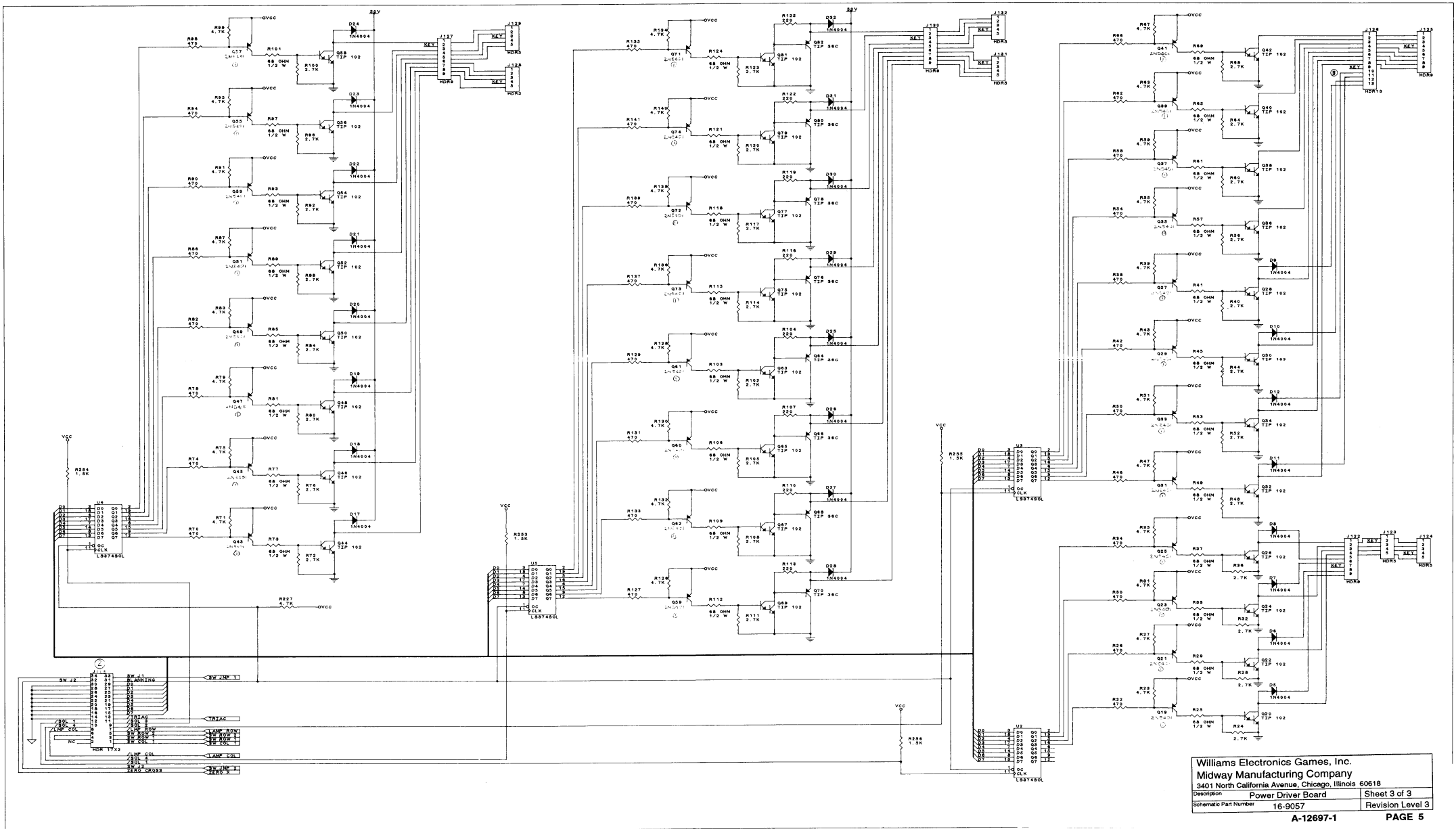
Description	WPC CPU Board	Sheet 1 of 1
Schematic Part Number	16-9060	Revision Level 2



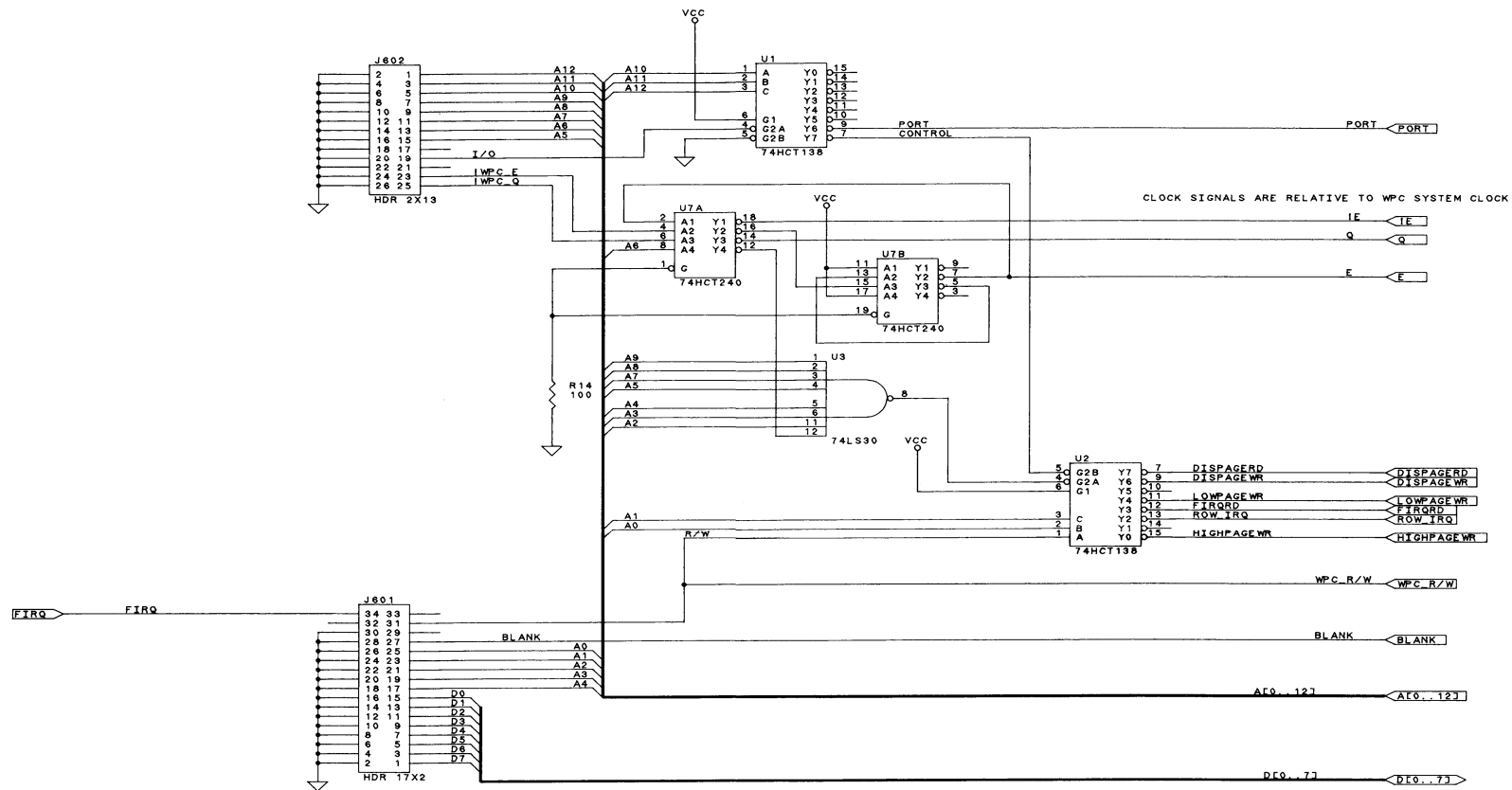
Note: See specific game manual for fuse value.

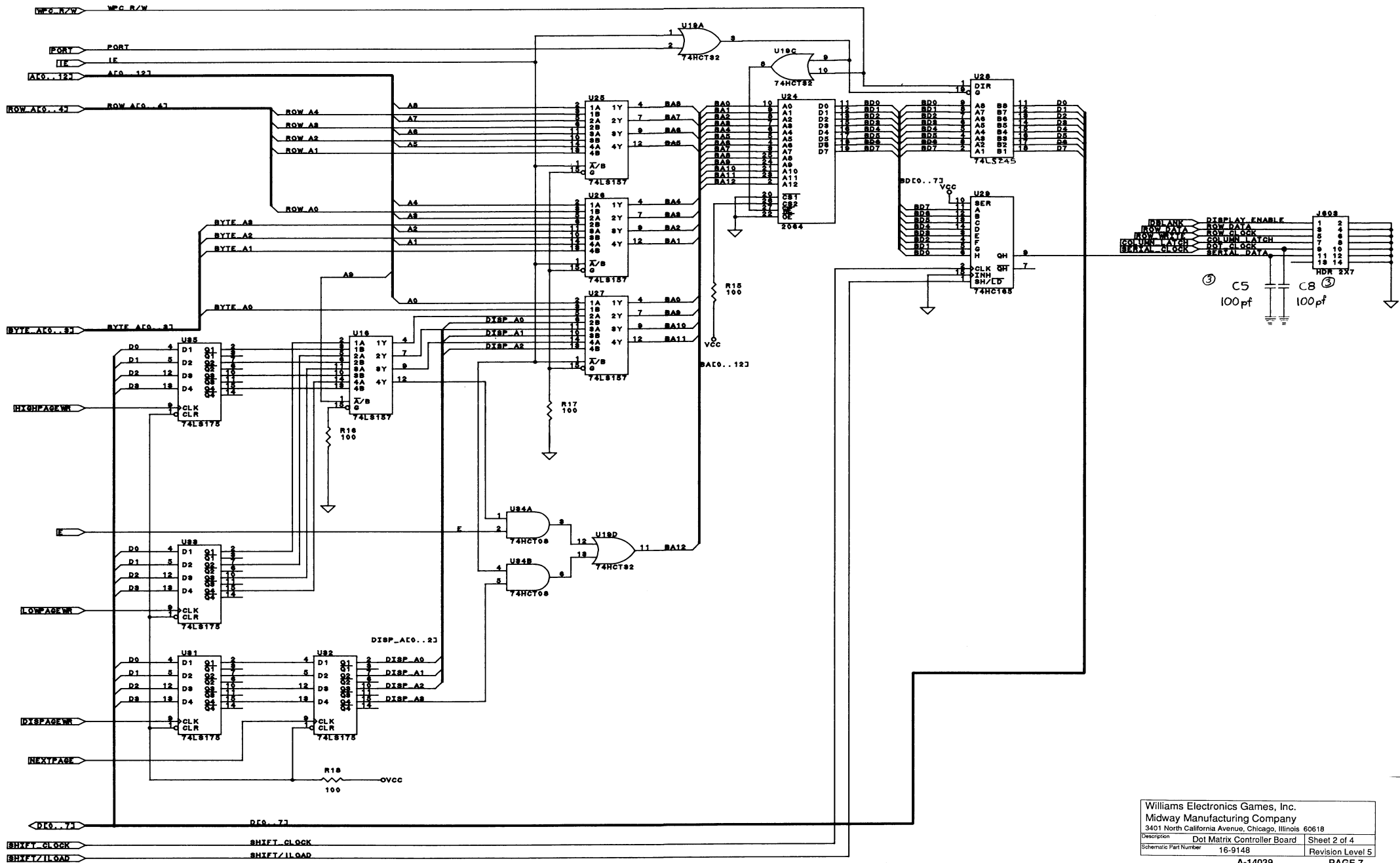


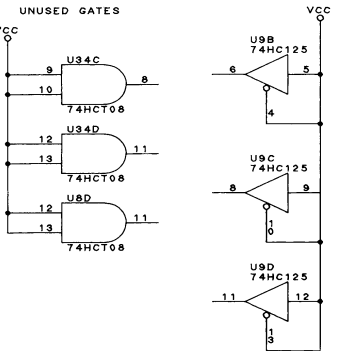
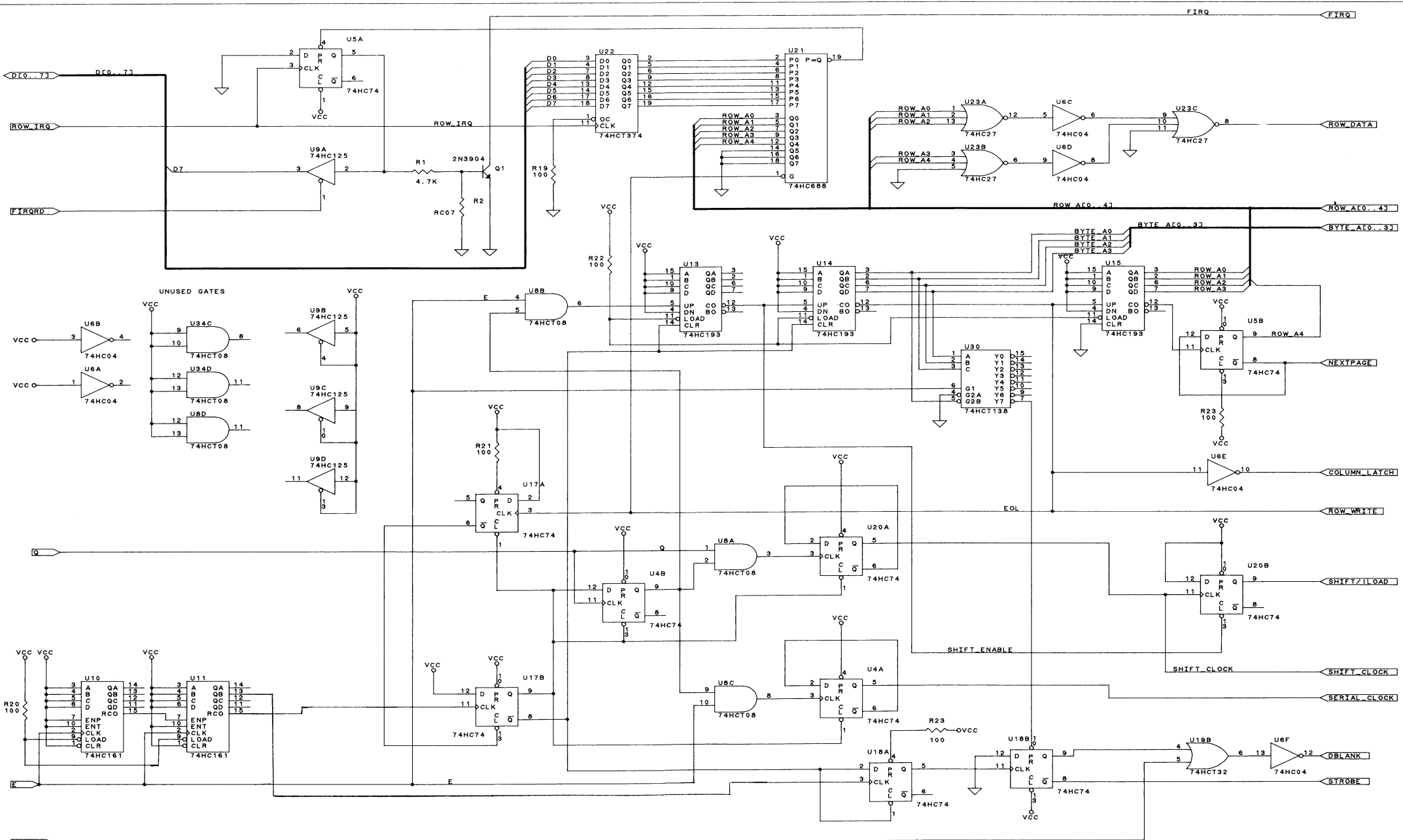
Williams Electronics Games, Inc.
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 3401 North California Avenue, Chicago, Illinois 60618
 Description: Power Driver Board Sheet 2 of 3
 Schematic Part Number: 16-9057 Revision Level 3

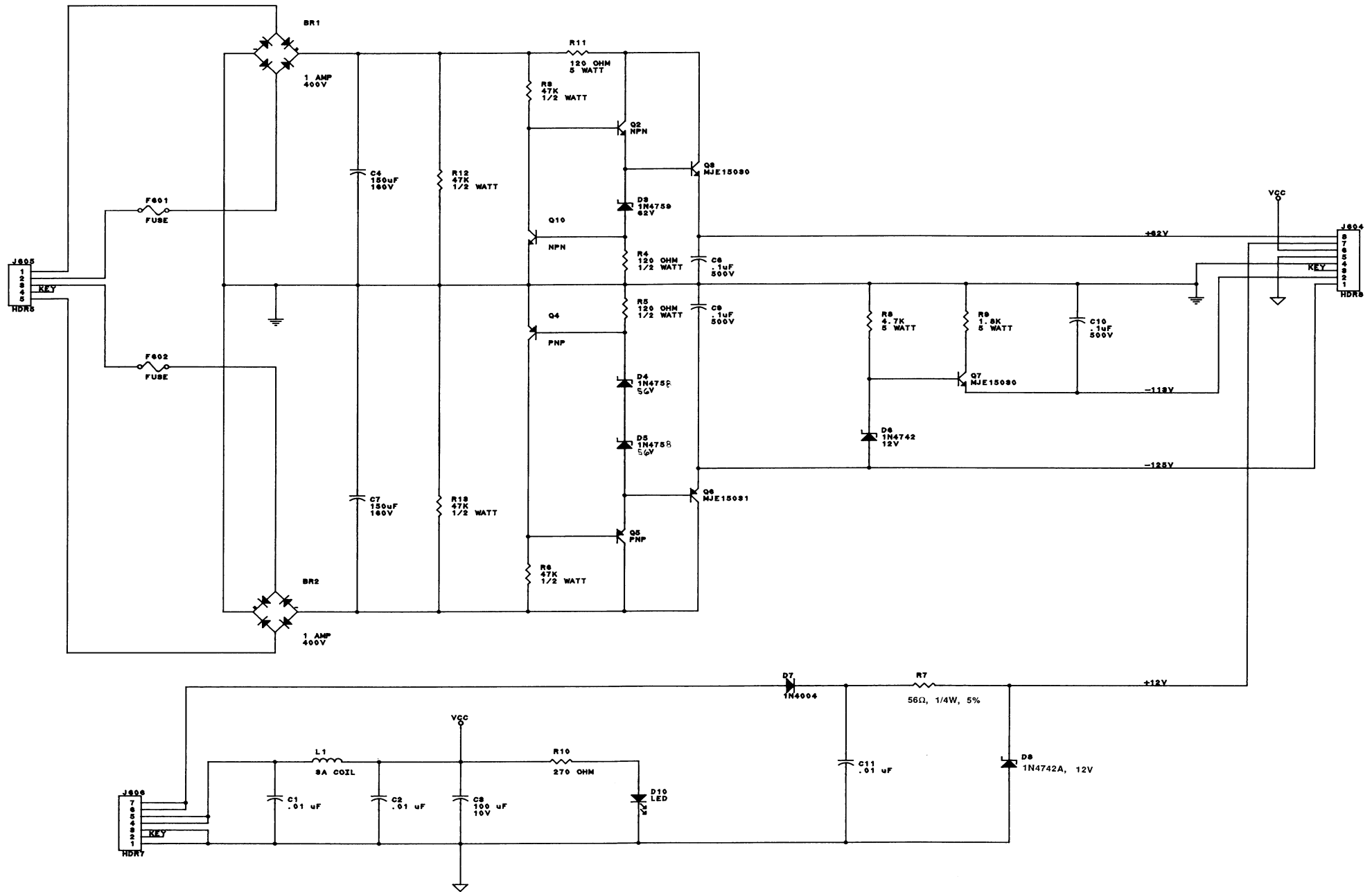


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 Description: Power Driver Board Sheet 3 of 3
 Schematic Part Number: 16-9057 Revision Level 3
 A-12697-1 PAGE 5

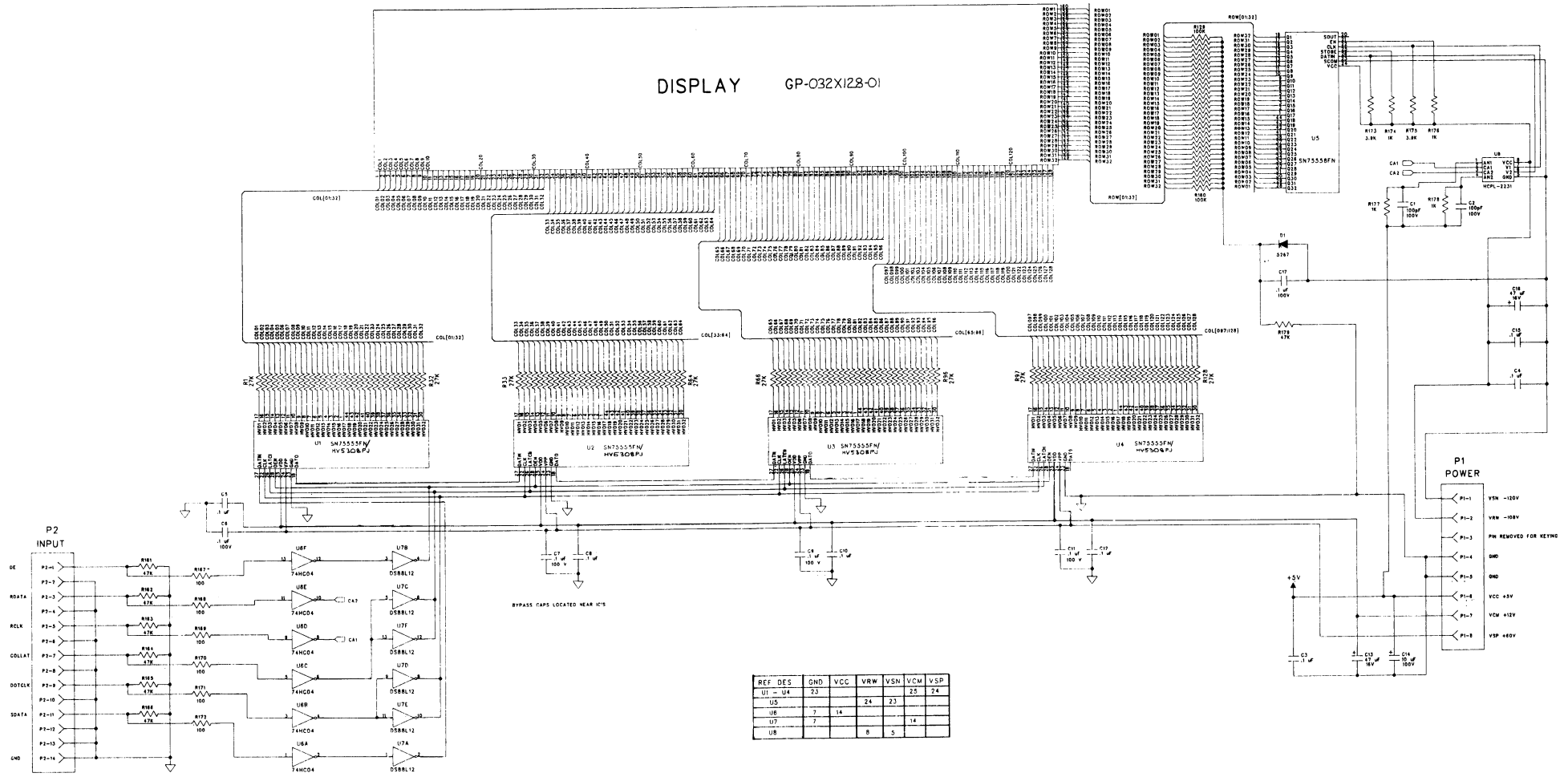








DISPLAY GP-032X128-01



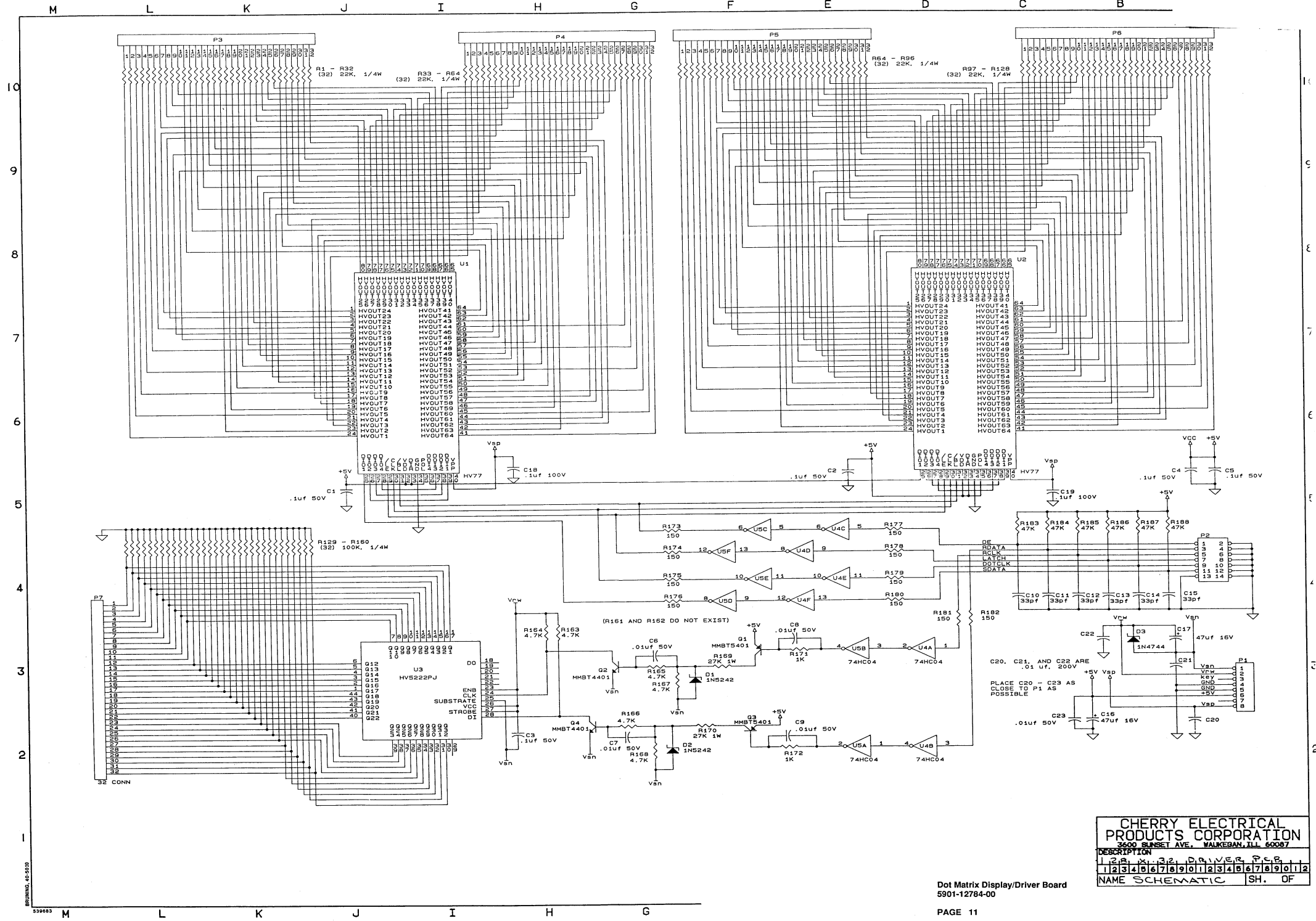
- 2. RESISTOR VALUES ARE IN OHMS, 1/8 WATT, 5%.
 - 1. CAPACITOR VOLTAGES ARE 50V, 20%.
- NOTES: UNLESS OTHERWISE SPECIFIED.

Dot Matrix Display/Driver Board
5901-12784-00

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

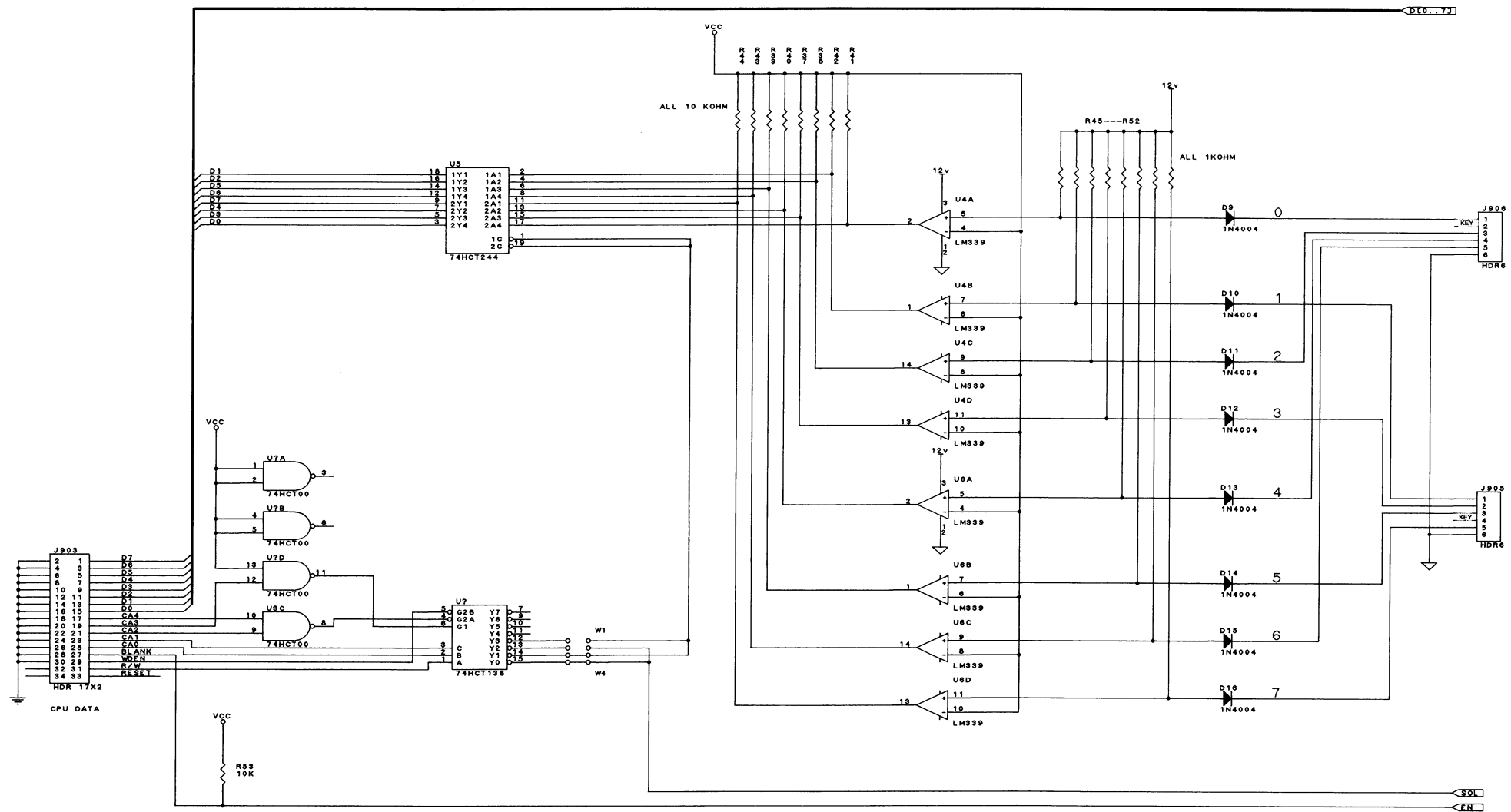
SCHEMATIC

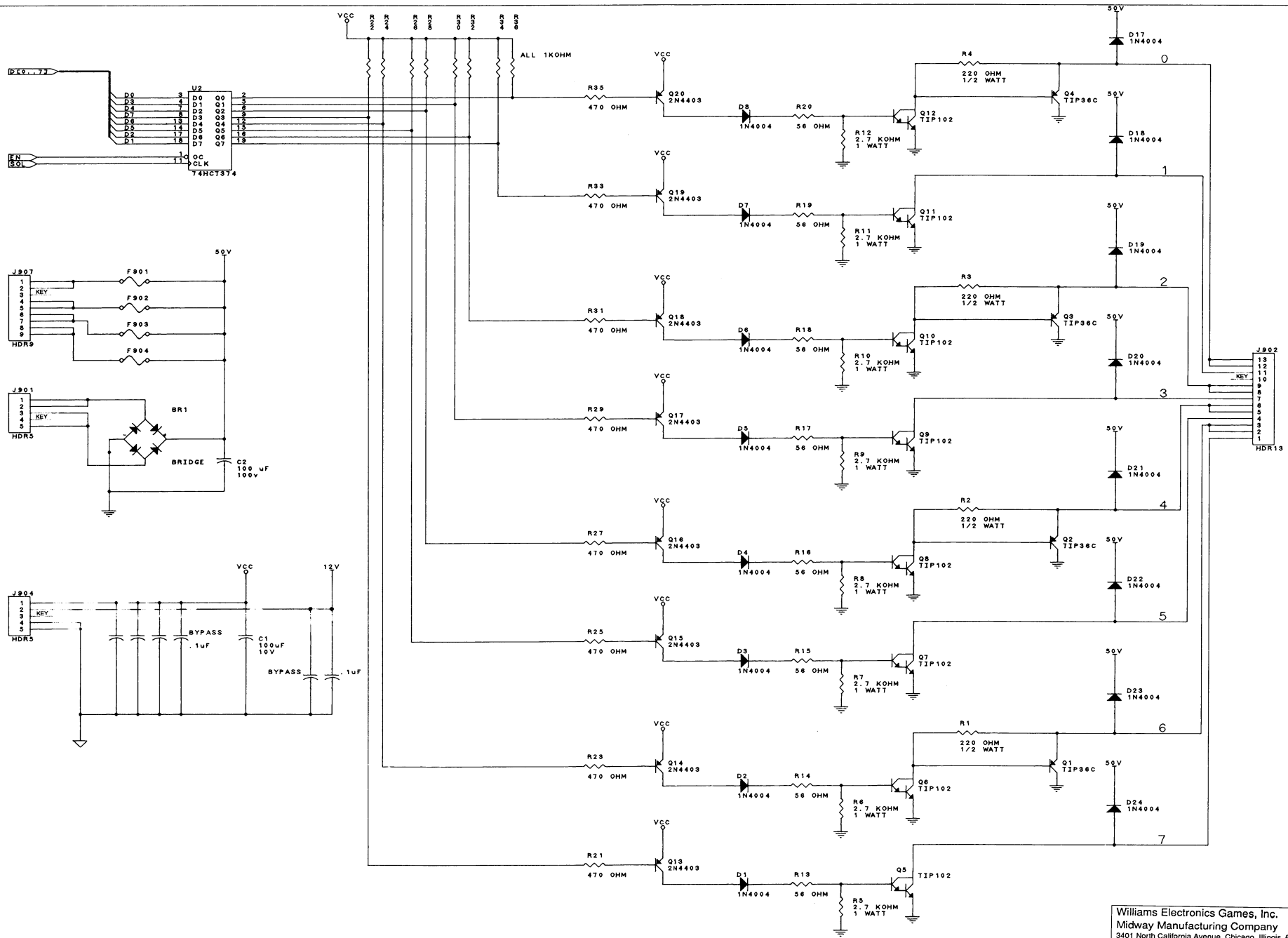


CHERRY ELECTRICAL PRODUCTS CORPORATION
 3500 SUNSET AVE., WALKERGAN, ILL. 60087
 DESCRIPTION: 128 X 32 DRIVER PCB
 1234567890123456789012
 NAME SCHEMATIC SH. OF

Dot Matrix Display/Driver Board
5901-12784-00

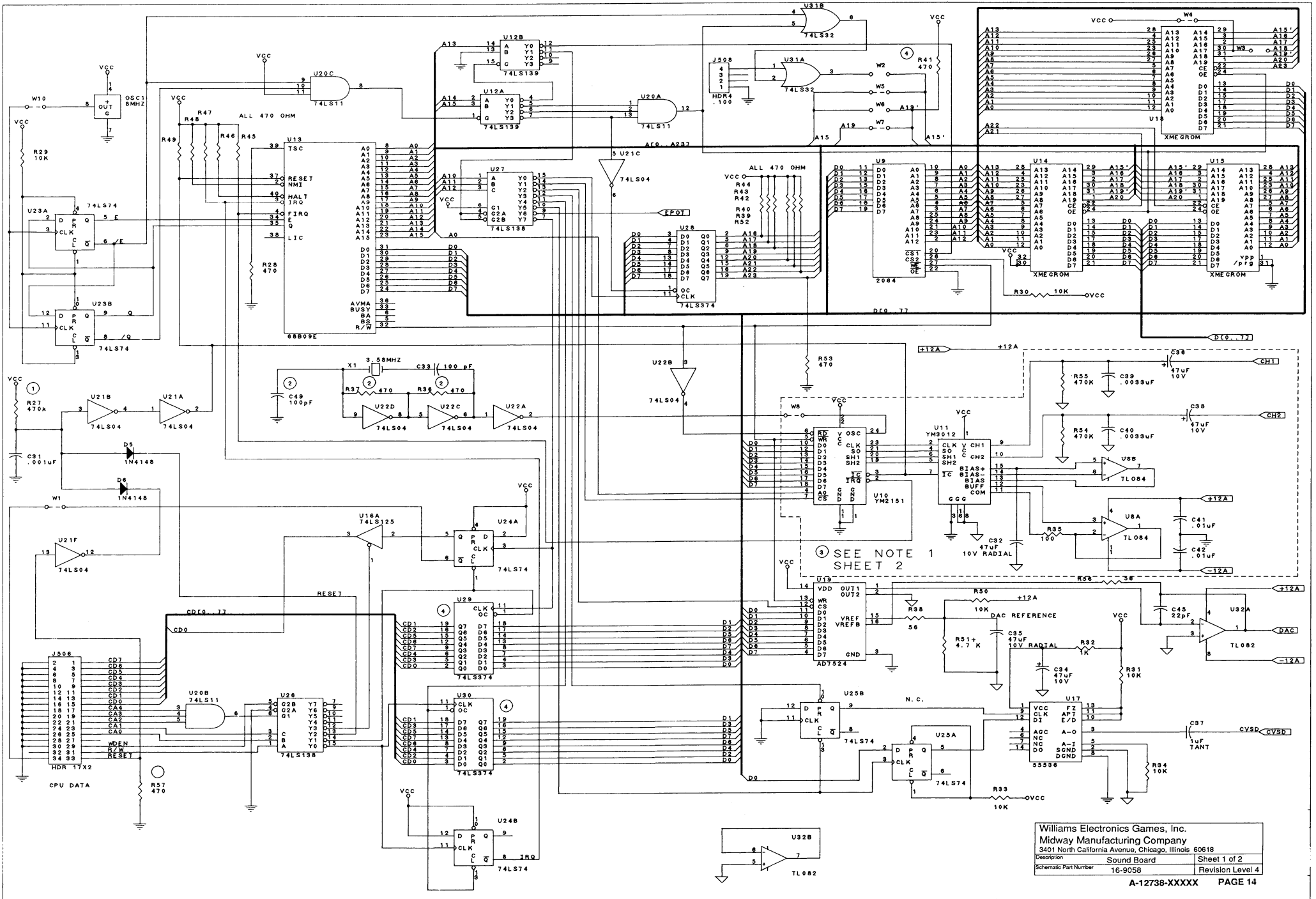
590883



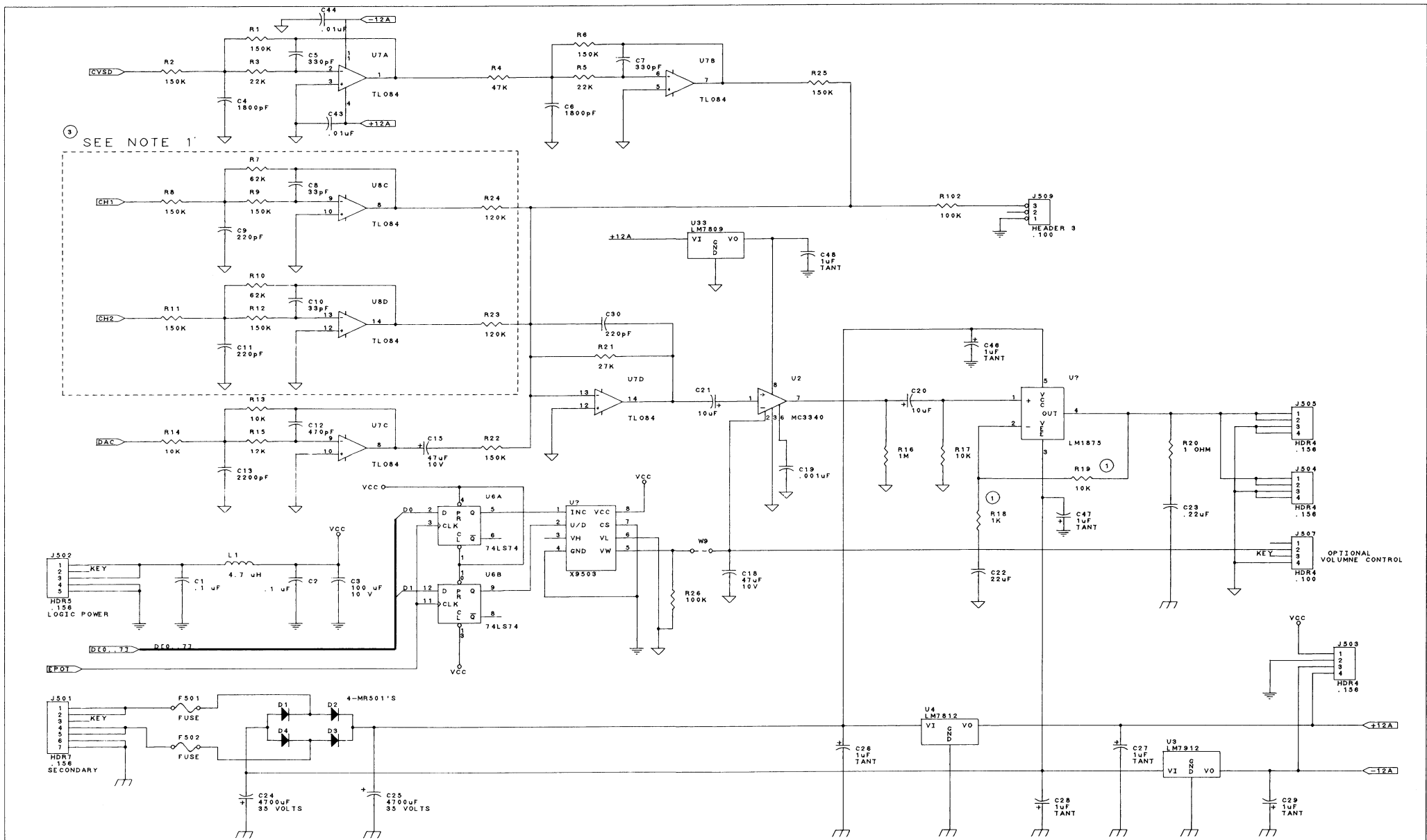


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Description	Fliptronic II Board	Sheet 2 of 2
Schematic Part Number	16-9307	Revision Level 1



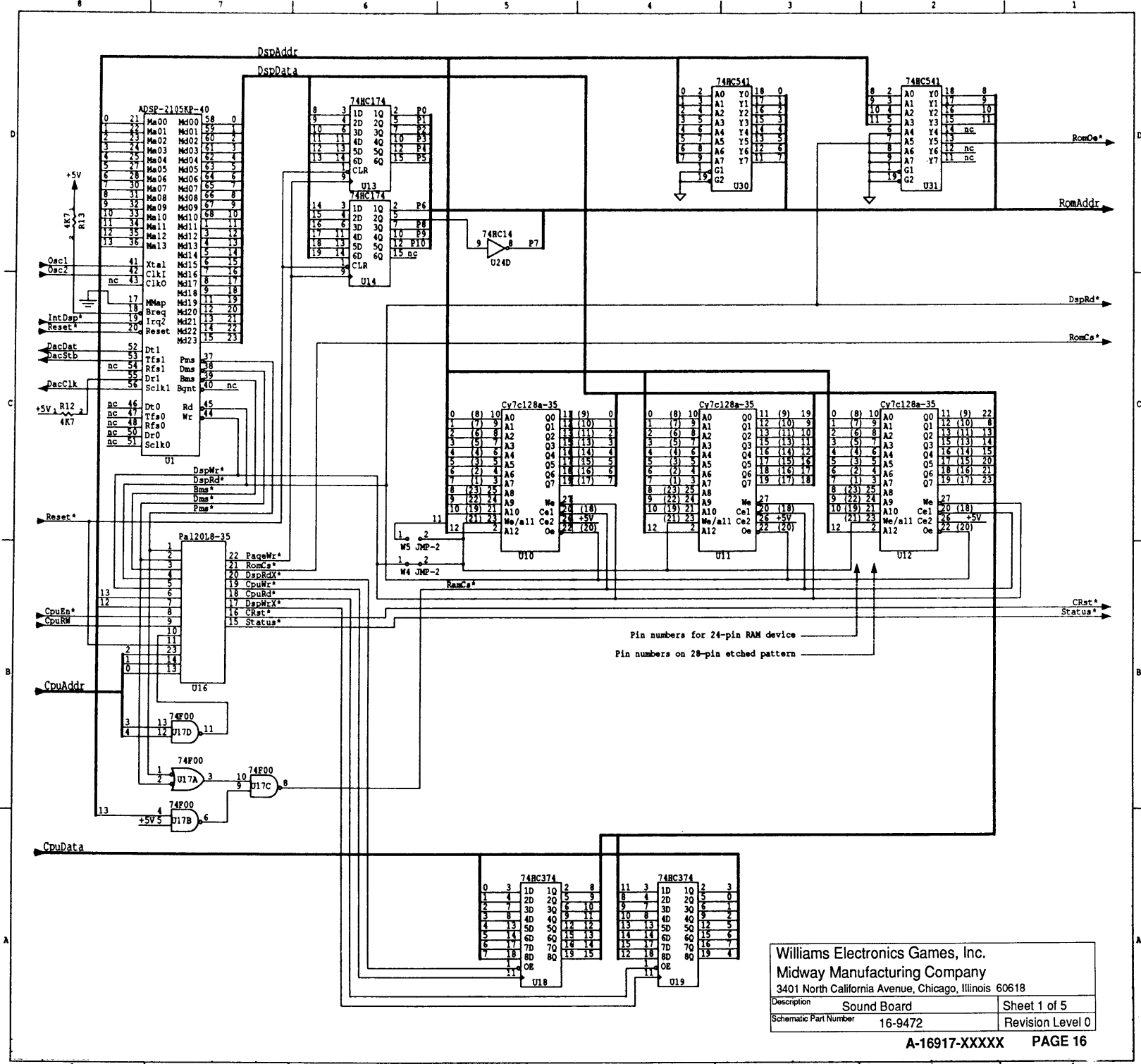
Williams Electronics Games, Inc.
 Midway Manufacturing Company
 3401 North California Avenue, Chicago, Illinois 60618
 Description Sound Board Sheet 1 of 2
 Schematic Part Number 16-9058 Revision Level 4



SEE NOTE 1

NOTES:
 1 COMPONENTS BOUNDED BY DASHED LINES ARE NOT USED IN SHUFFLE ALLEY GAMES.

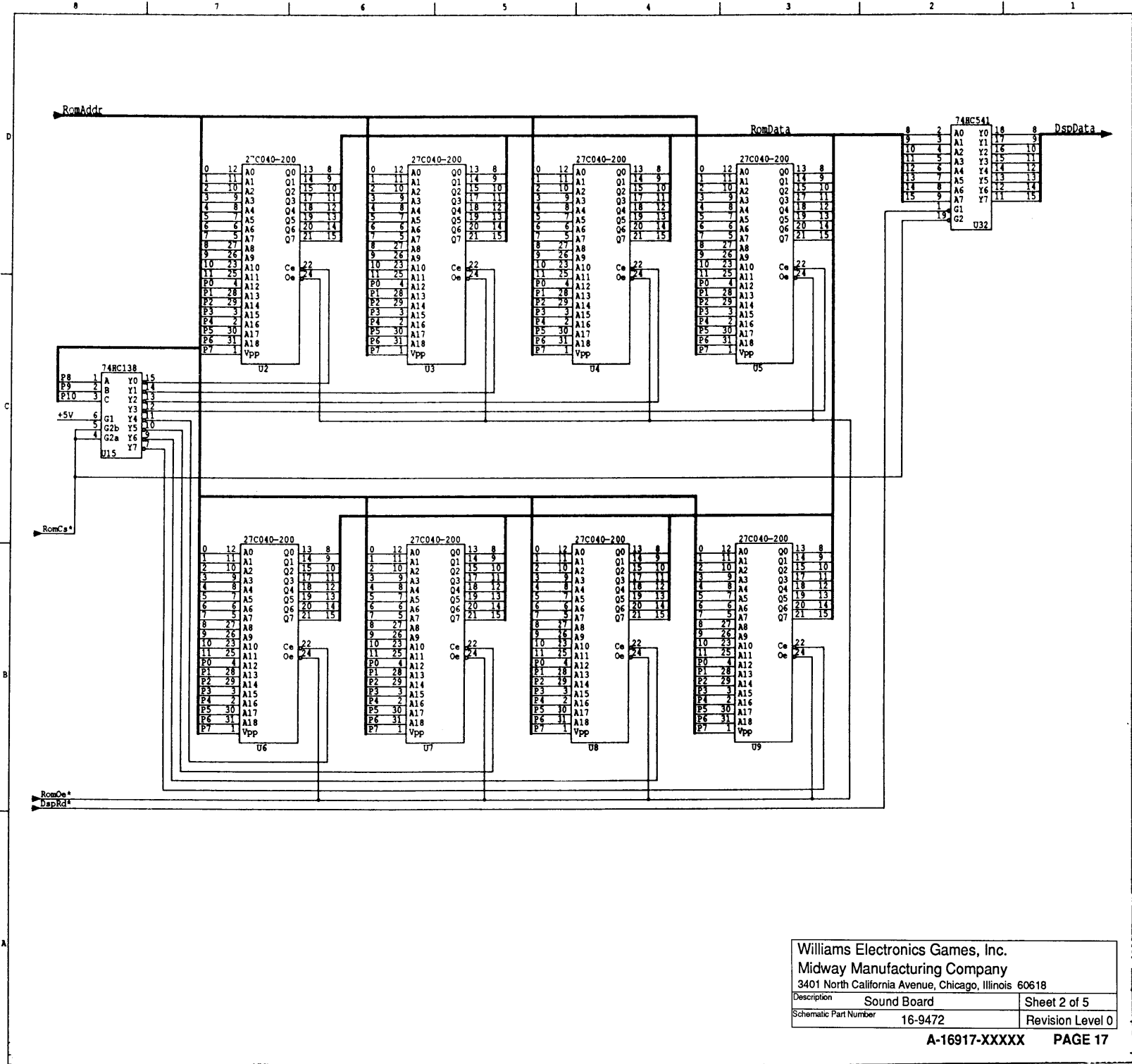
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Description	Sound Board	Sheet 2 of 2
Schematic Part Number	16-9058	Revision Level 4



Pin numbers for 24-pin RAM device
 Pin numbers on 28-pin etched pattern

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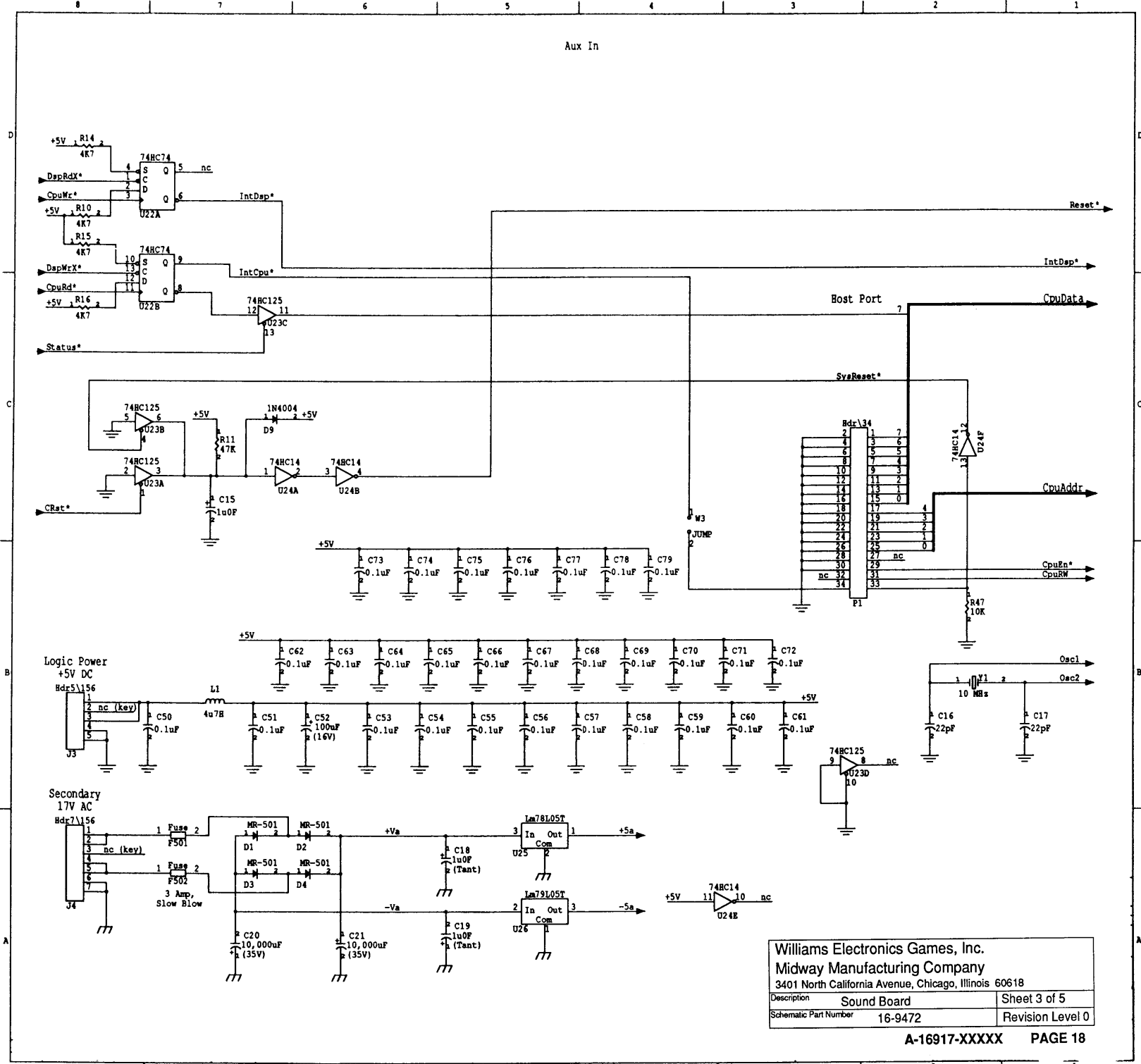
Description	Sound Board	Sheet 1 of 5
Schematic Part Number	16-9472	Revision Level 0



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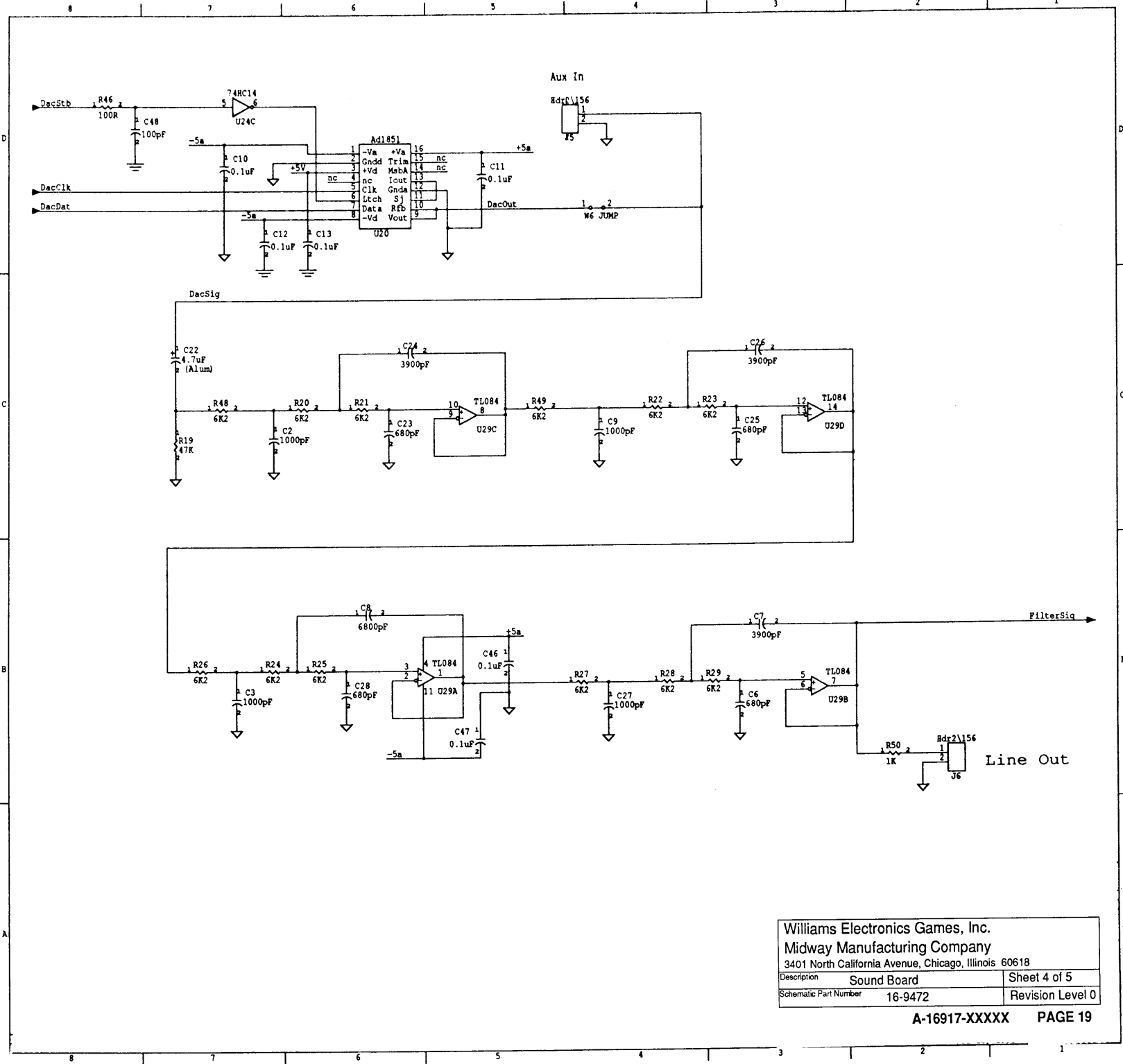
Description	Sound Board	Sheet 2 of 5
Schematic Part Number	16-9472	Revision Level 0

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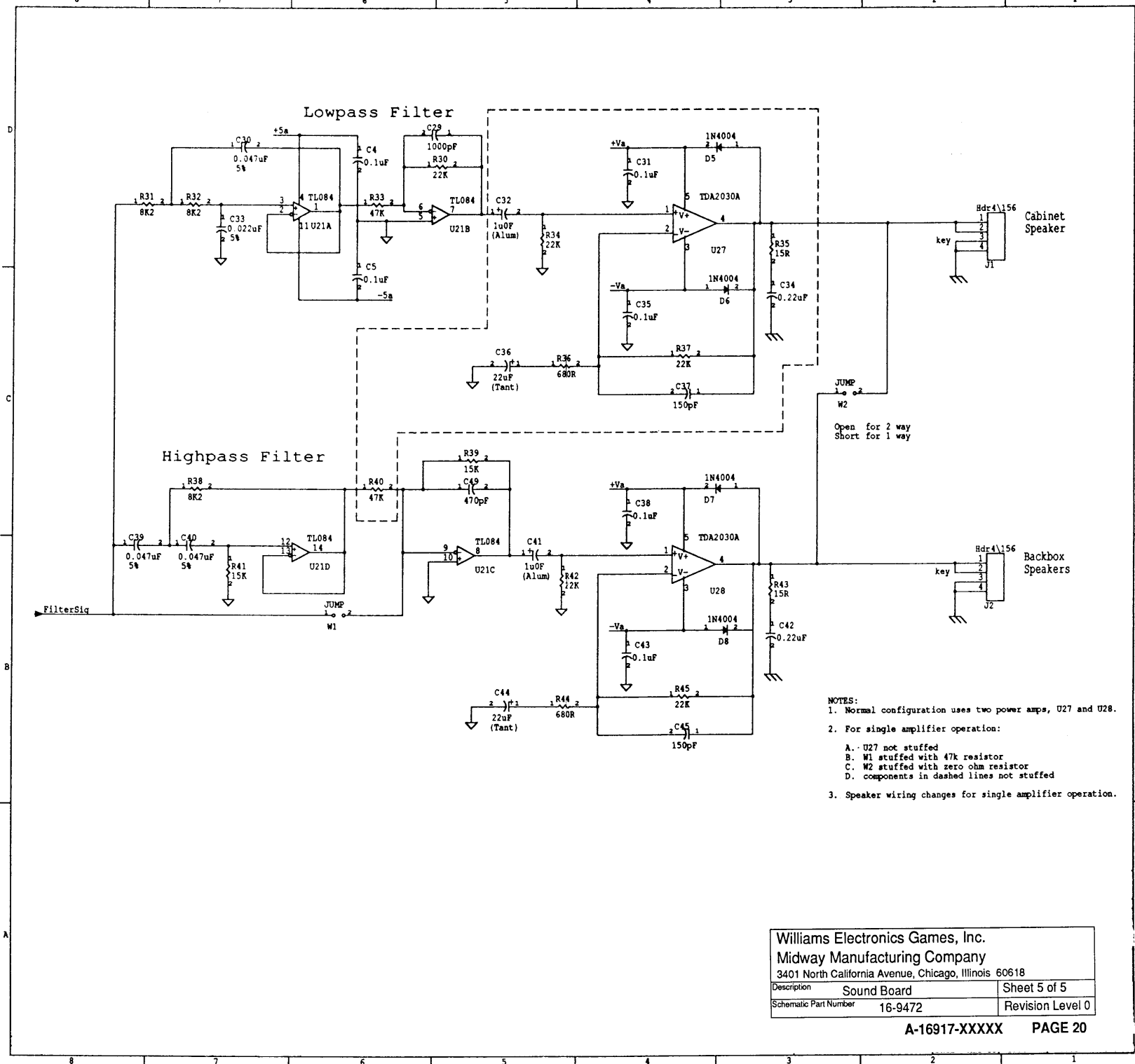
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Description	Sound Board	Sheet 3 of 5
Schematic Part Number	16-9472	Revision Level 0



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Description	Sound Board	Sheet 4 of 5
Schematic Part Number	16-9472	Revision Level 0



- NOTES:
1. Normal configuration uses two power amps, U27 and U28.
 2. For single amplifier operation:
 - A. U27 not stuffed
 - B. W1 stuffed with 47k resistor
 - C. W2 stuffed with zero ohm resistor
 - D. components in dashed lines not stuffed
 3. Speaker wiring changes for single amplifier operation.

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Description	Sound Board	Sheet 5 of 5
Schematic Part Number	16-9472	Revision Level 0