

# Vintage Arcade Skee-Ball

Installation, Programming and Operation



**Vintage Arcade Skee-Ball**  
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### **WARNINGS**

Read this manual thoroughly before assembling your game. Failure to follow the instructions could cause damage to your game and void your warranty. In addition, the manual explains the game in detail so that you and your players can enjoy the game to its fullest.

- A. The power cord must be plugged into a grounded, three-prong outlet. Failure to do so could cause permanent injury or game damage.
- B. This game is suitable for indoor use only. The game should not be installed outdoors or in areas directly exposed to sunlight, high humidity, direct water contact, dust, high heat or extreme cold. Installation in any such environment shall void the warranty.
- C. Replacement of fuses, lamps and any other servicing on the product should be conducted by trained personnel.
- D. When removing channel covers, remove key immediately after unlocking to prevent damage to the runway carpet when placing the channel cover on the alley.

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## **SPECIFICATIONS**

### **BASIC ALLEY**

Height	13FT
Width	81"
Length	29 1/2"
Weight	154"
	680 lbs. Uncrated
	730 lbs. Crated
Power Maximum:	115 VAC, 3.0 AMPS
	345 WATTS
Average:	115 VAC, 1.0 AMPS
	115 WATTS

### **TOOLS REQUIRED**

5/32" Allen Wrench (provided)	Attach Nets to the Back Cabinet
2 - 3/4" Wrenches	Attach Alley to the Back Cabinet
2 - 1/2" Wrenches	Attach Legs to the Back Cabinet

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### ASSEMBLY INSTRUCTIONS

#### PRE-ASSEMBLY

Remove all parts from the shipping boxes and inspect for any possible damage during handling. Use the list on the specifications page to inventory the items. If any part(s) are missing, call your salesperson immediately. If shipping damage is noted, call the trucking company making the delivery.

Part Number	QTY	Description
- 990227-1	1	Manual, Skee-ball 100 Yr Anniversary Alley
- 801850-4	1	5/32 x 6in Hex Allen Wrench
- 211137-1	1	Assy, Cage, Left Side
- 211132-1	1	Assy, Cage, Right Side
- 211131-1	1	Weldment, Cage, Top
- 800179-52	5	Ball, 3-1/8in, Brown, Plastic
- 800109-2316	2	Key, 2316
- 801122-9	12	Button Head Cap Screw, 1/2-20 x 1 1/2 Black

#### ASSEMBLY

1. Arrange the Alley and the Back Cabinet on their sides.



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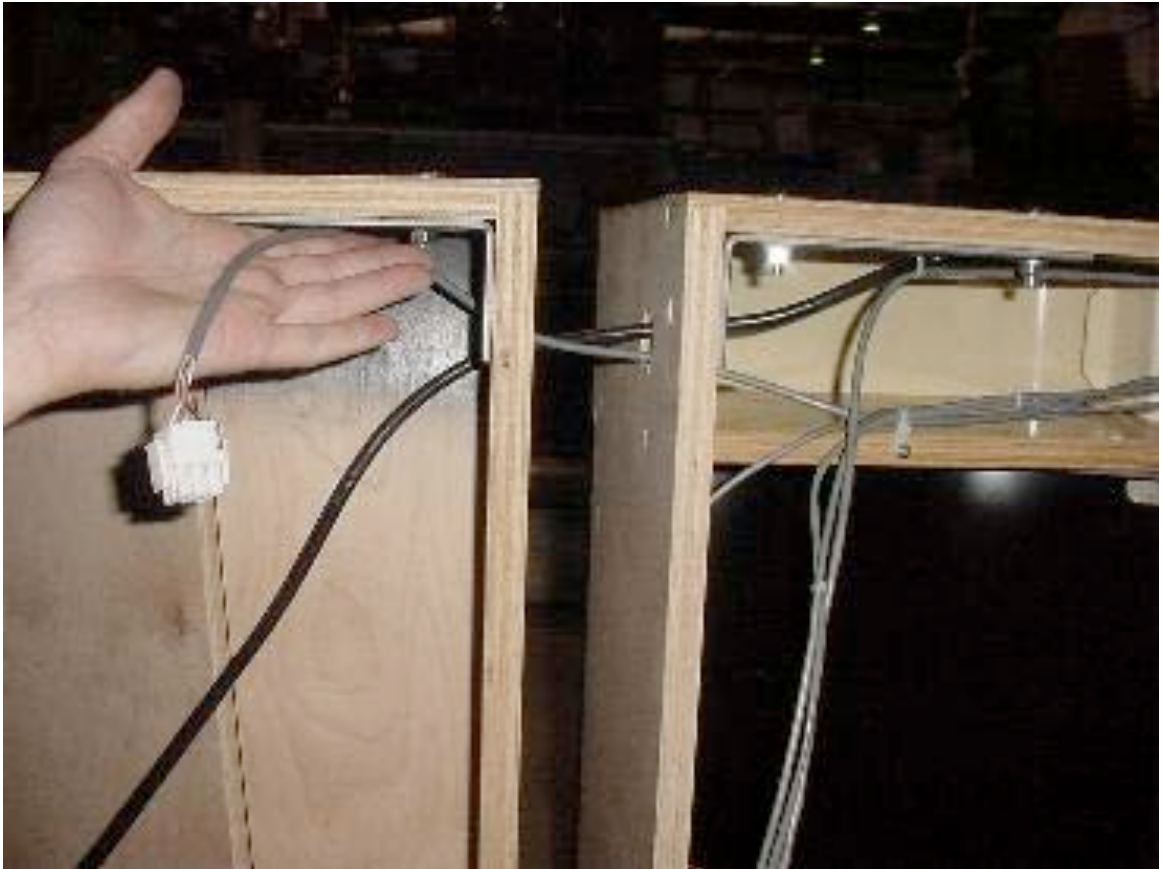
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2. Feed the power cord and the 9 nine connector cable through the holes in the alley and the back cabinet and pull through.



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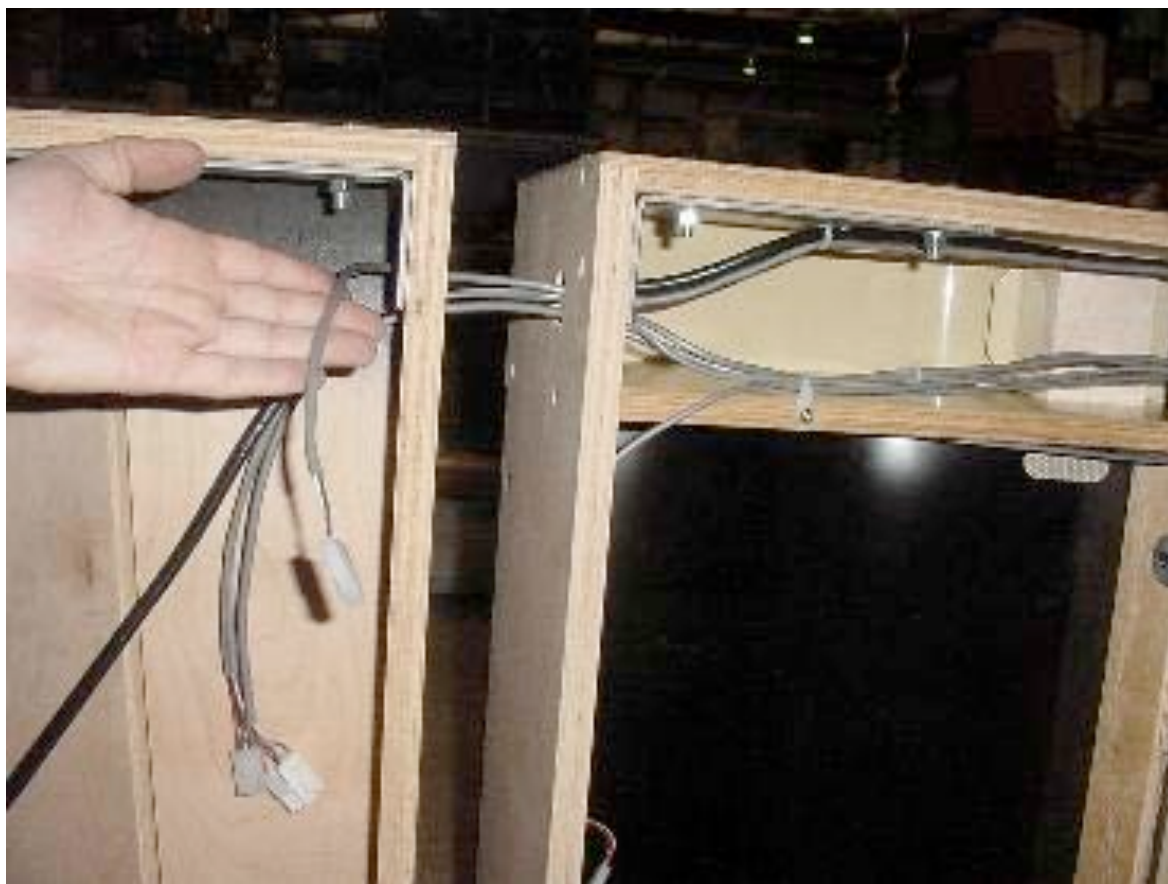
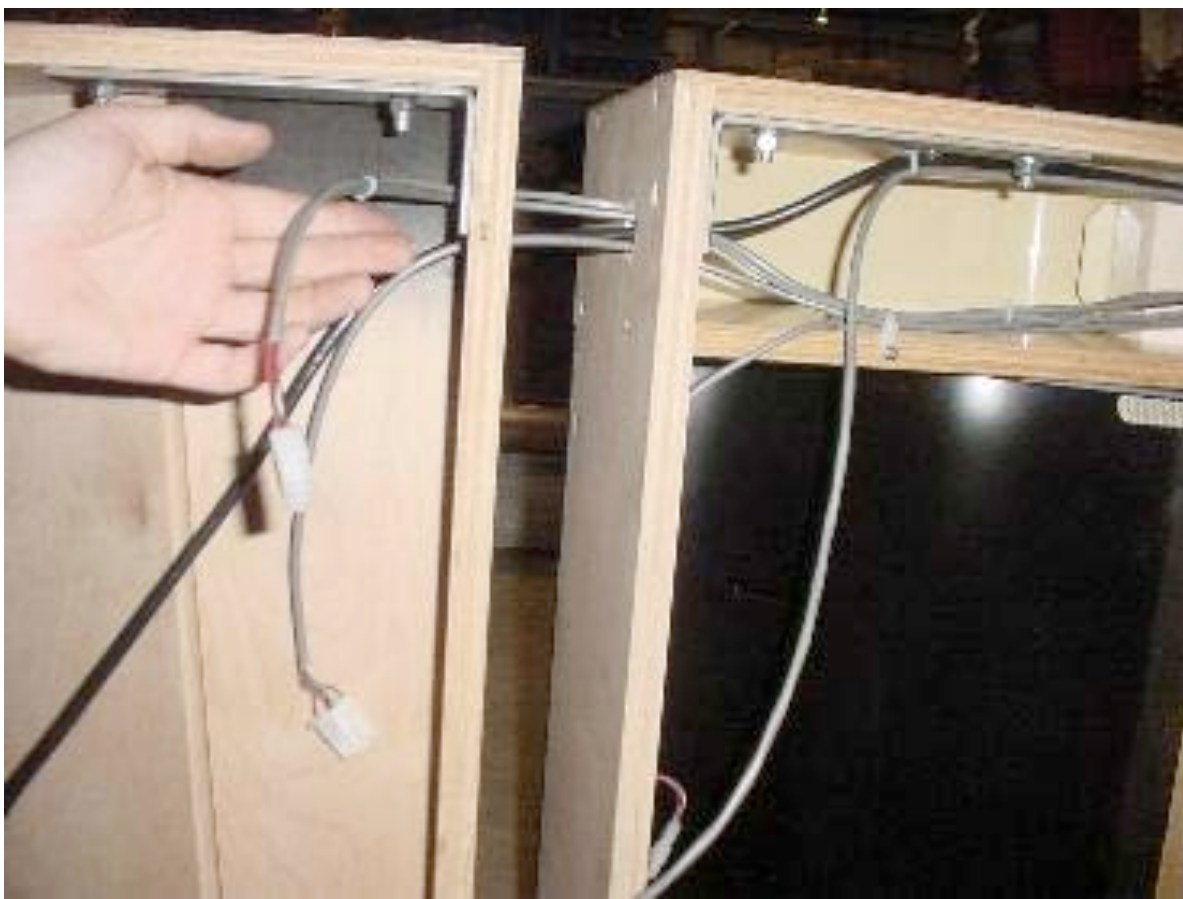


3. Feed the three pin and then two pin cables through the holes in the alley and the back cabinet and pull them through.



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4. Attach mating cables from back cabinet.



5. Fasten back cabinet to alley with provided hardware..



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6. Fit and loosely insert top and bottom, then tighten.



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### FUNCTIONAL DESCRIPTION

#### MAJOR GAME COMPONENTS

##### Back Cabinet Assembly

This portion of the game houses the score display panel and target board assembly.



##### Runway Assembly (Alley)

This assembly houses the ball release assembly, ball count sensor, ball release sensor, and all control electronics.





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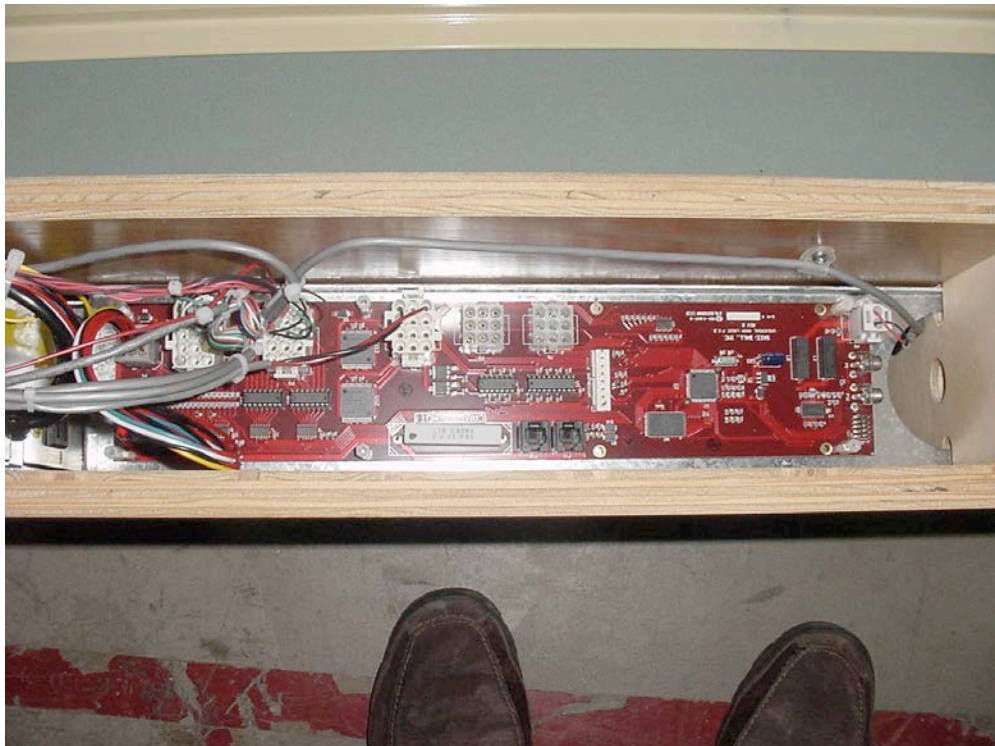
### Scoreboard Display Cover

Located in front of the score panel. It is easily removable by pulling plastic straight up from the top to gain access to the light bulbs, and flip digit display.



### Controller Assembly

This assembly is located in the electronics area below the runway's left channel. The CPU is on one printed circuit board and is referred to as the Universal Controller (P/N 632065-10).

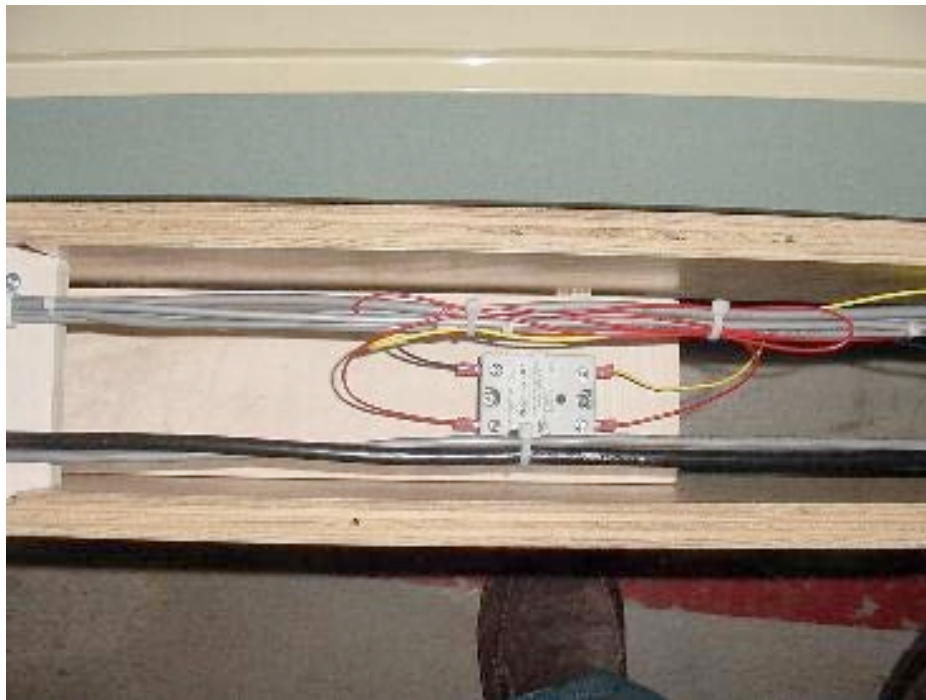


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### Power Supply and Solenoid Relay

The Power Supply (P/N 800758-1) (shown from bottom side) and the Solenoid Relay (P/N 801716-1) are also located in the along the left side of the runway.



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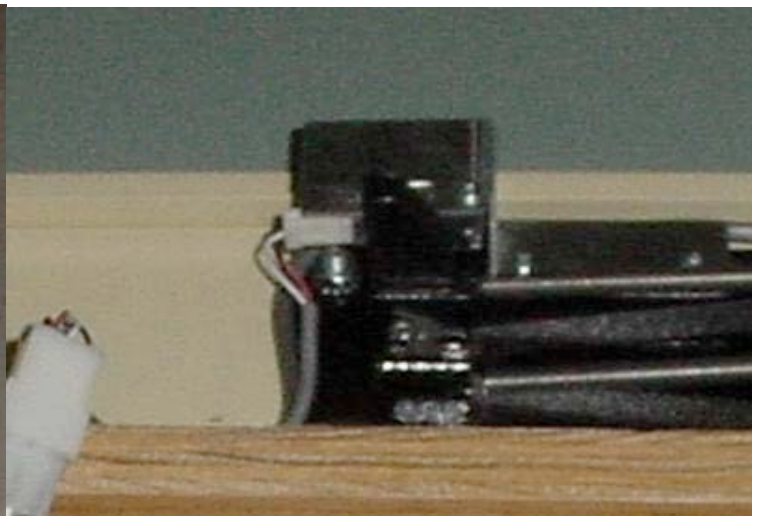
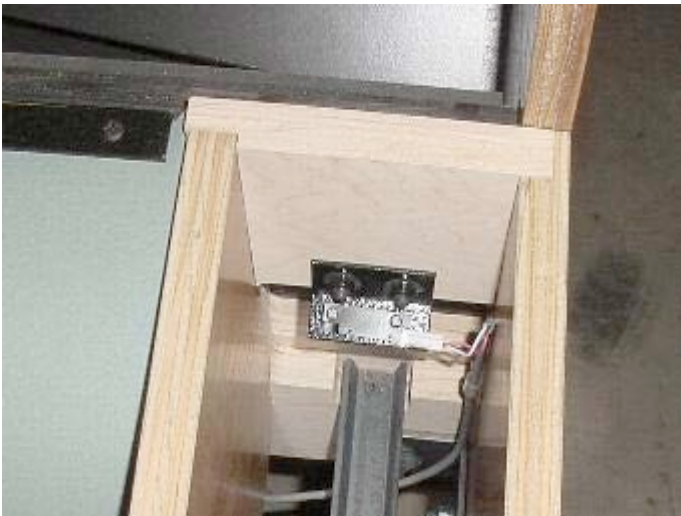
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### Opto-Sensors

Used at all pockets on target board, they are Omron Opto-interrupters (P/N 800773-3). They are located on a rail on the underside of the target board.



This part is also used for the ball count (at rear of right channel cover) and ball release (mounted on single ball release, under right channel cover) functions.





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### Single Ball Release Assembly

Located on underside of the right side channel cover. It has a solenoid connected via linkage to a release arm. Upon start of the game the solenoid engages and allows the balls to roll down to the player. The Ball Release Sensor, which is mounted in front of this assembly, counts the balls as they are being released. After counting the appropriate amount of balls, the solenoid disengages and is able to prevent any more balls from being released due to the pressure applied by the springs. Example: The game is typically set for 9 balls per play but you may only have 1 ball loaded into the game. In this case, solenoid will engage to allow the ball to pass until the sensor detects the 9 balls and will then immediately disengage.



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**Target Board Protective Net (Cages)** - There are 3 different panels fabricated out of hard PVC frame and metal mesh. These are fastened to the back cabinet assembly to protect the Target Board to reduce the possibility of the ball going astray and damaging the Target Board.



## GAME PLAY

After the pulling the lever, the controller turns the Ball Release Solenoid ON, and the proper number of balls are released. The following conditions should exist:

- Score homes to "0"
- All balls in game should roll the access area.

The alley is now ready to be played. If a ball is rolled and goes into the 50-point pocket, the score will increase by 50. Also, shortly after passing the ball count sensor, the controller will play a tune and the ball count display will increment by one. Each pocket has a unique tone. If, however, during the scoring time a winning score is achieved, the **WINNER SONG** is played instead of the pocket sound. Each achievement has its own sound. If the ball does not go into any of the pockets (a gutter ball), a **GUTTER BALL** tune is played. When the last ball has passed the ball release sensor, the solenoid will close and subsequent balls are captured.

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## GENERAL TROUBLESHOOTING

**CAUTION: High voltage is present in some areas of the alley (power supply, SCR, solenoid, etc.). Unplug line cord before performing any troubleshooting.**

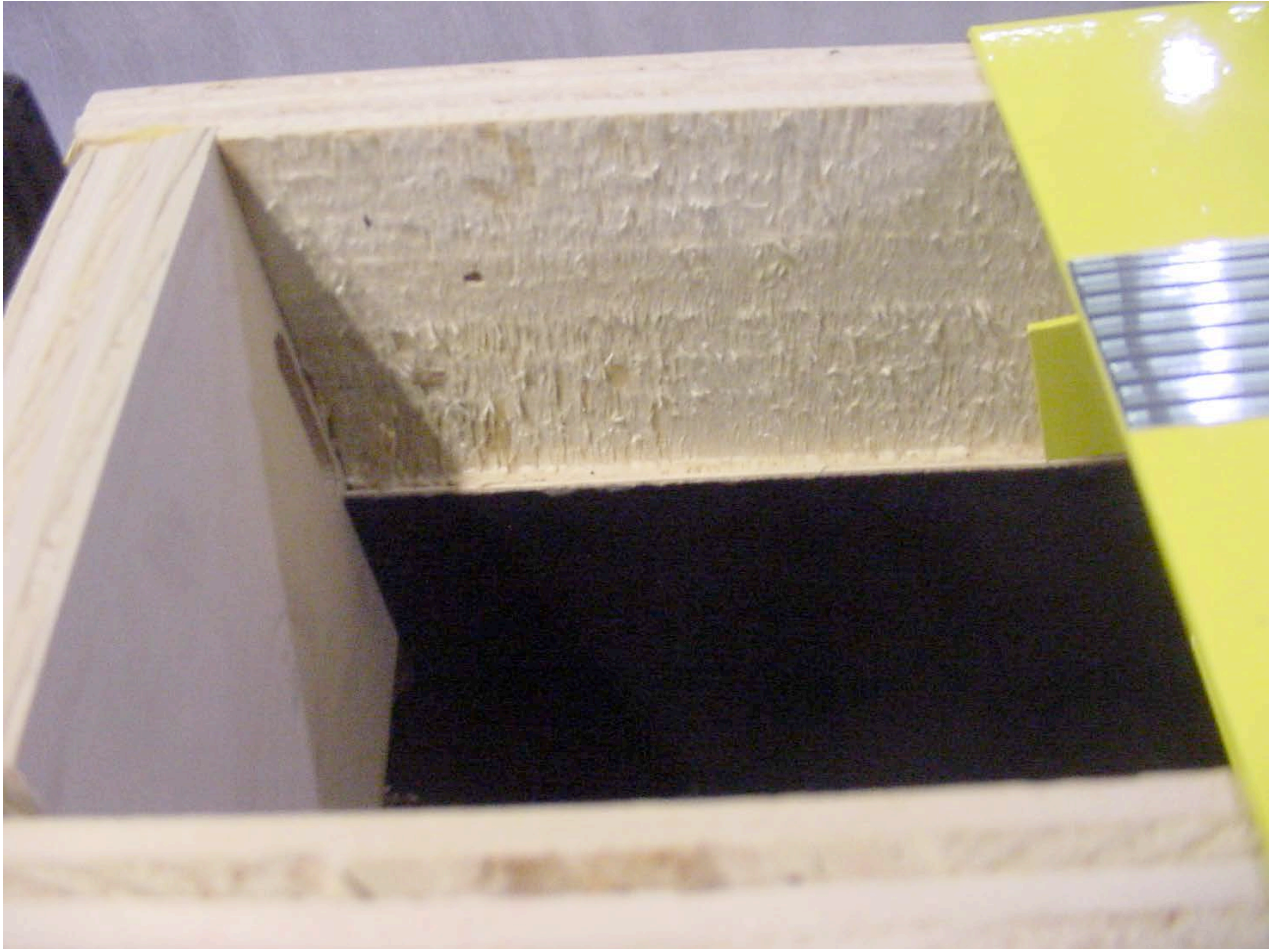
PROBLEM	RECOMMENDATION
Game does not start when lever pulled and released	<ol style="list-style-type: none"><li>1. Make sure power is applied to the alley.</li><li>2. Check the connections on the cable from the controller to the lever sensor.</li><li>3. Replace sensor.</li></ol>
Display not showing proper readout	<ol style="list-style-type: none"><li>1. Inspect cable for good connections.</li><li>2. Check connectors</li><li>3. Check power supply voltage.</li><li>4. Adjust potentiometer at Power Supply</li><li>5. Replace display with a known good display.</li></ol>
Ball count not accurate	<ol style="list-style-type: none"><li>1. Clean Sensor</li><li>2. Adjust ball count sensor towards the ball if it does not count the ball.</li><li>3. Adjust the sensor away from the ball if it counts one ball as two.</li></ol>
Missing ball count.	<ol style="list-style-type: none"><li>1. Adjust the sensor to make sure it detects the ball.</li><li>2. Replace the sensor</li></ol>
Ball release inaccurate	<ol style="list-style-type: none"><li>1. Adjust ball count sensor towards the ball if it does not count the ball.</li><li>2. Adjust the sensor away from the ball if it counts one ball as two.</li><li>3. Check for physical obstruction.</li></ol>
Missing ball release count	<ol style="list-style-type: none"><li>1. Adjust the sensor to make sure it "Sees" the ball.</li><li>2. Replace the sensor.</li></ol>
Pulling lever but does not release balls	<ol style="list-style-type: none"><li>1. Replace lever sensor.</li><li>2. Replace controller.</li></ol>
Gutter ball not scored or counted as ball played	<ol style="list-style-type: none"><li>1. Check the connection ball count sensor.</li><li>2. Replace ball count sensor.</li><li>3. Replace cable</li><li>4. Replace controller.</li></ol>

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**MAINTENANCE NOTES:**

**WHEN REMOVING CHANNEL COVERS, DO NOT LEAVE KEY IN LOCK BECAUSE IT WILL DAMAGE THE RUNWAY CARPET**

**WHEN REINSTALLING CHANNEL COVERS SLIDE TABS ON REAR OF COVER INTO SLOTS IN THE ALLEY TO SECURE.**



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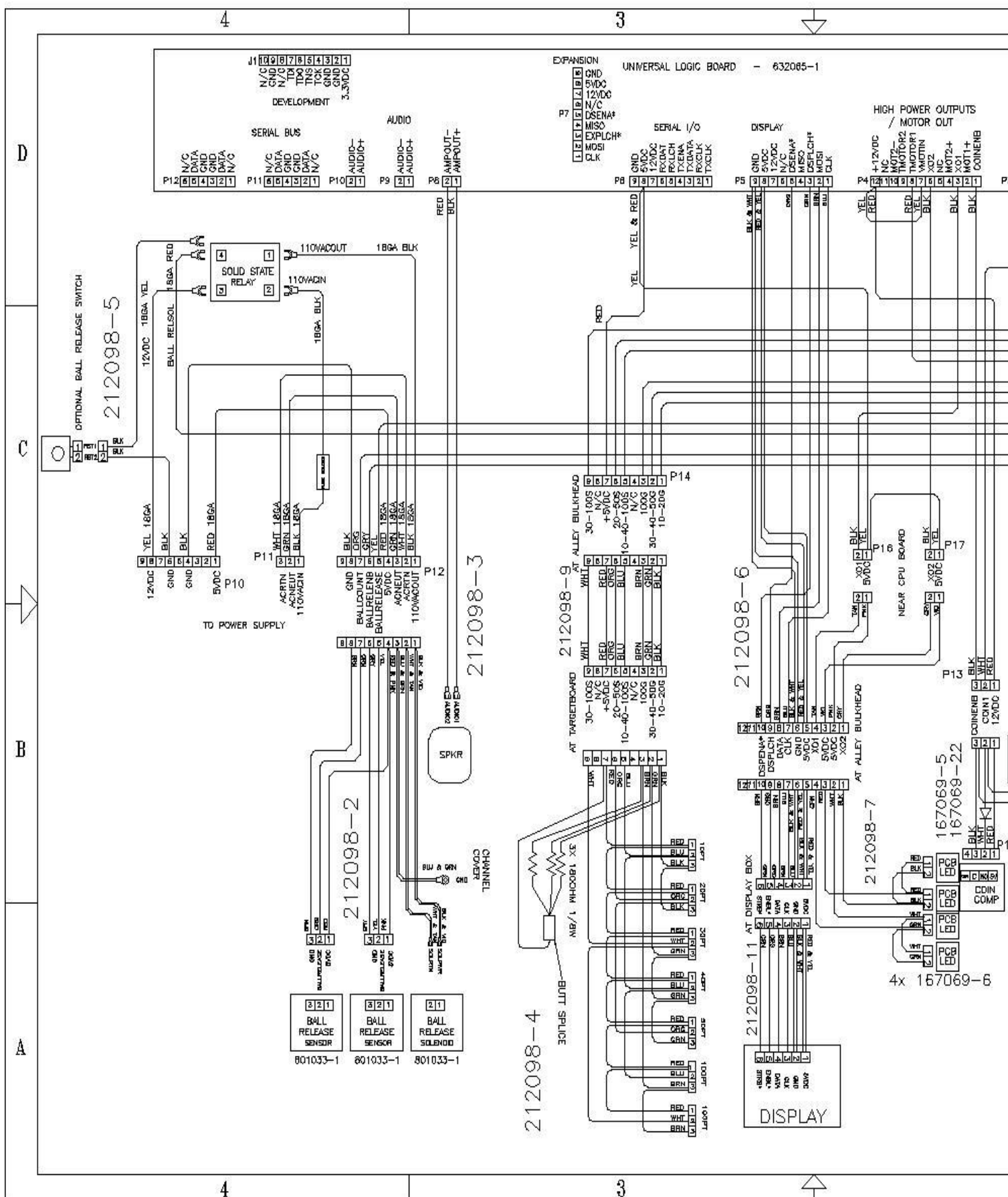
**PARTS LIST:**

PartNumber	Description	SHIPPED ASSY,SKEE-BALL 2010 10FT
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## **SCHEMATICS & WIRING DIAGRAMS:**

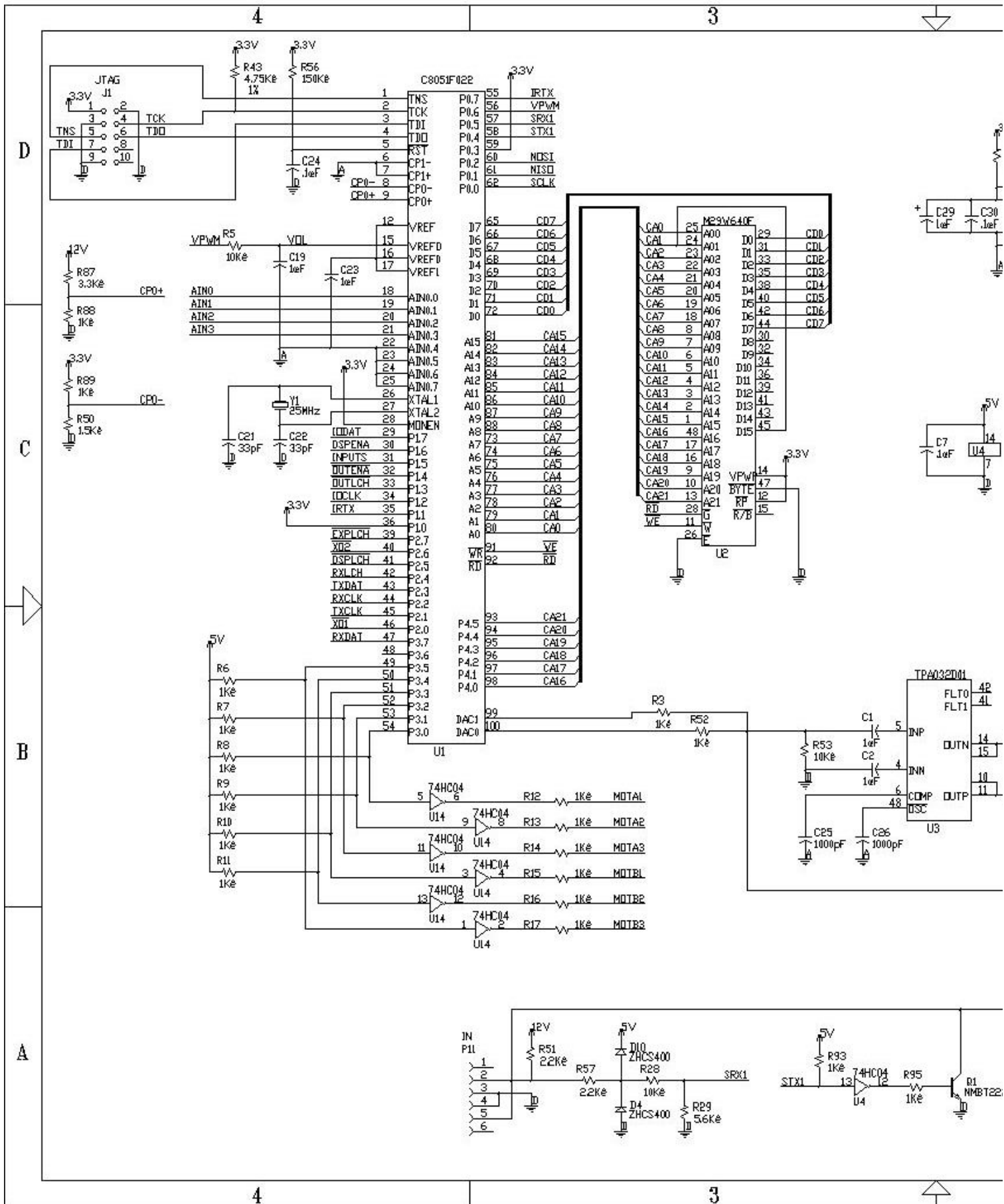


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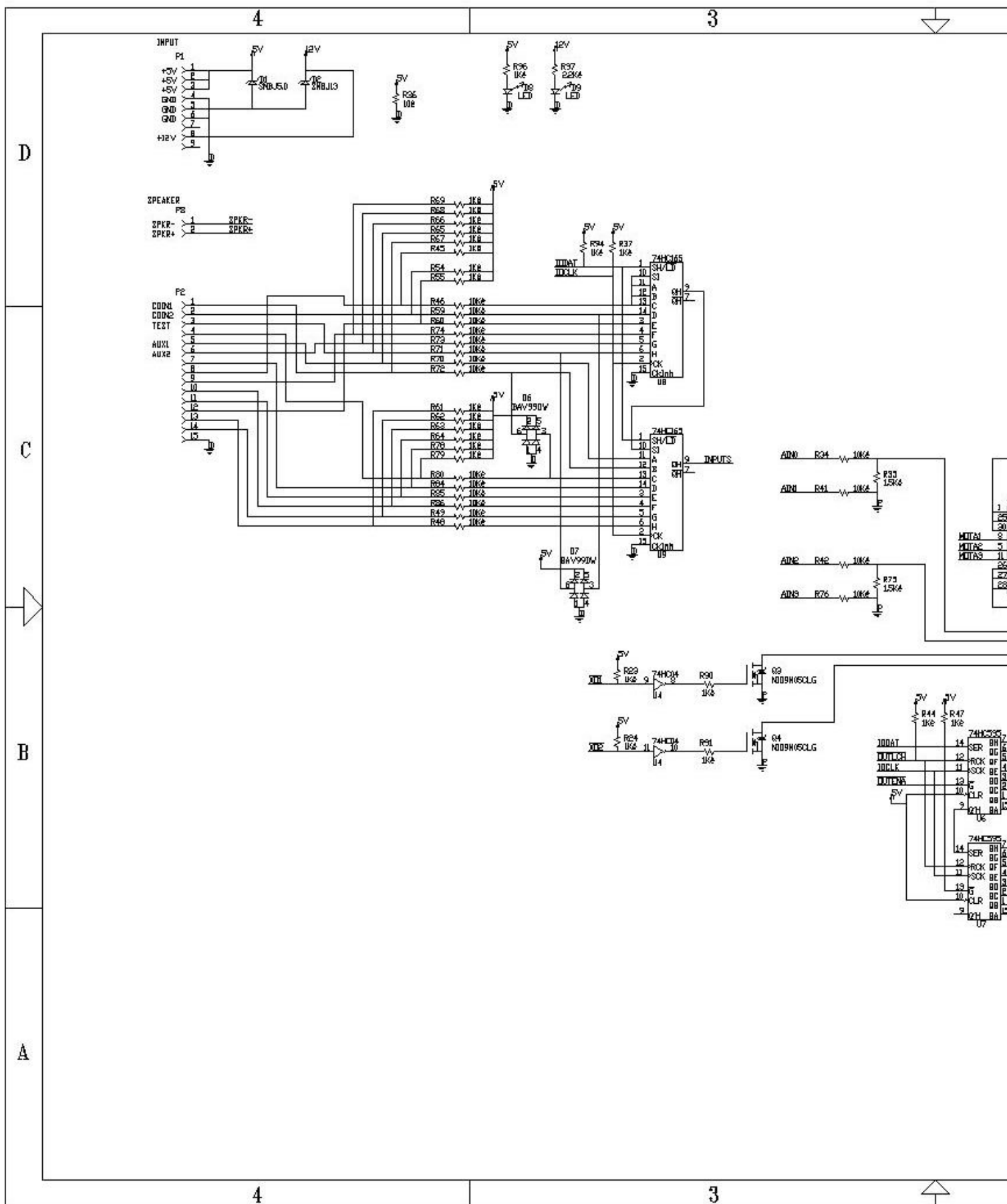
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