

# SERVICE MANUAL



**BAY★TEK**  
entertainment



PLACE SERIAL NUMBER LABEL HERE

# FACTORY CONTACT INFORMATION



BAY TEK ENTERTAINMENT  
Pulaski Industrial Park  
1077 East Glenbrook Drive  
Pulaski, WI 54162 USA

## SIGN UP TO RECEIVE OUR E-MAILS!

Stay up to date on the latest game information, new products launches, early notification of parts specials, updates of retro fit parts, software upgrades, best practices and more!

Visit [baytekent.com](http://baytekent.com) and enter your email to sign up!

You can also register your new game at [baytekent.com/register](http://baytekent.com/register)

### SALES

Phone: (920) 822-3951  
Fax: (920) 822-8936  
Email: [sales@baytekent.com](mailto:sales@baytekent.com)

### PARTS

Phone: (920) 822-3951 Ext 1101  
Fax: (920) 822-8936  
Email: [parts@baytekent.com](mailto:parts@baytekent.com)

### SERVICE

Phone: (920) 822-3951 Ext 1102  
Fax: (920) 822-8936  
Email: [service@baytekent.com](mailto:service@baytekent.com)

**Open Monday - Friday**  
**8 AM - 5PM C.S.T.**

All games are proudly manufactured at our factory in Pulaski, Wisconsin, USA

# TABLE OF CONTENTS

|                                         |         |
|-----------------------------------------|---------|
| FACTORY CONTACT INFORMATION .....       | 2       |
| TABLE OF CONTENTS.....                  | 3       |
| WELCOME TO TUNDRA TOSS QUICK FIRE ..... | 4       |
| SAFETY PRECAUTIONS .....                | 4       |
| GAME SPECIFICATIONS .....               | 5       |
| CARD SWIPE INSTALLATION .....           | 6       |
| GAME SETUP .....                        | 7 - 18  |
| HOW TO PLAY .....                       | 19      |
| MAIN MENU FUNCTIONS .....               | 20 - 23 |
| PAYOUT SETTINGS RECOMMENDATIONS .....   | 21      |
| TROUBLESHOOTING GUIDES .....            | 24 - 28 |
| CIRCUIT BOARD LAYOUT .....              | 29      |
| WIRING DIAGRAMS .....                   | 30 - 37 |
| POWER SUPPLY DIAGNOSTICS .....          | 38      |
| HOW TO REPLACE DISPLAY .....            | 38      |
| HOW TO REPLACE SCORE SENSORS .....      | 39      |
| BILL ACCEPTOR DIAGNOSTICS .....         | 40      |
| AVAILABLE BLANKING PLATES .....         | 40      |
| HOW TO ADJUST CONVEYOR TENSION .....    | 41      |
| HOW TO ADJUST CONVEYOR GUARD .....      | 41      |
| I/O BOARD DIPSWITCH SETTINGS .....      | 42      |
| I/O AUX BOARD PINOUT .....              | 42      |
| CONTROLLER BOARD INFORMATION .....      | 43      |
| REAR CONTROLLER BOARD INFORMATION ..... | 43      |
| CONVEYOR EXPLODED VIEW .....            | 44      |
| PARTS PICTURES .....                    | 45 - 47 |
| PARTS LIST .....                        | 47 - 48 |
| MAINTENANCE LOG .....                   | 49      |
| TECHNICAL SUPPORT .....                 | 50      |
| WARRANTY .....                          | 50      |

# WELCOME TO TUNDRA TOSS

## Congratulations on your purchase!

Please take a moment to read through this manual and be sure to contact us if you have any questions, or would like more information.

Thank you for your purchase! Your business is important to us and we hope you enjoy this game as much as we do!

*Your Friends at Bay Tek Entertainment*

Please inspect the game for any damaged, loose, or missing parts.

If damage is found, please contact your freight carrier first.  
Then, contact Bay Tek Entertainments' Service Department at  
(920) 822-3951 Ext. 1102  
Or email us at [service@baytekent.com](mailto:service@baytekent.com) for further assistance.

## SAFETY PRECAUTIONS

|                                                                                                                                                                                                                                                                                                                                                                          |                             |                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                         | <b>NOTICE</b>               |    |
| Modifications to the mechanical, electrical and structural components of this game may void its compliance certifications.                                                                                                                                                                                                                                               |                             |                                                                                       |
| This appliance is suitable for INDOOR, DRY locations only.                                                                                                                                                                                                                                                                                                               |                             |                                                                                       |
|                                                                                                                                                                                                                                                                                       | <b>DANGER</b>               |  |
| DO NOT perform repairs or maintenance on this game with the power ON.<br>Unplug the unit from the wall outlet or shut off the power strip located inside the cabinet.                                                                                                                                                                                                    |                             |                                                                                       |
|                                                                                                                                                                                                                                                                                       | <b>WARNING</b>              |  |
| Use of flammable substances can cause sever burns or serious injury.<br>Always use NON-FLAMMABLE solvents for cleaning. DO NOT use gasoline kerosene or thinners.                                                                                                                                                                                                        |                             |                                                                                       |
|                                                                                                                                                                                                                                                                                       | <b>CAUTION</b>              |  |
| Lifting heavy objects can cause back, neck or other injuries. Be sure adequate lifting and moving devices are available when unloading, unpacking and moving this game.                                                                                                                                                                                                  |                             |                                                                                       |
|                                                                                                                                                                                                                                                                                       | <b>ATTENTION</b>            |  |
| Be sure the electrical power matches the game requirements. See the serial number located on the back of the game cabinet. Always plug into a grounded circuit. If the supply cord is damaged, it must be replaced by an approved cord or assembly provided by the manufacturer.<br><b>A shielded power cable must be used for the game to retain EU/EMC compliance.</b> |                             |                                                                                       |
|                                                                                                                                                                                                                                                                                       | <b>IN CASE OF EMERGENCY</b> |  |
| UNPLUG THE POWER CORD.<br>The power cord must be accessible at all times in case of an emergency.                                                                                                                                                                                                                                                                        |                             |                                                                                       |
|                                                                                                                                                                                                                                                                                       | <b>WARNING</b>              |  |
| This unit is capable of producing sound levels hazardous to human hearing.<br>Consult local sound regulations and adjust volume accordingly.                                                                                                                                                                                                                             |                             |                                                                                       |

# GAME SPECIFICATIONS

## WEIGHT

|             |           |        |
|-------------|-----------|--------|
| NET WEIGHT  | 1350 lbs. | 612 kg |
| SHIP WEIGHT | 1461 lbs. | 663 kg |

## POWER REQUIREMENTS

|                       |                |
|-----------------------|----------------|
| INPUT VOLTAGE RANGE   | 100 to 240 VAC |
| INPUT FREQUENCY RANGE | 50/60 Hz       |

## GAME DIMENSIONS

|        |              |        |
|--------|--------------|--------|
| WIDTH  | 47 inches    | 119 cm |
| DEPTH  | 135 inches   | 343 cm |
| HEIGHT | 124.5 inches | 316 cm |

## MAX OPERATING CURRENT

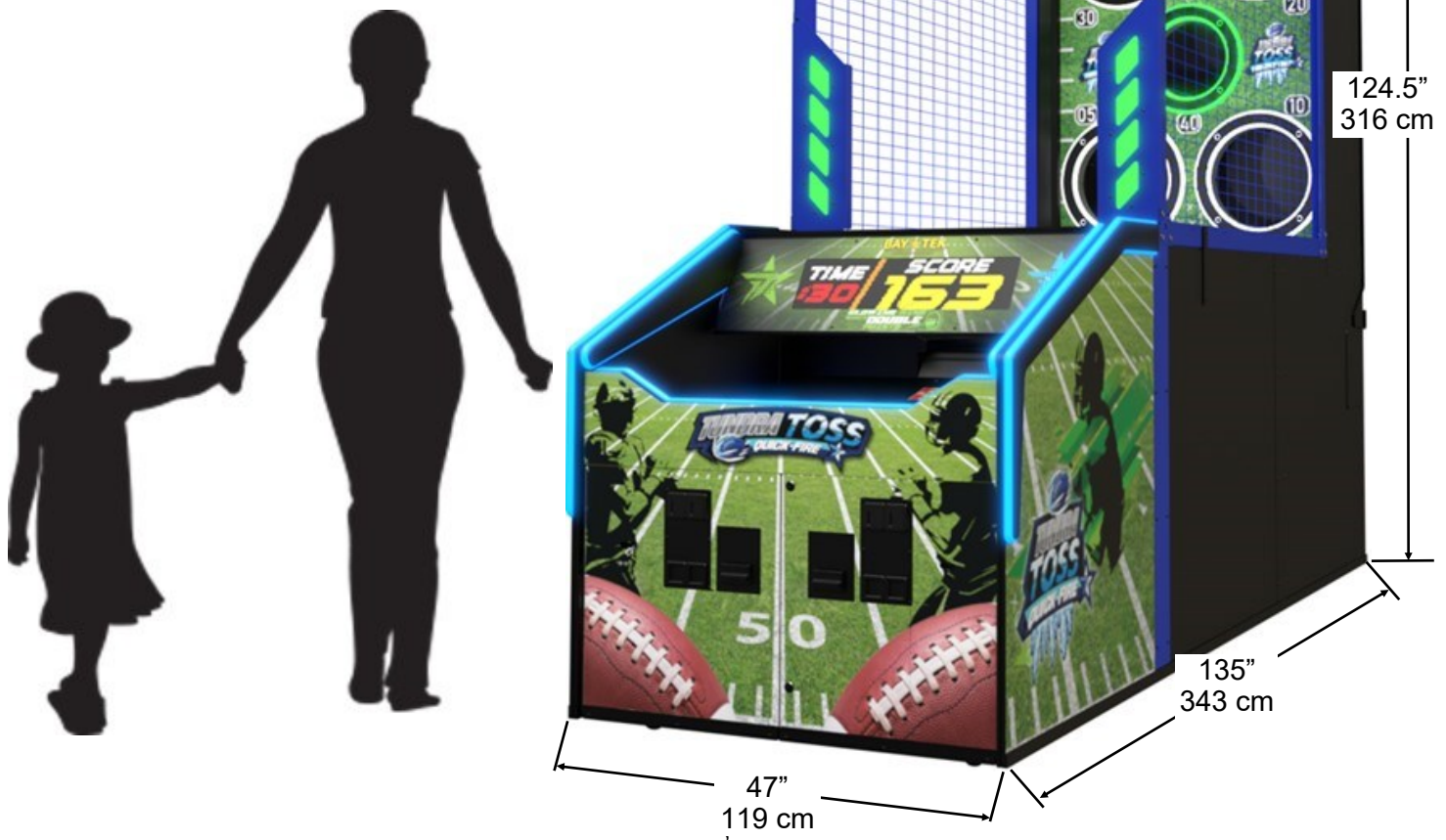
4.3 Amps @ 115 VAC / 2.15 Amps @ 230 VAC

## OPERATING TEMPERATURE

|            |              |
|------------|--------------|
| FAHRENHEIT | 45 - 80 F    |
| CELSIUS    | 7.2 - 26.7 C |

## SHIPPING DIMENSIONS

|           |                                                                                  |
|-----------|----------------------------------------------------------------------------------|
| 2 PALLETS | 72"L x 48"W x 82"H, 626 lbs. class 250<br>96"L x 48"W x 80"H, 835 lbs. class 250 |
|-----------|----------------------------------------------------------------------------------|



# CARD SWIPE SYSTEM INSTALLATION

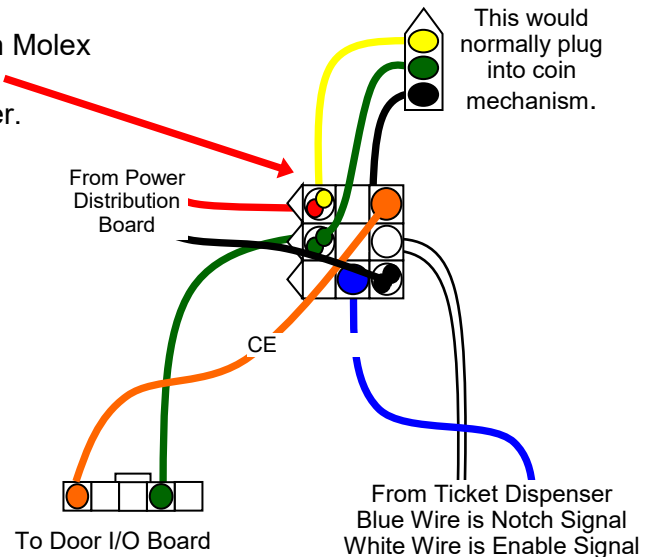
The Tundra Toss game is pre-wired with a UCL (Universal Card Link) connector to accept Card Swipe systems from many different manufactures.

Please follow these instructions to make full use of this capability.

## Option #1:

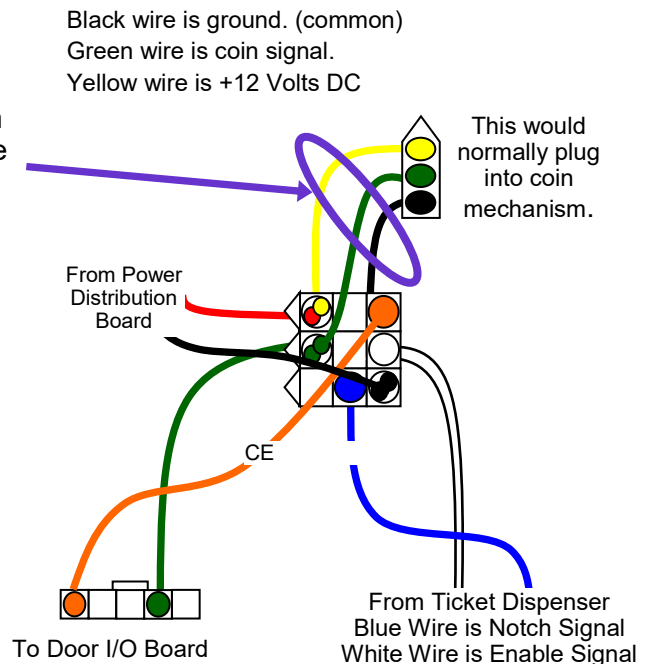
Card swipe systems may come with a standard 9 pin Molex connector. This is the UCL connector.

Simply plug this connector into your card swipe reader.



## Option #2:

If your card swipe systems does not have a standard 9 pin Molex connector, then you will have to splice wires into the harness.



### Notes:

1.) Many card swipe systems have a voltage threshold that can be adjusted in the card swipe menu. Please set this "Game Drive Threshold" to 2 Volts.

### Menu Changes

Enter menu, Go to "Payout" Menu

Change "Credits" to Swipe or Tap

Change "Redemption Type" to Tickets, Points, or Coupons

# TUNDRA TOSS QUICK FIRE GAME SETUP

Welcome to the game set up instructions for the Tundra Toss Quick Fire

The game will arrive on 2 pallets. Please inspect the pallets for shipping damage and report immediately to the freight company if any damage is found.

## Tools Needed:

1 ladder (8 foot)

5/32" Hex Bit Torx T-30 bit

Phillips screwdriver

2 people

# 2 Square head screwdriver bit

7/16" Wrench

## Important:

Portions of this game are heavy, bulky and large.

Assembly requires 2 people to lift heavy components, and ladders that are tall and strong enough to position components to the top of the game.

## Instructions:

Starting with the small pallet, remove the cardboard and shrink wrap surrounding the front console, side nets, and large cardboard box.

Remove the bag of 4 balls - these are extra balls - not needed for game play. Store these in the bottom of the game, or in the back room.

Remove the side nets from the pallet by removing the 4 packing screws using a #2 square bit.

This hardware is not needed in the assembly of the game.

Repeat the process for the other side net.

Set both side nets aside for later installation.

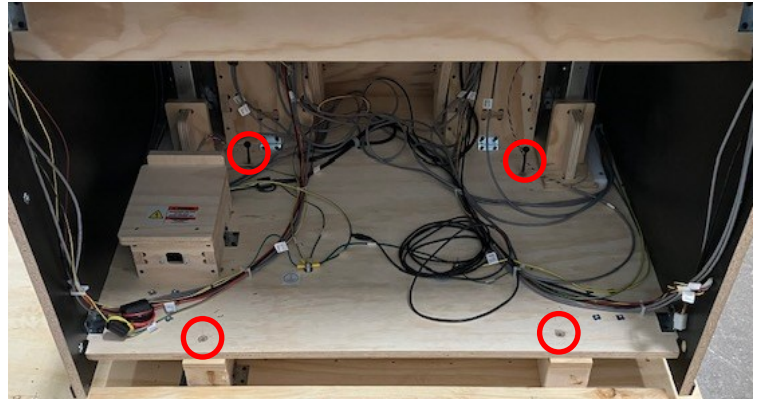
Remove the large cardboard box from the pallet and set aside for later installation.



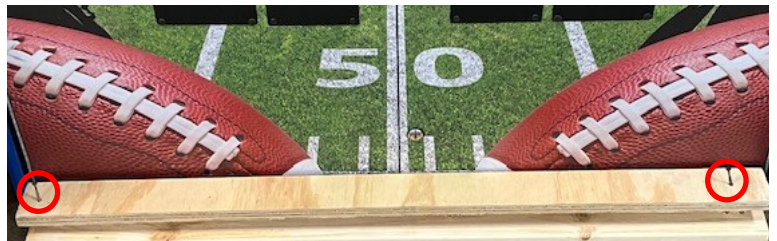
# TUNDRA TOSS QUICK FIRE GAME SETUP

From the back of front console, remove the 4 of Torx T-30 screws holding it to the pallet using a Torx T-30 bit.

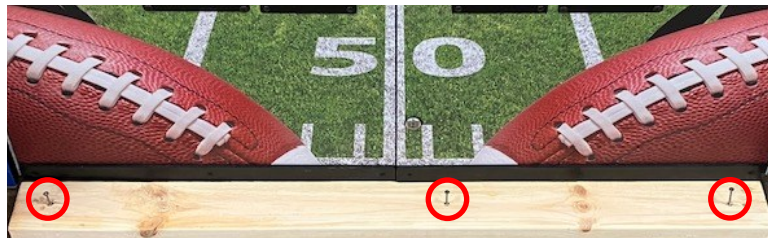
**Important! The front console must be removed from the front of the pallet or damage may occur!**



From the front side, remove the 2 screws using a #2 square bit and remove the wood piece.



Under that, remove the 3 screws using a #2 square bit and remove the 2 by 4 from pallet.



The front console can now be removed from the pallet by pushing it off the front of the pallet using 2 people.

Push at the back of the cabinet so that the front doors come off the pallet first.

Remove bag of keys taped to front console and open the front doors.

Open the coin box and remove the hardware kit.

This hardware kit contains all of the bolts and screws for assembly of the game.



# TUNDRA TOSS QUICK FIRE GAME SETUP

## Rear Cabinet:

Working on the large pallet, remove the cardboard and shrink wrap surrounding the rear cabinet.

From the front of the rear cabinet, remove the 2 of Torx T-30 screws holding it to the pallet using a Torx T-30 bit.



From the back of the rear cabinet, remove the 4 screws from back door using a #2 square bit and remove the back door. Set aside for later installation.



Inside the back door, remove the 2 of Torx T-30 screws holding it to the pallet using a Torx T-30 bit.



**Important! The rear cabinet must be removed from the rear of the pallet or damage may occur!**

The rear cabinet can now be removed from the pallet by pushing it off the rear of the pallet using 2 people.

Push at the front of the cabinet so that the back door comes off the pallet first.

Place the rear cabinet in the game room in it's final position.

# TUNDRA TOSS QUICK FIRE GAME SETUP

## Rotate playfield up into position:

Remove the 2 black plastic shipping pieces by removing the 2 bolts on each side of the cabinet.

These pieces are not needed in the game assembly.

Once both shipping pieces are removed, the playfield can be rotated up into position.



**Caution!** Use a ladder to carefully climb onto conveyor belt. Be aware of your footing as you lift.

Lift the playfield up and it will rotate smoothly into the upright position.

Inspect the rear of cabinet to ensure cables and rear tarp are not pinched or stretched.



Locate 4 bolts from the hardware kit.



A5SCHH007

The best process is to hand thread the bolts into the empty locations on the side bracket.

Once both bolts are started, tighten all using a 5/32 hex bit.

**Repeat the process for the other side bracket.**



# TUNDRA TOSS QUICK FIRE GAME SETUP

## Install Rear Tarp.

From back of cabinet, route the phone cables on both sides down neatly and into the bottom of the cabinet.

The rear tarp must slide down the inside of the cabinet and come back out the bottom.

Start with one corner, and push it down into the slot.

Work along the length of the tarp.



Once you get one corner back out of the slot, the rest of the tarp can be pulled down and out.



Clip the 5 carabiners into the tarp as shown.



# TUNDRA TOSS QUICK FIRE GAME SETUP

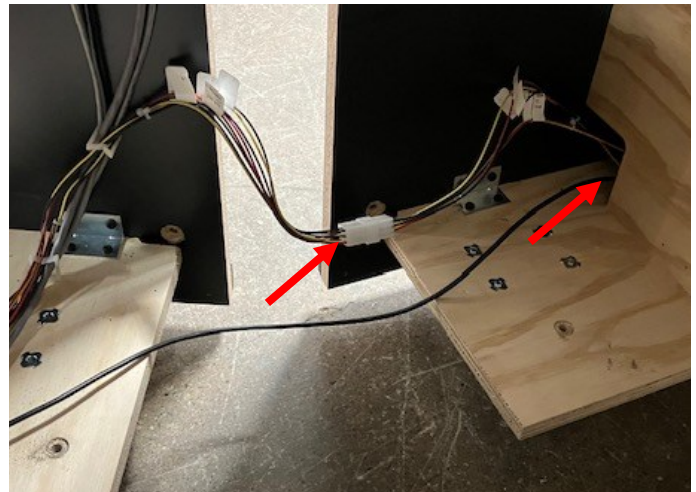
## Attach Front Console:

Push the front console close to the rear cabinet.

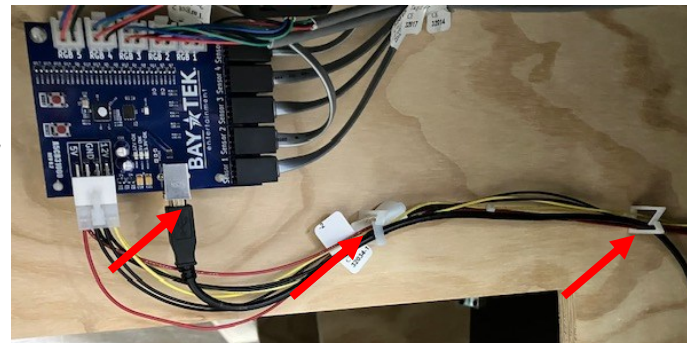
On the left side, plug the CE32035 cable to the CE32039 cable.

Uncoil the USB cable and route through the 4 wood cutouts to the rear controller board.

Hint: A small person could crawl under the cabinet, routing the cable through the wood cutouts along the way!



Clip into the wire saddles and plug into the bottom of the rear controller board.



On the right side, plug the AC power cord into the line filter.

Plug the CE32000 cable to the CE32001 cable.



# TUNDRA TOSS QUICK FIRE GAME SETUP

Push the front console tight to the rear cabinet, being careful not to pinch any wires.  
Route the loose wires up on the shelves.

Locate 2 of the blue metal connector plates from the large cardboard box.

Locate 4 bolts from the hardware kit.



A5SCHH007

Place the blue metal connector plate on the cabinet.



The best process is to hand thread all of the bolts into the connector plate.  
The cabinet may have to be lifted to align all of the holes.

Once both bolts are started, tighten all using a 5/32 hex bit.

Repeat the process for the other side bracket.

Remove the 8 balls from the plastic bag. These are to be left in the game to be used.

The other bag of 4 are spares.

Use 8 balls in each game.



# TUNDRA TOSS QUICK FIRE GAME SETUP

## Install Side Cages:

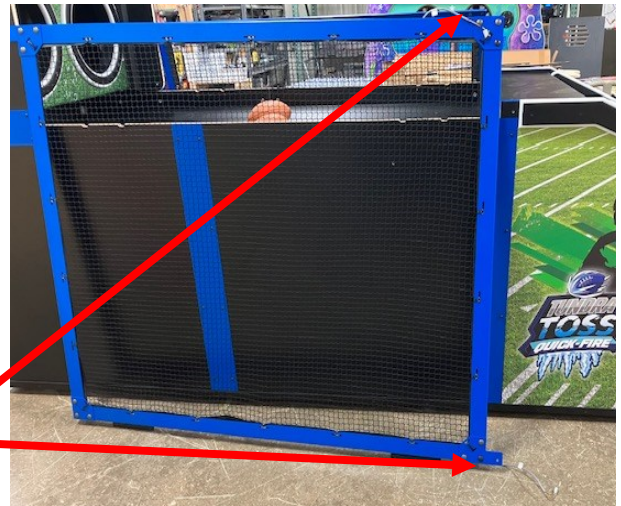
**Important: There is a difference between the 2 side cages.**

The left side cage has a cable attached.

The right side does not.

Locate the left side cage and place on the left side of the cabinet.

Cable is toward the front of the cabinet.



Locate 4 bolts from the hardware kit.



A5SCHH007

Using 2 people, lift the left side cage up on the cabinet and secure using 2 bolts.

One on top left, one on the bottom right.

Once both bolts are started, tighten all using a 5/32 hex bit.

Repeat the process for the other right side cage.



Locate 6 of black 10's (A5SCPH152) from the hardware kit.



A5SCPH152

Install the 6 black 10's using a #2 square bit into the L brackets.

Repeat the process for the other side cage.



# TUNDRA TOSS QUICK FIRE GAME SETUP

## Install Roof Panels:

Locate the 3 roof panels from the card board box.

Locate 12 bolts from the hardware kit.



A5SCHH007



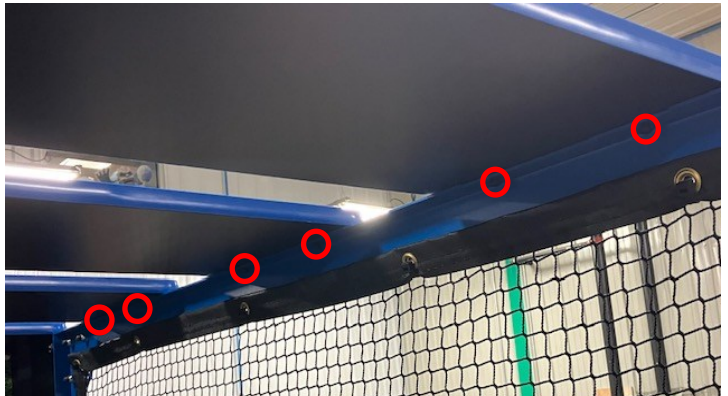
Carefully place a roof panel on top of the side cages.

**Ensure T-Nuts are on top of board.**

(It's best to keep the T Molding splice toward the back of the game)

Hand thread 4 bolts into each side of the roof panel.

Tighten all using a 5/32 hex bit.



## Build Marquee:

Locate the marquee roof panel and football plexi from the card board box.

Locate 6 of bolts from hardware kit.



A5SCPH115

Locate 6 of spacers from hardware kit.



A5SENY105

Locate 6 of washers from hardware kit.



A5WAFL030

Locate 6 of lock washers from hardware kit.



A5WAFL005



# TUNDRA TOSS QUICK FIRE GAME SETUP

Install the hardware onto the football plexi marquee as shown:  
Lock washer on bolt, then washer, then plexi, then spacer.



Install the football plexi marquee onto marquee base and tighten using a Philips screwdriver.

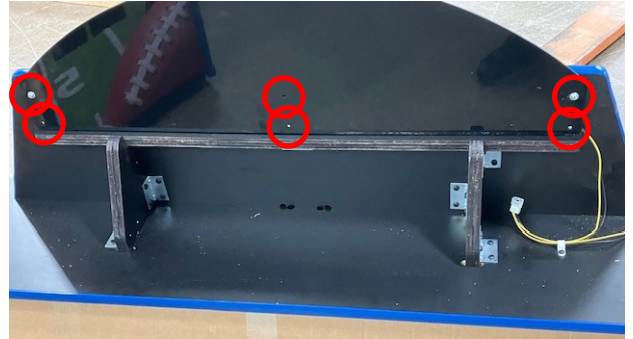
## Install Marquee:

Locate 12 bolts from the hardware kit.



A5SCHH007

Carefully bring the assembled football marquee up to top of the game on top of the side cages.

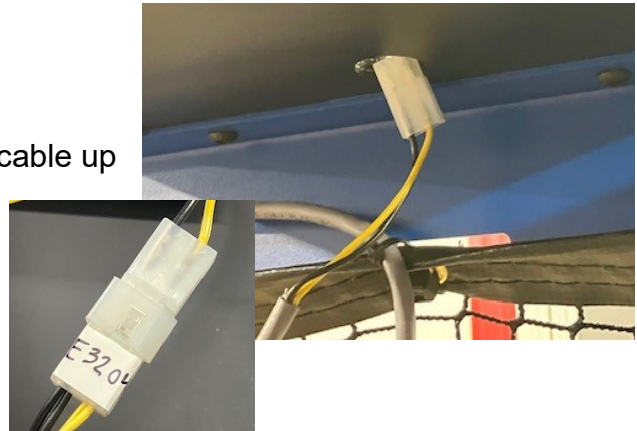


Hand thread 4 bolts into each side of the roof panel.

Tighten all using a 5/32 hex bit.

From underneath the marquee, route the CE32037 cable up through the hole in the wood and plug into the marquee's CE32044 cable.

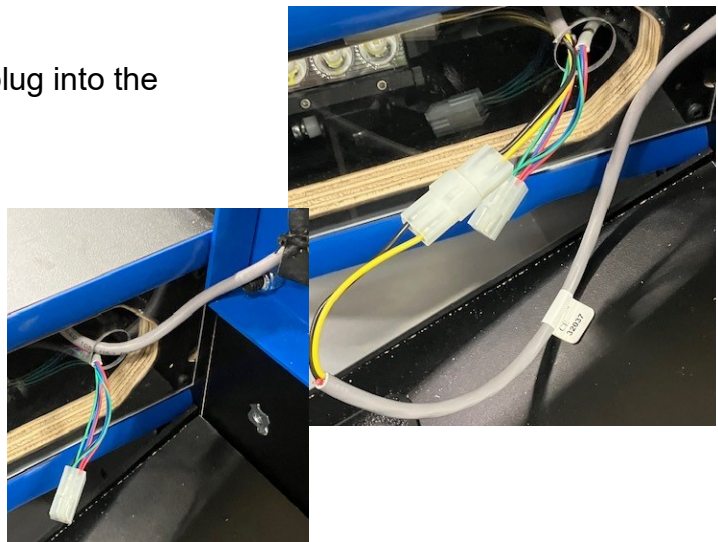
Pull the slack cable upwards and leave the extra cable length on top of the game.



On the bottom end of this CE32037 cable, plug into the CE32036 connector.

Push the slack cable down into the front console.

The other cable will be plugged into the side lights later.



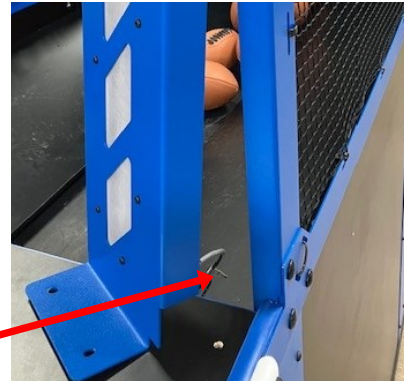
# TUNDRA TOSS QUICK FIRE GAME SETUP

## Install Front Uprights:

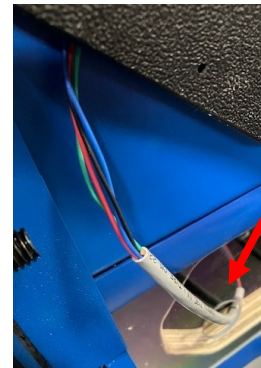
Locate the right front upright the front console.



Position the right front upright near the right side cage and plug in the CE32041 cable into the CE32024 connector from the front console.



Push the slack cable down into the front console.



Locate 1 bolt and 1 nut from the hardware kit.



A5SCHH007 A5NULO050

Install the bolt and nut in the top of right side upright.

Tighten using a 5/32 hex bit and 7/16" wrench.



Locate 2 bolts from the hardware kit.



A5SCHH007

Install the 2 bolts in the bottom of the right side upright.

Tighten both bolts using a 5/32 hex bit.

Repeat this process for the left side front upright.

# TUNDRA TOSS QUICK FIRE GAME SETUP

## Install Conveyor Guard:

Locate 2 of A5SCPH085 bolts from the hardware kit.



A5SCPH085

Locate the Conveyor Guard from the front console.



Carefully climb inside cabinet and install the guard so that there is a small gap between the guard and the conveyor belt.

Make sure it is not touching the belt!

Tighten both bolts using a #2 square bit.



## Close back Door.

Locate the power cord inside the rear of the cabinet and pull out the back of the game.

Reinstall the back door by installing the 4 screws back into the back door using a #2 square bit.



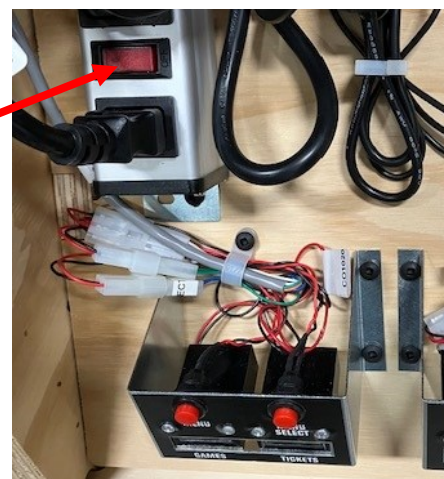
## The game build is now complete!

The power cord can now be plugged into a wall socket.

Open the front door of the game and flip the rocker switch on the power strip to power on the game.

The game is now set up and ready to play!

Enter the menu to adjust settings to your specific location.  
Price per play / Ticket Payout / etc..



# HOW TO PLAY

Score points by throwing leather footballs through target holes, breaking the sensor beam between the emitter and detector boards inside each hole.

Throw through the LED lit up holes to score more points!

A conveyor belt will return the footballs to the players during game play.

2 players can play, alternating turns on the same machine!

Green Player vs Blue Player with lights and audio to indicate the players amount of time.

Players switch every 20 seconds, with each player earning their own bonus time!



# MAIN MENU SETTINGS

The Menu and Menu Select buttons are located inside the front door.

Hold the MENU button down for 3 seconds to open the main menu on the display.

Press MENU to scroll through the options, and MENU SELECT to change the settings.

Default settings are highlighted in yellow below.



## Credits Needed

|                   |          |           |   |   |   |     |    |    |
|-------------------|----------|-----------|---|---|---|-----|----|----|
| <b>Card Swipe</b> | Tap Card | Free Play | 1 | 2 | 3 | ... | 19 | 20 |
|-------------------|----------|-----------|---|---|---|-----|----|----|

Sets the amount of credit pulses needed to start a game. “Card Swipe” will display “Swipe Card” on the display screen. “Tap Card” will display “Tap Card” on the display screen.

## Redemption Type

|                |        |         |                    |
|----------------|--------|---------|--------------------|
| <b>Tickets</b> | Points | Coupons | Entertainment Only |
|----------------|--------|---------|--------------------|

Sets the wording on the screen used to describe any tickets won.

“Entertainment Only” will not give tickets for games.

## Game Volume

|     |     |        |             |         |
|-----|-----|--------|-------------|---------|
| Off | Low | Medium | <b>High</b> | Highest |
|-----|-----|--------|-------------|---------|

Adjusts the sound level during game play.

## Attract Volume

|     |     |               |      |         |
|-----|-----|---------------|------|---------|
| Off | Low | <b>Medium</b> | High | Highest |
|-----|-----|---------------|------|---------|

Adjusts the sound level of the music during non-play periods.

## Attract Time

|     |   |   |          |   |   |   |     |    |    |
|-----|---|---|----------|---|---|---|-----|----|----|
| Off | 1 | 2 | <b>3</b> | 4 | 5 | 6 | ... | 14 | 15 |
|-----|---|---|----------|---|---|---|-----|----|----|

Sets the amount of time (in minutes) between attract sound cycles during non-play periods.

“Off” means that there will be no music played during non-play periods.

## Game Time

|    |    |    |    |    |    |           |    |     |    |    |
|----|----|----|----|----|----|-----------|----|-----|----|----|
| 15 | 20 | 25 | 30 | 34 | 40 | <b>45</b> | 50 | ... | 80 | 85 |
|----|----|----|----|----|----|-----------|----|-----|----|----|

Sets the length (in seconds) of each game.

# MAIN MENU SETTINGS

Scroll through the options by pressing the “MENU” button.

Change selection with the “SELECT” button. Default settings are highlighted in yellow below.

## Bonus Time Mode

|          |            |             |         |         |          |
|----------|------------|-------------|---------|---------|----------|
| Disabled | Allow Once | Allow Twice | Allow 4 | Allow 8 | Infinite |
|----------|------------|-------------|---------|---------|----------|

Allows extra time to be added to the length of the game after scoring a certain amount of points.

## Points for Bonus Time

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| 100 | 150 | 200 | 250 | 300 |
|-----|-----|-----|-----|-----|

How many points the player must score to activate “Bonus Time Mode”

## Bonus Time Awarded

|   |   |   |   |   |    |    |    |    |    |    |
|---|---|---|---|---|----|----|----|----|----|----|
| 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|----|----|----|----|----|----|

Sets the amount of time (in Seconds) that will be added to game length when scoring the “Points for Bonus time”

## Lobby Join Time

|                |   |   |   |   |   |   |
|----------------|---|---|---|---|---|---|
| Lobby Disabled | 4 | 5 | 6 | 7 | 8 | 9 |
|----------------|---|---|---|---|---|---|

Sets the amount of time (in seconds) during the player can coin up and join for head to head play.

## Payout Setting Recommendations

|                              | \$0.50      | \$1.00      | \$1.50      | \$2.00      | \$2.50      | \$3.00      | \$5.00      |
|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Ticket Values</b>         | 2           | 5           | 10          | 15          | 20          | 30          | 40          |
| <b>Point Values</b>          | 90          | 90          | 90          | 90          | 90          | 90          | 90          |
| <b>Max Tickets</b>           | 30          | 30          | 50          | 50          | 50          | 75          | 90          |
| <b>Game Time</b>             | 30s         | 45s         | 45s         | 45s         | 45s         | 45s         | 45s         |
| <b>Bonus Time Mode</b>       | Allow Twice | Allow Twice | Allow Twice | Allow Twice | Allow Twice | Allow Twice | Allow Three |
| <b>Points for Bonus Time</b> | 100         | 100         | 100         | 100         | 100         | 100         | 100         |
| <b>Bonus Time Awarded</b>    | 5s          | 5s          | 5s          | 5s          | 5s          | 5s          | 5s          |
| <b>Mercy Tickets</b>         | 5           | 5           | 5           | 5           | 5           | 5           | 5           |

Yellow column is the recommended settings for a game cost of \$1.50 per play.

With a \$0.01 ticket value.

These vales are recommendations, your results may vary depending on player skill level.

# MAIN MENU SETTINGS

Scroll through the options by pressing the "MENU" button.

Change selection with the "SELECT" button. Default settings are highlighted in yellow below.

## Ticket Setting

|    |    |    |    |    |    |     |     |     |     |
|----|----|----|----|----|----|-----|-----|-----|-----|
| 10 | 20 | 30 | 40 | 50 | 60 | ... | 180 | 190 | 200 |
|----|----|----|----|----|----|-----|-----|-----|-----|

Sets the number of tickets awarded for the set amount of points scored in "Points Settings" below.

## Points Setting

|    |    |    |    |    |     |     |     |     |     |
|----|----|----|----|----|-----|-----|-----|-----|-----|
| 50 | 60 | 70 | 80 | 90 | 100 | 110 | ... | 390 | 400 |
|----|----|----|----|----|-----|-----|-----|-----|-----|

Sets the number of points needed to be awarded the number of tickets in "Ticket Settings" above.

## Max Tickets

|     |   |    |    |     |    |    |    |     |    |    |     |
|-----|---|----|----|-----|----|----|----|-----|----|----|-----|
| Off | 5 | 10 | 15 | ... | 45 | 50 | 55 | ... | 90 | 95 | 100 |
|-----|---|----|----|-----|----|----|----|-----|----|----|-----|

Sets the maximum amount of tickets that can be awarded for each game.

"Off" means that a player can win as many tickets as set in the settings.

## Mercy Tickets

|          |   |   |   |   |   |   |   |   |   |    |
|----------|---|---|---|---|---|---|---|---|---|----|
| Disabled | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------|---|---|---|---|---|---|---|---|---|----|

Sets the amount of tickets that will be awarded for a game if the number of tickets won is zero.

"Disabled" means that a player will not receive tickets if a target is not scored.

## Starting High Score

|    |    |    |    |    |     |     |     |     |     |
|----|----|----|----|----|-----|-----|-----|-----|-----|
| 50 | 60 | 70 | 80 | 90 | 100 | 110 | ... | 240 | 250 |
|----|----|----|----|----|-----|-----|-----|-----|-----|

Sets the initial "High Score", This resets every power cycle.

## Add Cheat Credits

Press the Menu Select button 3 times to add a credit to the game after the menu is exited.

## Clear Tix and Credits

Press the Menu Select button 3 times to clear the tickets owed and credits on the game.

## Reset Defaults

Press the Menu Select button 3 times to reset the Menu Settings to factory defaults.

# Diagnostics Menu

Scroll through the options by pressing the “Menu Select” button.  
Exit the menu by pressing the “Menu” button.

Software version is shown on the display as you enter the menu.

**Software Version 1.7**  
**Display Driver Version 0.1**  
**Door Board 1 Version 0.1**  
**Door Board 2 Version 0.1**

If it shows **Missing**, then the circuit board is not communicating to motherboard.

**Target Sensor Errors** - A target will blink red and green if it is dirty or blocked as soon as you enter the menu. This will continue until you cycle through the RGB colors, then the blinking will stop. You will have to go into the menu again to have a faulty sensor blink.

## Single Games

Displays the number of 1 player games played.

## Double Games

Displays the number of Head to Head games played.

## RGB Color

Press the “Menu Select” button to cycle from all Red LED’s to all Green LED’s to all Blue LED’s

## Test Ticket Dispenser

Press the “Menu Select” button to dispense 1 ticket.

# TROUBLESHOOTING GUIDE

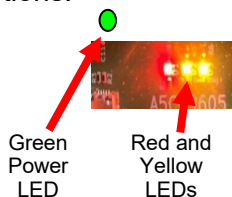
## Troubleshooting Strategy

Use common sense and a systematic method of troubleshooting to determine the exact problem, probable cause and remedy. Use the process of elimination to find the faulty component. Always check for the simple and obvious causes first such as unplugged, loose or broken wires and bad sensors, bent, pinched, stuck or jammed components.

| Troubleshooting Chart                                                                                                                                                                                     |                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Problem                                                                                                                                                                                                   | Probable Cause                                                                                                                                                         | Remedy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>No power to the game</b><br><b>No lights on at all.</b><br><br>The power switch is the rocker switch on the power strip located in the front of the cabinet.                                           | Unplugged.<br>Circuit breaker tripped.<br><br>Line Filter Faulty.<br>Power strip faulty.<br><br>Disconnected, loose or broken wires.                                   | Check wall outlet.<br>Reset power strip breaker switch or building circuit breaker.<br>Replace Line Filter (Part # A5FI9012)<br>Change plug position, replace power strip if a section does not work. Part # A5OU5000<br>Check rocker switch on power strip.<br>Refer to wiring diagram. Check connections and reseal cables from line filter to outlet strip. Cables # CE31006 and A5CORD49<br><b>If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.</b> |
| <b>Monitor is on</b><br><b>But everything else off</b><br><br><b>(Power Supply not ON)</b>                                                                                                                | Power supply unplugged.<br>Rocker Switch.<br><br>Power supply shutting down because of 12 V overload.<br>Faulty power supply.<br>Faulty Power Dist Board               | Insure power supply is plugged into power strip<br>Make sure rocker switch is set ON. <br>Refer to Power Supply Diagnostics to isolate bad component. A bad motor or 12 volt short would cause this.<br>Refer to Power Supply Diagnostic section.<br>Replace Power Distribution Bd. (A5CB5156B)                                                                                                                                                           |
| <b>Dollar Bill Acceptor not functioning</b><br>Ensure Bill Acceptor is set to "Always Enable"<br><b>Important : Only 12 Volt DC DBA is to be installed.</b><br><br>Model # AE 2454 U5E<br>Part # A5AC9101 | Check for power to Bill Acceptor.<br>Dirt or debris in acceptor slot.<br><br>Pinched, broken, or disconnected wiring.<br><br>Bill acceptor problem.<br>Part # A5AC9101 | Acceptor should cycle stacker at game power up. If not, check cable connections.<br>Refer to "How to Clean Bill Acceptor" Or clean with bill reader cleaning card. (A5CC9000)<br>Check wiring from bill acceptor to I/O Aux Board. (A5CE 31039) Repair or replace wiring harness. Make sure wires are secure in connectors.<br>Refer to troubleshooting section of dollar bill acceptor manual included with this game or the diagnostics label of the back of the unit.                                                                      |
| <b>Meters does not work</b><br>Game meter will click at the end of the game.<br><br>Ticket meter will click as tickets are being dispensed.                                                               | Ensure correct number of tickets are being dispensed<br>Disconnected, loose or broken wires.<br><br>Faulty counter.                                                    | Check ticket values in menu. Refer to Tickets not dispensing troubleshooting section.<br>Refer to wiring diagram. Check connections and reseal cables from meters to I/O Aux Board<br>Cables # AACO1000 and CE32032<br>Replace counter. AACO1000.                                                                                                                                                                                                                                                                                             |

# TROUBLESHOOTING GUIDE

| Problem                                                                                    | Probable Cause                                                                                                                                                                                                              | Remedy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Game not coining up</b>                                                                 | <p>Look for communication and power on the I/O Aux Board for that player.</p> <p>Ensure game makes sound when coin switch is triggered.</p> <p>Game set to large amount of credits per game.</p> <p>Coin Input stuck ON</p> | <p>Refer to "I/O Aux Board Issue" diagnostic section.</p>  <p>Check coin switches—both should be wired normally open. If one switch is "closed" the other will not work either. Check wiring to I/O Aux Board. (AACBL4A-DOORA, CE31023)</p> <p>Check Game Setup Menu. Ensure Credits is set to proper value.</p> <p>Ensure only 5 volts on coin switch green and black wires. Replace I/O Aux board if needed. Part # AACB9605A-TT</p>                               |
| <b>No Sound</b><br><br>Motherboard creates sound, the Audio Amplifier boards amplifies it. | <p>Volume set to mute in menu or game volume/attract volume set to zero.</p> <p>Disconnected, loose or broken wires.</p> <p>Verify 12 Volts DC to Audio Amplifier Boards on CE32029</p> <p>Faulty speaker.</p>              | <p>Enter Main Menu and verify: Game Volume &amp; Attract Volume is not zero. Mute is set to OFF</p> <p>Refer to wiring diagram. Check connections and reseal audio cable from control board to speakers. Cables # A5CE2321, A5CEAU010, CE32007, AACE8811A-P</p> <p>Unplug audio cable (A5CE2321) from control board, plug into MP3 player or phone and see if music is amplified and comes out of speaker.</p> <p>If Yes - then control board is faulty.</p> <p>If No - then cable or amplifier board is faulty</p> <p>Replace speaker. AACE8811A-P</p> |
| <b>I/O Aux Board Issue</b><br><br>Game does not coin up, and has no other functions.       | <p>Green power LED should be flashing.</p> <p>Red and Yellow LED's should be on solid, with yellow LED randomly blinking.</p> <p>Faulty I/O Aux Board.</p>                                                                  | <p>If it is off, then check 12 &amp; 5 Volts DC coming into board on cable CE32030 &amp; CE32031 from Power Distribution Board.</p> <p>If not on, then it is not communicating with the motherboard. Check A5CORD58 USB cable.</p> <p>If they are off, check power into board on CE32030 &amp; CE32031 cable. Replace board if needed.</p> <p>Replace if needed. Part # AACB9605A-TT</p>                                                                                                                                                                |



# TROUBLESHOOTING GUIDE

| Problem                                                                                                                                                                                                                                                                                                                 |                                                                                                              | Probable Cause                                                                                                                                                                                          | Remedy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Low Tickets message on display.</b><br><br><br><br>Each side will have a low ticket switch in the rear of the ticket tray.                                                                                                          |                                                                                                              | Tickets are empty in ticket tray<br><br>Faulty cable. Disconnected, loose or broken wires.<br><br>Faulty low ticket switch.<br><br>Dipswitch on I/O Door Board.<br><br>Faulty I/O Door Board.           | Load tickets into tray. Ensure tickets hold down the micro switch wire.<br><br>The 2 wires on the switch should go to the C and NO locations. Check connectors from low ticket switch to Newgen board. Check for continuity. (A5CE31023)<br><br>Inspect switch and replace if needed. (AASW200)<br><br>Check dipswitch settings on the I/O door board. If the game has a card swipe system, Dipswitch # 5 should be ON.<br><br>Replace I/O Door Board. Part # AACB9605A-TT                                                      |
| <b>Tickets do not dispense or Wrong amount dispensed</b><br><br>Check for the correct amount of tickets showing on Monitor                                                                                                                                                                                              | Tickets on display does <b>not</b> match tickets coming out of game.                                         | Opto Sensor on ticket dispenser dirty.<br><br>Faulty ticket dispenser.<br><br>Notch on tickets cut too shallow.<br><br>Faulty cable. Disconnected, loose or broken wires.<br><br>Faulty I/O Door Board. | Blow dust from sensor and clean with isopropyl alcohol.<br><br>Replace with working dispenser to isolate the problem. (A5TD1)<br><br>Flip tickets and load upside-down to have large cut notch toward opto sensor.<br><br>Check connectors from ticket dispensers to I/O Door board. Check for continuity. CE31023<br><br>Ensure issue is not with a card swipe system - Replace I/O Door Board. Part # AACB9605A-TT                                                                                                            |
|                                                                                                                                                                                                                                                                                                                         | Tickets on display do match tickets coming out of game                                                       | Settings in Menu are incorrect.                                                                                                                                                                         | Enter Menu and check certain areas:<br>Points Settings, Mercy Tickets, etc..<br><br>Door Board Dipswitch Settings:<br>1/2 Ticket<br>Fixed tickets                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Conveyor not working. Or running in wrong direction.</b><br><br><br><br>The conveyor is programmed to stop if a person walks on the conveyor belt.<br><br>This will void the game and a power cycle is needed to clear this error. | Loose or bad connection between Conveyor Motor and Controller Board<br><br>Check for 12 Volts DC into Motor. |                                                                                                                                                                                                         | Refer to wiring diagram. Check connection, reseal cable from Controller Board to Motor. CE32000 & CE32001<br><br>If motor has 12 Volts - Replace motor AAMO31000.<br><br>If not 12 Volts - turn game off and back on. Try playing a game.<br><br>Tension on conveyor belt may be too high. Refer to "How to Adjust Conveyor Tension" Section.<br><br>Note: A voided game will not pay out tickets. (because the player is cheating) . It will save the credit after the power cycle if the "Save Ticket/NJ" dipswitch #3 is ON. |

# TROUBLESHOOTING GUIDE

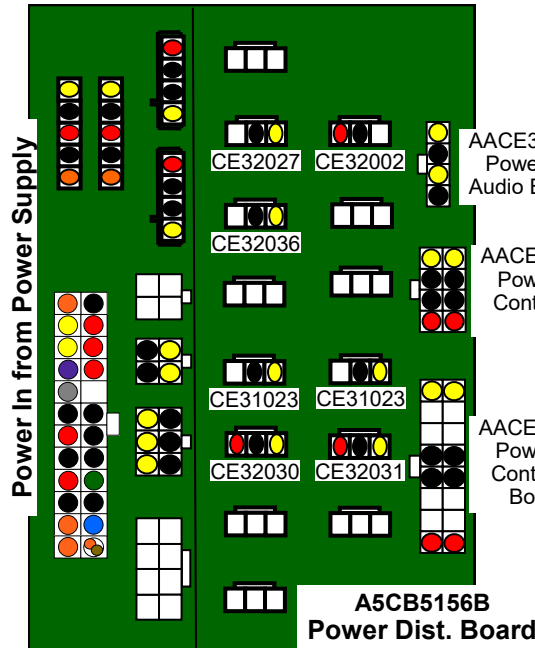
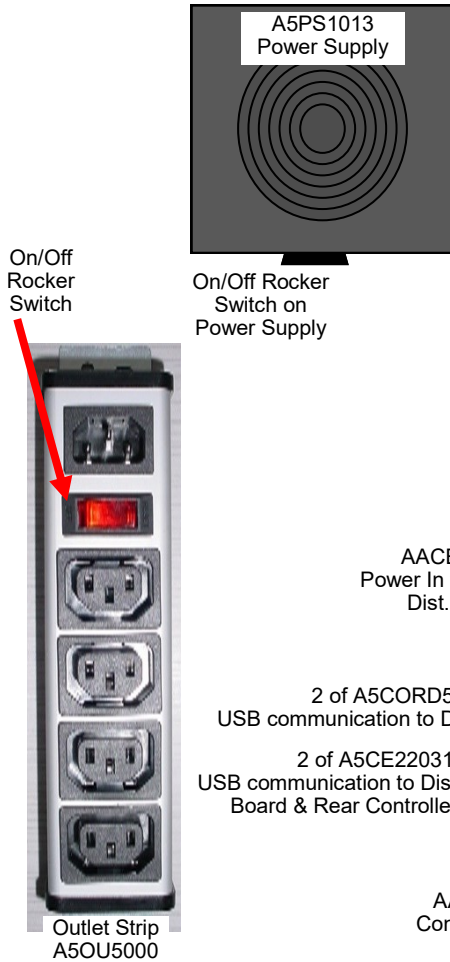
| Problem                                                                                                                                                                                       | Probable Cause                                                                                                                                                                          | Remedy                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Scoring Issues.</b><br><br>There is an emitter board and a detector board behind each target hole<br><br> | Loose or bad connection<br><br>Test sensors in Diagnostic Menu<br><br>Faulty sensor board.                                                                                              | Refer to wiring diagram. Check connections, reseal cables from Rear Controller Board to sensors. CE32010 or CE32013 or CE32016 or CE32018 or CE32020 and cable between sensor boards. (CE32008 or CE32015)<br><br>Enter the game menu. A faulty target hole will flash red and green on the RGB lights.<br><br>Replace faulty sensor boards. AACB31001 & AACB31002 |
| <b>Target is Lighting up Red</b>                                                                                                                                                              | Faulty sensor board in the target.                                                                                                                                                      | Enter the game menu. A faulty target hole will flash red and green on the RGB lights.<br><br>Replace faulty sensor boards. AACB31001 & AACB31002                                                                                                                                                                                                                   |
| <b>Menu Buttons do not work.</b><br><br>The menu buttons are located in the Front Door                                                                                                        | Swap connectors at the 2 buttons.<br><br>Pinched, broken, or disconnected wiring<br><br>I/O Aux board faulty.                                                                           | Replace button if problem stays with button.(AAPB2700A)<br><br>Inspect crimp to ensure good connection.<br>Check connections from menu buttons to I/O Aux Board.<br>Check cables (AAPB2700A, CE32032)<br><br>Replace I/O Aux Board if needed. Part# AACB9605A-TT                                                                                                   |
| <b>All Front Cabinet LED Color Strips are not Working</b><br>Controller Board issue                                                                                                           | Ensure Controller Board is receiving voltage from Power Distribution Board.<br><br>Ensure all LED cables are plugged into controller board.<br><br>Faulty Controller Board.             | Refer to wiring diagram. Check connections & reseal cables from Power Distribution Board to Light Board. CE32028<br><br>Refer to wiring diagram. Check connections and reseal light cables.<br><br>Replace Controller Board if needed. AACB22000A-TT                                                                                                               |
| <b>All Target LED Color Strips are not Working</b><br><br>Rear Controller Board issue                                                                                                         | Ensure Rear Controller Board is receiving voltage from Power Distribution Board<br><br>Ensure USB cable has good communication to controller board<br><br>Faulty Rear Controller Board. | Refer to wiring diagram. Check connections & reseal cables from Power Distribution Board to Rear Controller Board. CE32035 & CE32034<br><br>Refer to wiring diagram. Check connections and reseal USB cable from Motherboard to Light Board.. Cable # A5CE22031<br><br>Replace Rear Controller Board if needed. AACB31000A                                         |
| <b>One LED Lights in the Target Wall Holes is not working</b>                                                                                                                                 | Loose or bad connection.<br><br>Test LED's<br><br>Faulty LED                                                                                                                            | Refer to wiring diagram. Check multiple connections and reseal cables from Rear Controller Board to Target LED Cables # CE32009, CE32014, CE32017 to LED Cables CE32042, CE32043<br><br>Swap cable on Rear Controller Board into known good connector to isolate problem.<br><br>Replace faulty LED. (CE32042, CE32043)                                            |

# TROUBLESHOOTING GUIDE

| Problem                                                       | Probable Cause                                                                                                                                             | Remedy                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LED Lights in the front of the cabinet are not Working</b> | Loose or bad connection<br><br>Test LED's in Diagnostic Menu<br><br>Faulty LED                                                                             | Refer to wiring diagram. Check multiple connections, reseal cables from Controller Board to Lights. CE32022, & CE32040<br><br>Enter menu, scroll to Diagnostic Menu, & "RGB Color"<br><br>Replace faulty LED. Part # CE32040                                                                                                                                                                        |
| <b>LED Lights in Left and Right Sides are not Working</b>     | Loose or bad connection<br><br>Test LED's in Diagnostic Menu<br><br>Faulty LED                                                                             | Refer to wiring diagram. Check multiple connections, reseal cables from Controller Board to Lights: CE32025, CE32026, CE32038, CE32039<br><br>Enter menu, scroll to Diagnostic Menu, & "RGB Color"<br><br>Replace faulty LED. CE32038 or CE32039                                                                                                                                                    |
| <b>LED Lights in Left and Right Uprights are not Working</b>  | Loose or bad connection<br><br>Test LED's in Diagnostic Menu<br><br>Faulty LED                                                                             | Refer to wiring diagram. Check multiple connections, reseal cables from Controller Board to Lights. CE32024, CE32041<br><br>Enter menu, scroll to Diagnostic Menu, & "RGB Color"<br><br>Replace faulty LED. Part # CE32041                                                                                                                                                                          |
| <b>LED Lights in Marquee are not Working</b>                  | Loose or bad connection<br><br><br>Faulty LED                                                                                                              | Refer to wiring diagram. Check multiple connections, reseal cables from Power Distribution Board to Lights. CE32036, CE32037, and CE32044<br><br><br>Replace faulty LED. Part # CE32044                                                                                                                                                                                                             |
| <b>One or more Flood Lights not working.</b>                  | No 12 Volt DC to Lights<br>Loose or bad connection.<br><br>Faulty Flood Light                                                                              | Refer to wiring diagram. Check multiple connections and reseal cables from Power Distribution Board to lights. Cables # CE32027<br><br>Swap Flood Light to another connection. Replace if needed. Part # AALD22001P                                                                                                                                                                                 |
| <b>Both Displays not working</b>                              | No 5 Volt DC to Display.<br>Loose or bad connection.<br><br>Missing Communication from Controller Board<br><br>Faulty Matrix Board<br>Faulty Display Board | Refer to wiring diagram. Check multiple connections and reseal cables from Power Distribution Board to Displays. Cables # CE32002, CE32033<br><br>Refer to wiring diagram. Check multiple connections and reseal cables from Controller Board to Matrix Board to Displays. Cables # A5CE22031, A5CE9736<br><br>Replace Matrix Board. Part # AACB14000A-TT<br>Replace Display Board. Part # A5LD1052 |
| <b>One Display is not working</b>                             | No 5 Volt DC to Display.<br>Loose or bad connection.<br>Faulty Ribbon Jumper Cable<br><br>Faulty Display Board                                             | Refer to wiring diagram. Check connections and reseal cables on jumper cable to Displays. Cables # CE9736<br><br>Refer to wiring diagram. Reseat ribbon jumper cable between displays. Cables # A5CE9736<br><br>Swap Display Boards from side to side, replace if needed. Part # A5LD1052                                                                                                           |

# CIRCUIT BOARD LAYOUT

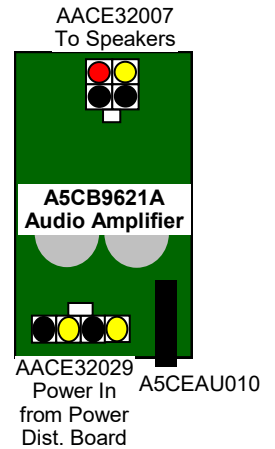
Boards are located inside the front door.



AACE32029 Power to Audio Board

AACE32028 Power to Controller

AACE32035 Power to Controller Board

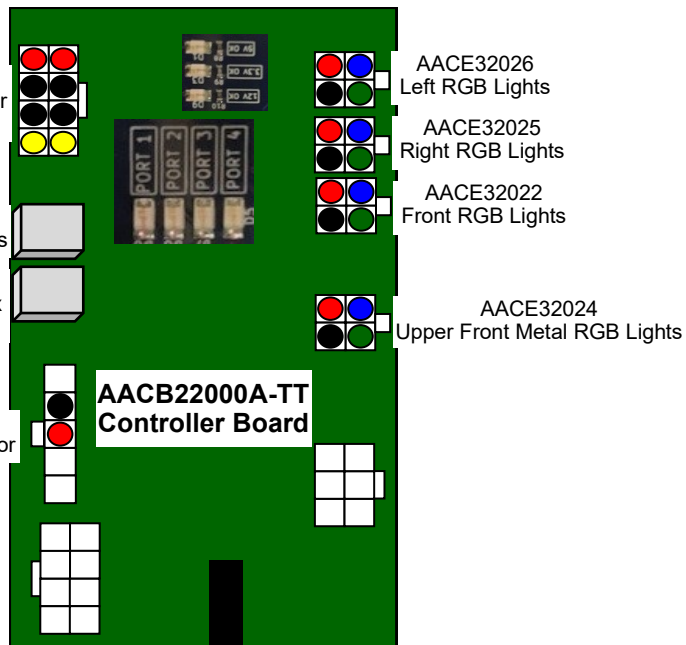


AACE32028 Power In from Power Dist. Board

2 of A5CORD58 USB communication to Door Boards

2 of A5CE22031 USB communication to Display Matrix Board & Rear Controller Board

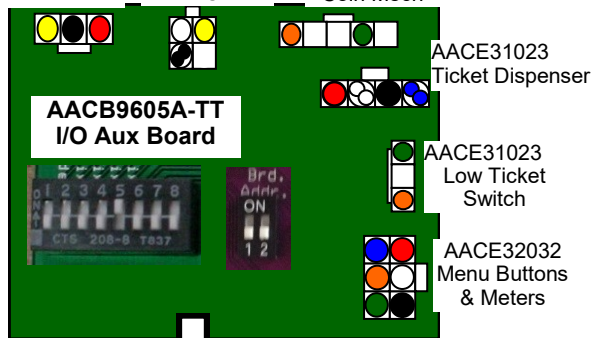
AACE32001 Conveyor Motor



AACE32030 Power in from Power Dist Bd

AACE31039 DBA Cable

AACE31023 Coin Mech

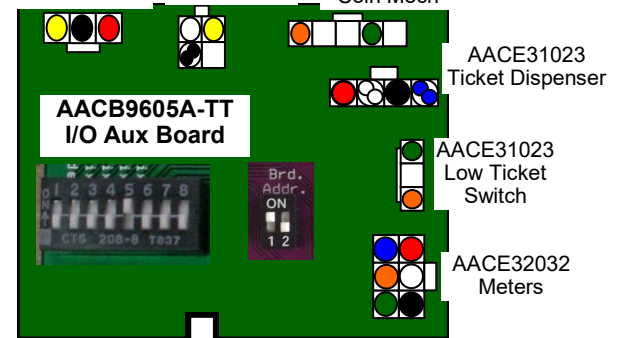


A5CORD58 USB communication to Controller Board

AACE32031 Power in from Power Dist Bd

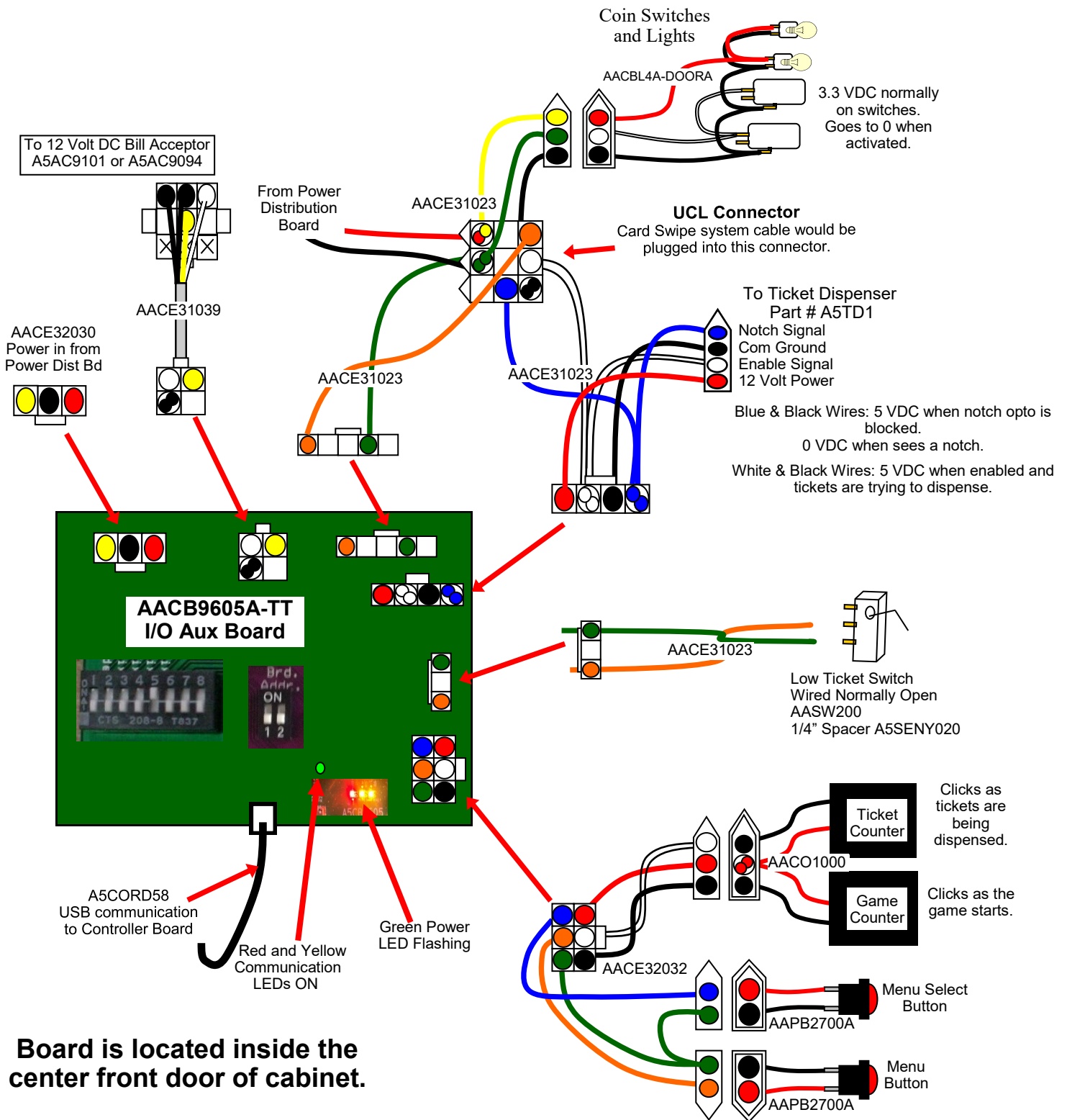
AACE31039 DBA Cable

AACE31023 Coin Mech



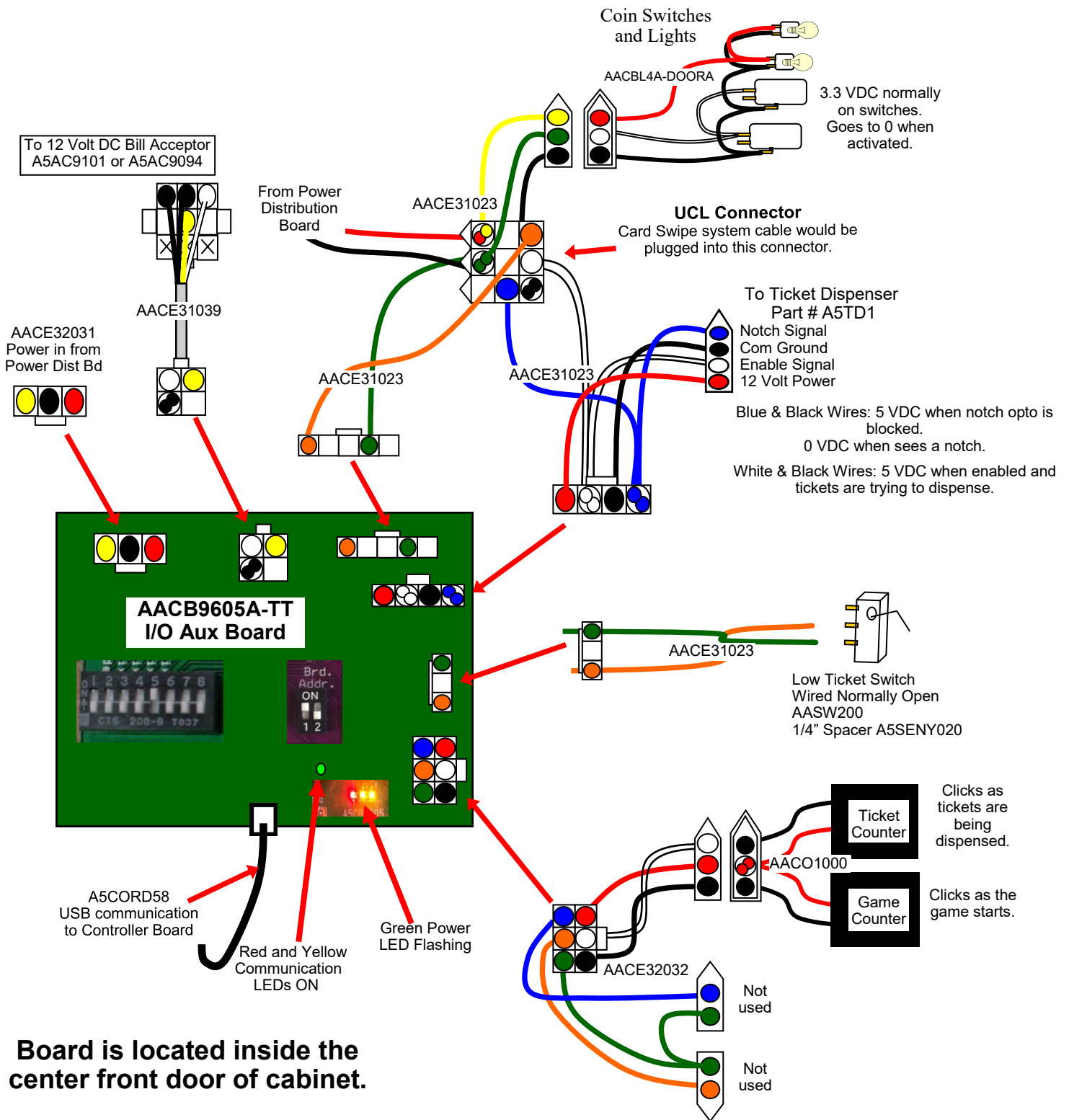
A5CORD58 USB communication to Controller Board

# LEFT SIDE BOARD WIRING DIAGRAM



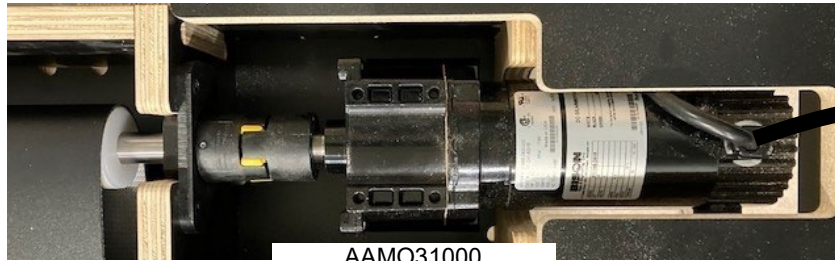
**Board is located inside the center front door of cabinet.**

# RIGHT SIDE BOARD WIRING DIAGRAM

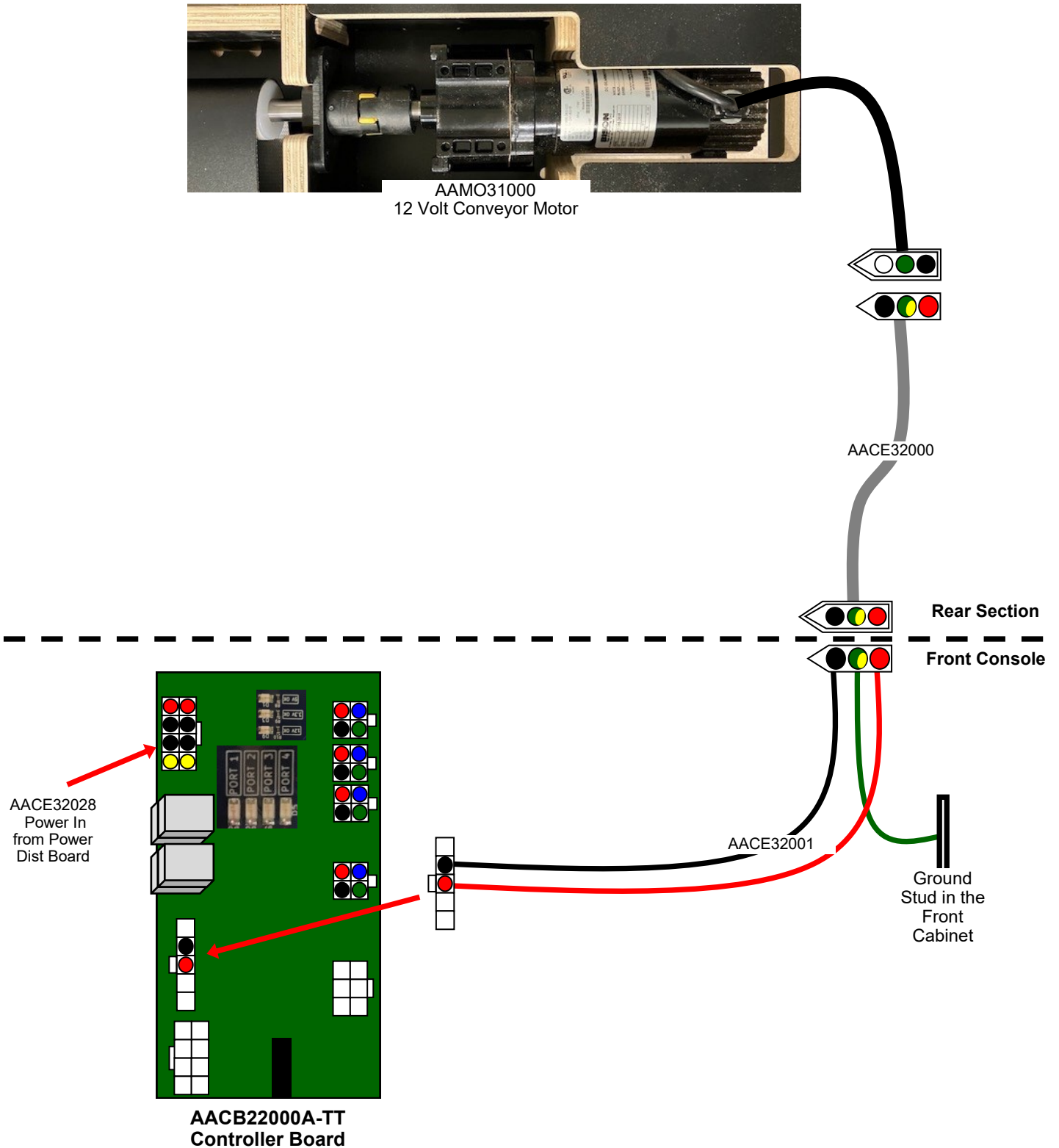


**Board is located inside the center front door of cabinet.**

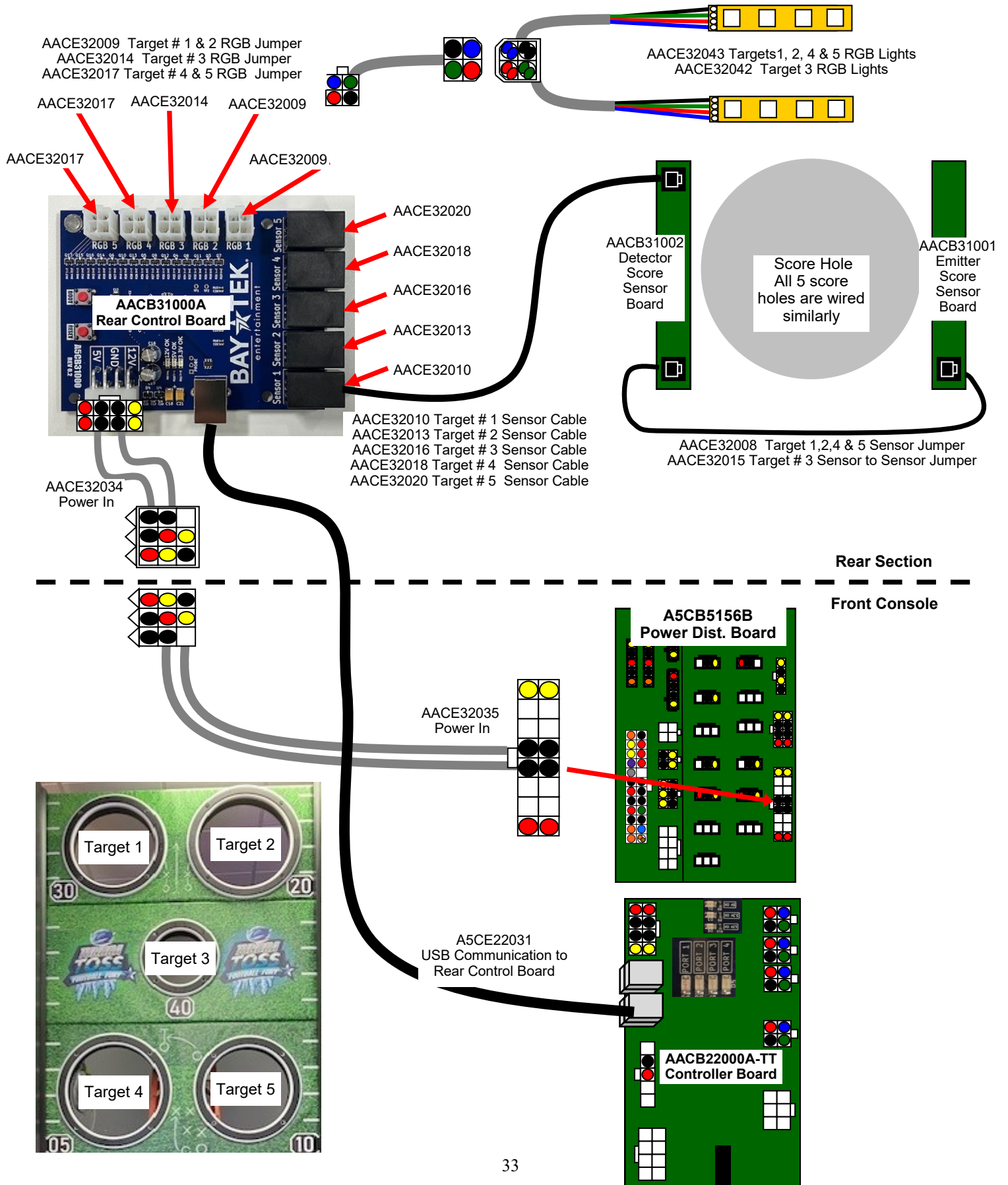
# CONVEYOR MOTOR WIRING DIAGRAM



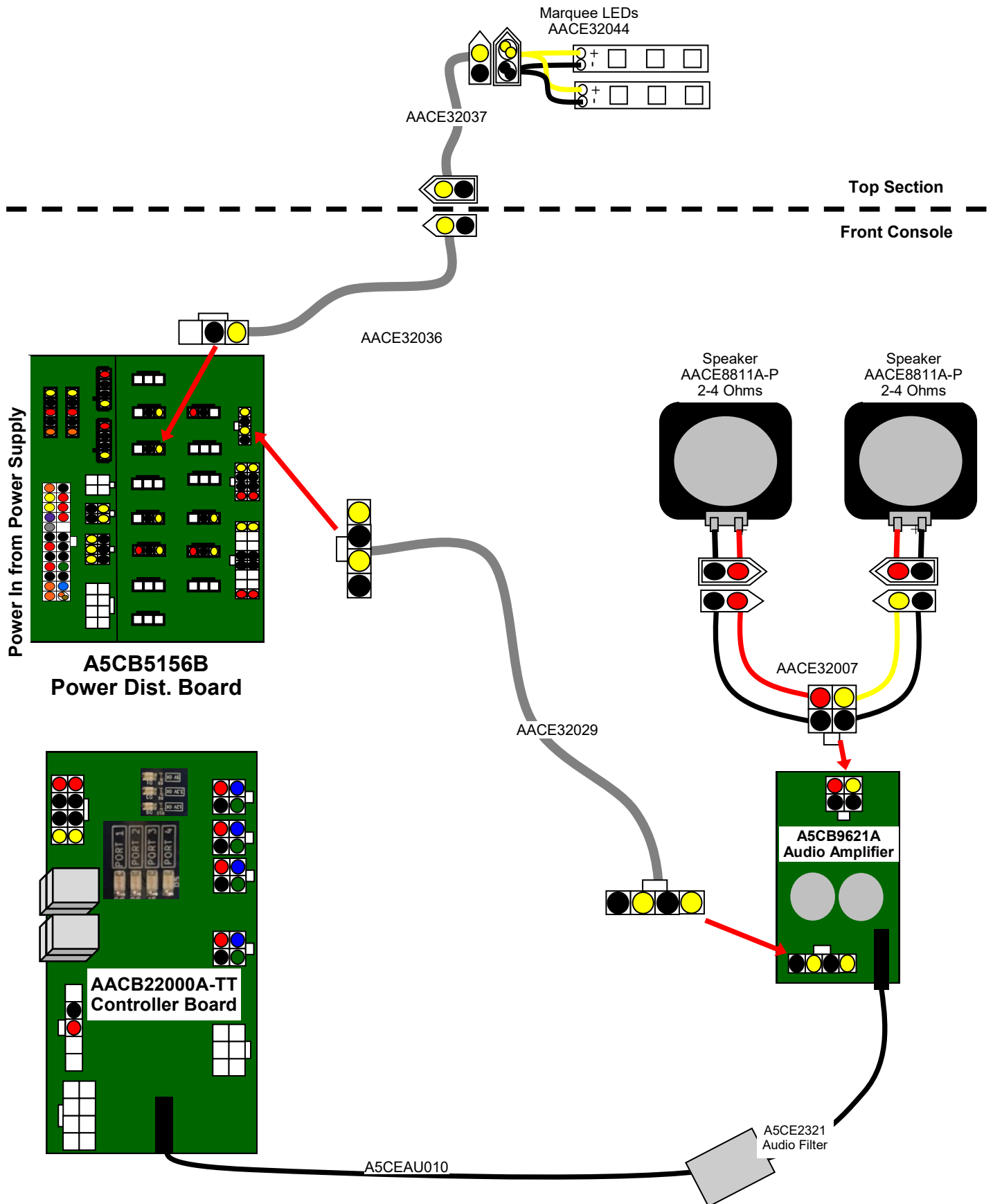
AAMO31000  
12 Volt Conveyor Motor



# BACK WALL SENSORS & LIGHTS WIRING DIAGRAM

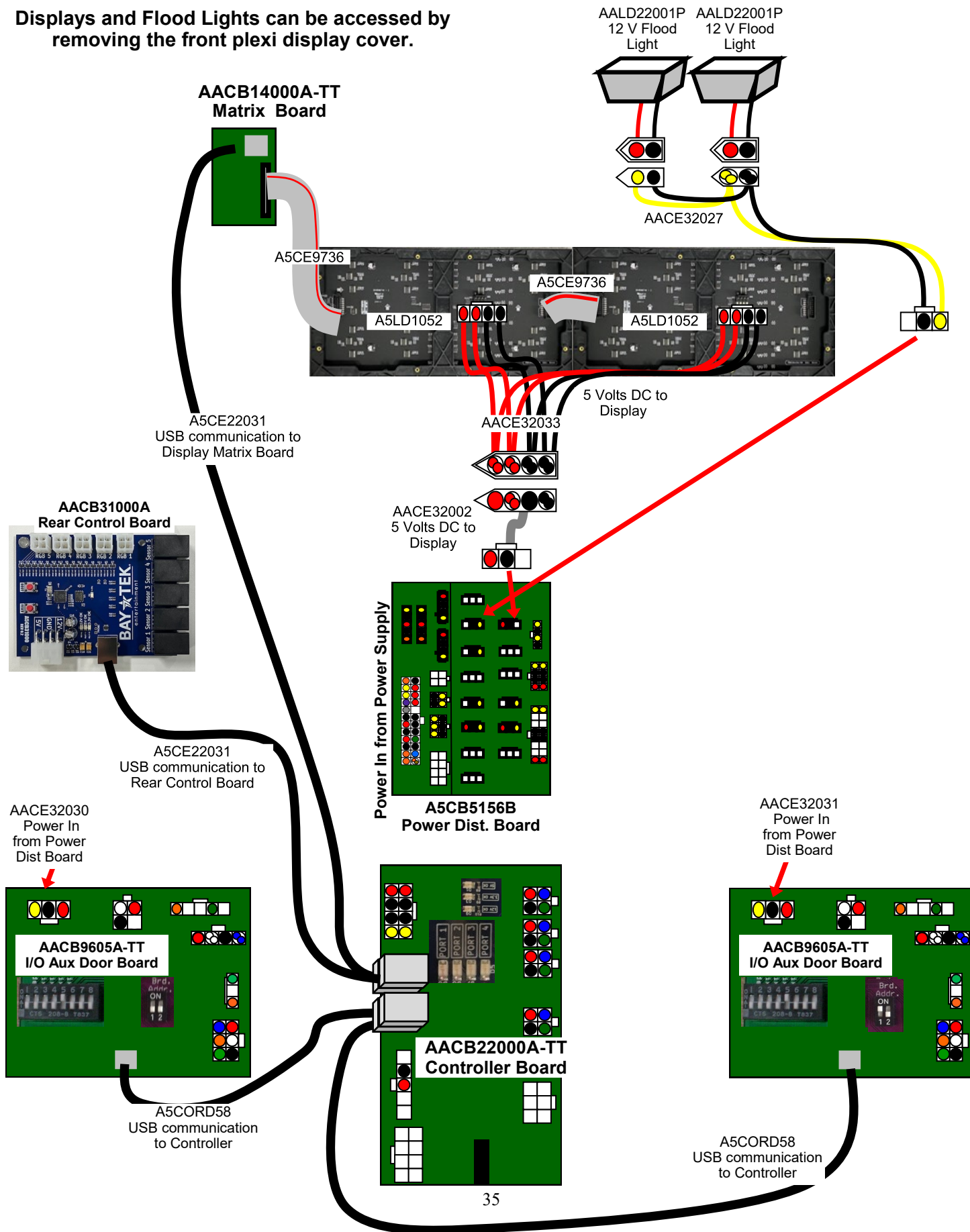


# SOUND & MARQUEE WIRING DIAGRAM

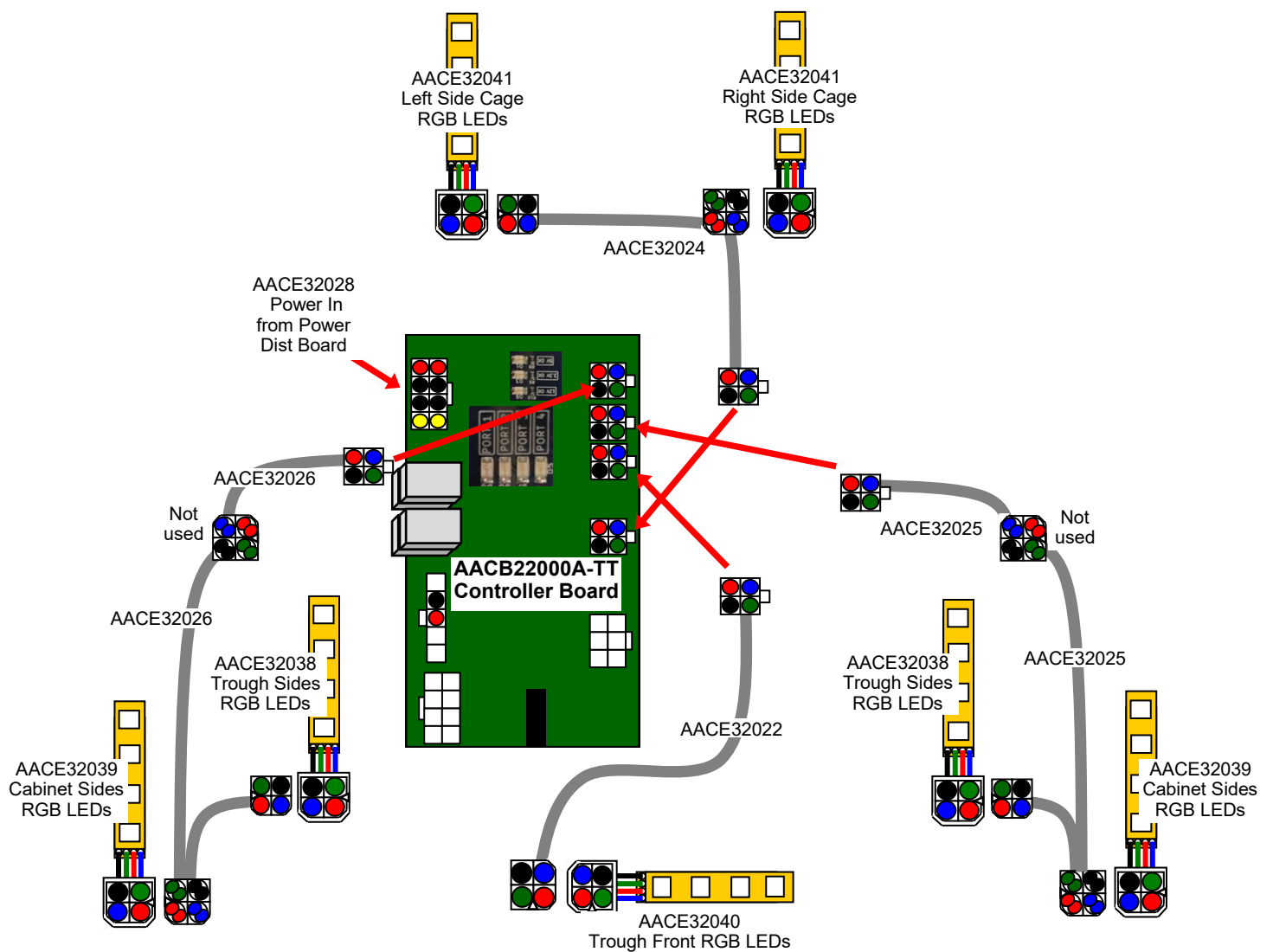


# DISPLAY & USB WIRING DIAGRAM

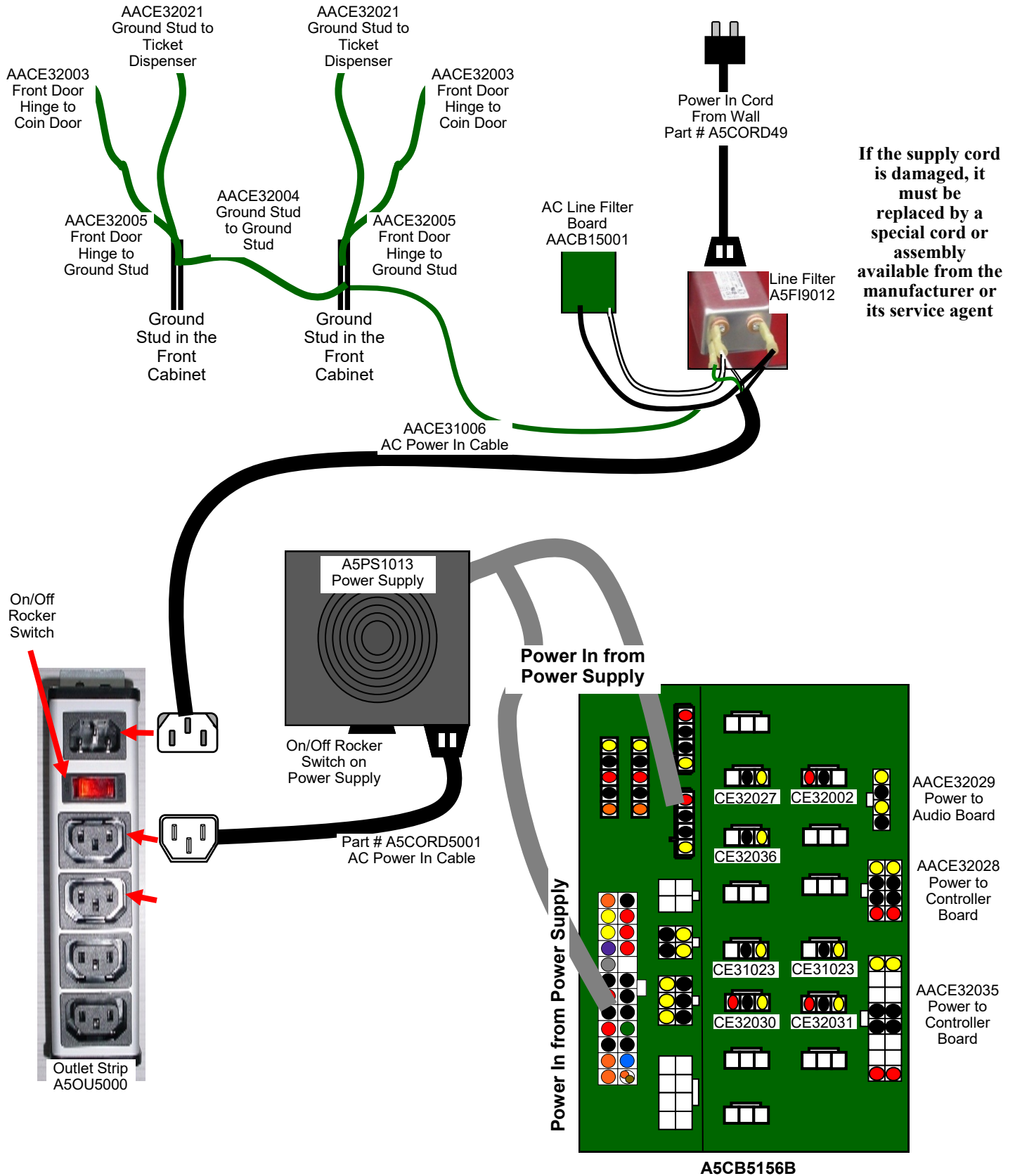
Displays and Flood Lights can be accessed by removing the front plexi display cover.



# GAME LIGHTING WIRING DIAGRAM

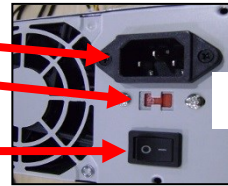


# AC POWER IN WIRING DIAGRAM

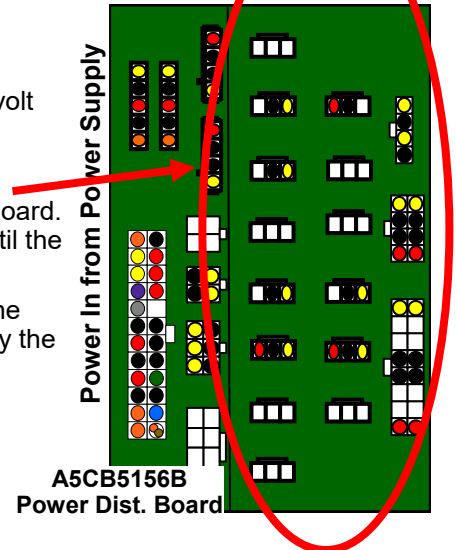


# POWER SUPPLY DIAGNOSTICS

- 1.) Verify AC power to game. Check power strip in front door. The rocker switch should be illuminated.
- 2.) Check connection to power supply.
- 3.) Ensure Power Supply switch is set to 115V (or 230V)  
(Some model power supplies may not have this)
- 4.) Ensure Power switch is on.
- 5.) Check for power supply fan turning.
  - If the power supply fan is turning and there is no 12 Volts out, the power supply is faulty and needs to be replaced.
- 6.) If power supply fan is not turning, check power supply cables to the Power Distribution Board. This board takes the power in, and directs it to the different 12 volt loads.
  - Turn off game.
  - Unplug all power out connectors from the right side of the Power Distribution Board. Turn on game and if the power supply fan is turning, plug one cable in at a time until the fan stops turning.
  - If power supply fan is not turning when only the power supply is plugged into the Power Distribution Board, then replace power supply. It should come on with simply the load of the Power Distribution Board plugged into it. Part # A5PS1013



A5PS1013  
Power Supply



A5CB5156B  
Power Dist. Board

## HOW TO REPLACE DISPLAY

The display boards are accessed from the front of the cabinet. Remove the screws holding the front plexi in place using a # 2 square bit.

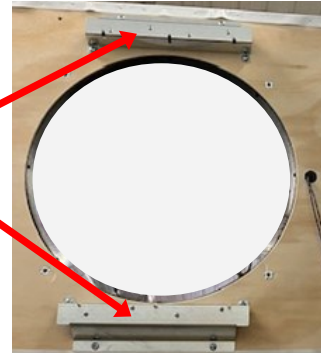
The display board can then be lifted out and unplugged.



# HOW TO REPLACE TARGET SENSORS

The target sensor boards are located behind metal protective brackets in the rear of the game.

Some brackets are mounted left and right of the hole, some are mounted above and below the hole.



## Tools Needed:

10-12 foot ladder

11/32" Nut Driver

Phillips Screwdriver

## Instructions:

Unplug the game from the wall.

Unclip the black tarp on the back of the game enough to access the faulty target sensor boards.

Unplug the phone cable communication cable to the sensor board.

Note:

Emitter boards have 1 cable

Detector boards have 2 cables, one on each end.



Remove the metal protective bracket by removing the 4 screws using a Phillips screwdriver.



Remove the circuit board from the bracket by removing the 4 nuts using a Phillips screwdriver and 11/32" nut driver.



Install the new sensor board making sure the plastic spacers are in place, and that the sensors are pointing toward the slots in the bracket.

