

Troubleshooting Guide



(716) 759-0360
WWW.ICEGAME.COM
Innovative Concepts in Entertainment
10123 Main street
Clarence, New York 14120

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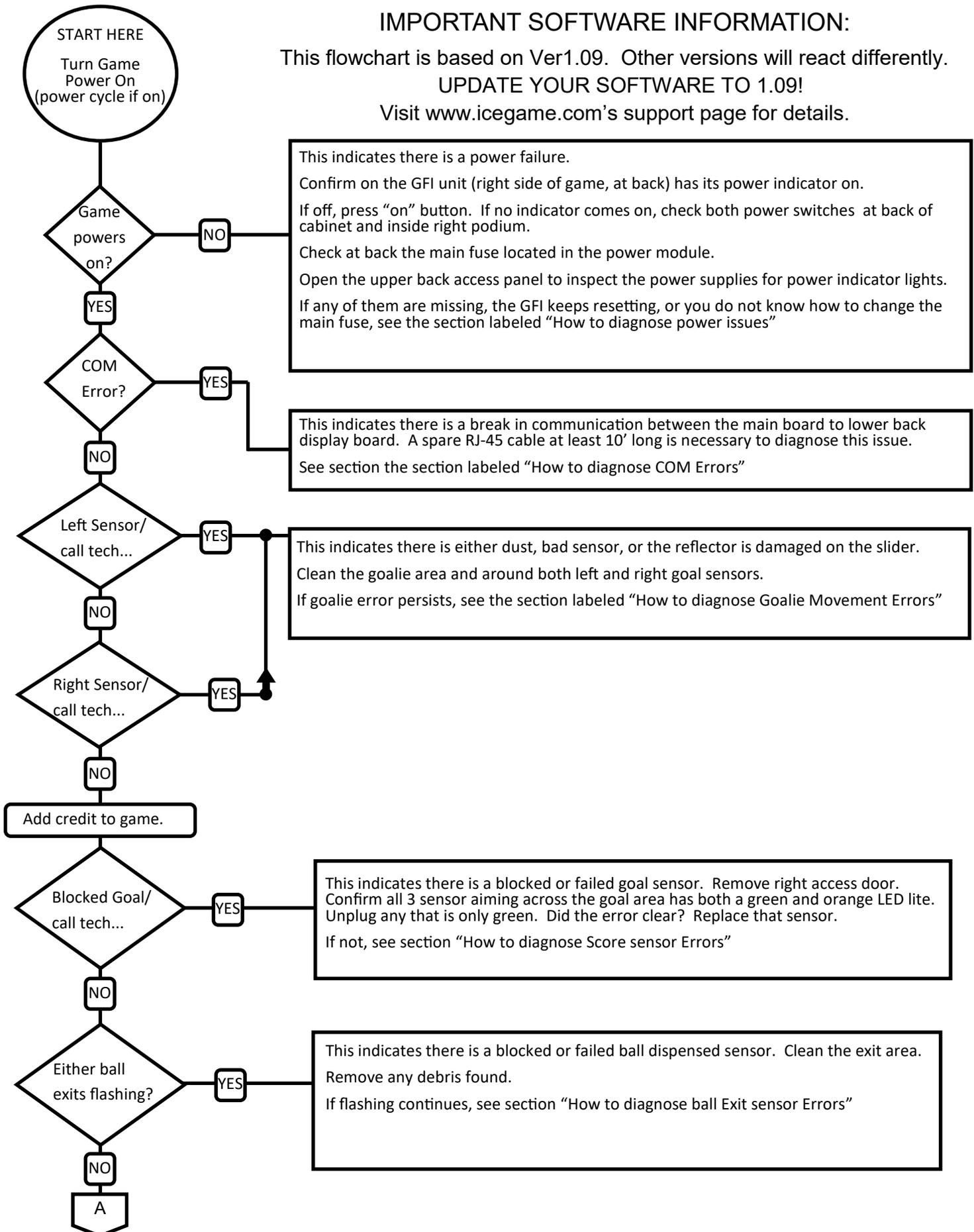
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IMPORTANT SOFTWARE INFORMATION:

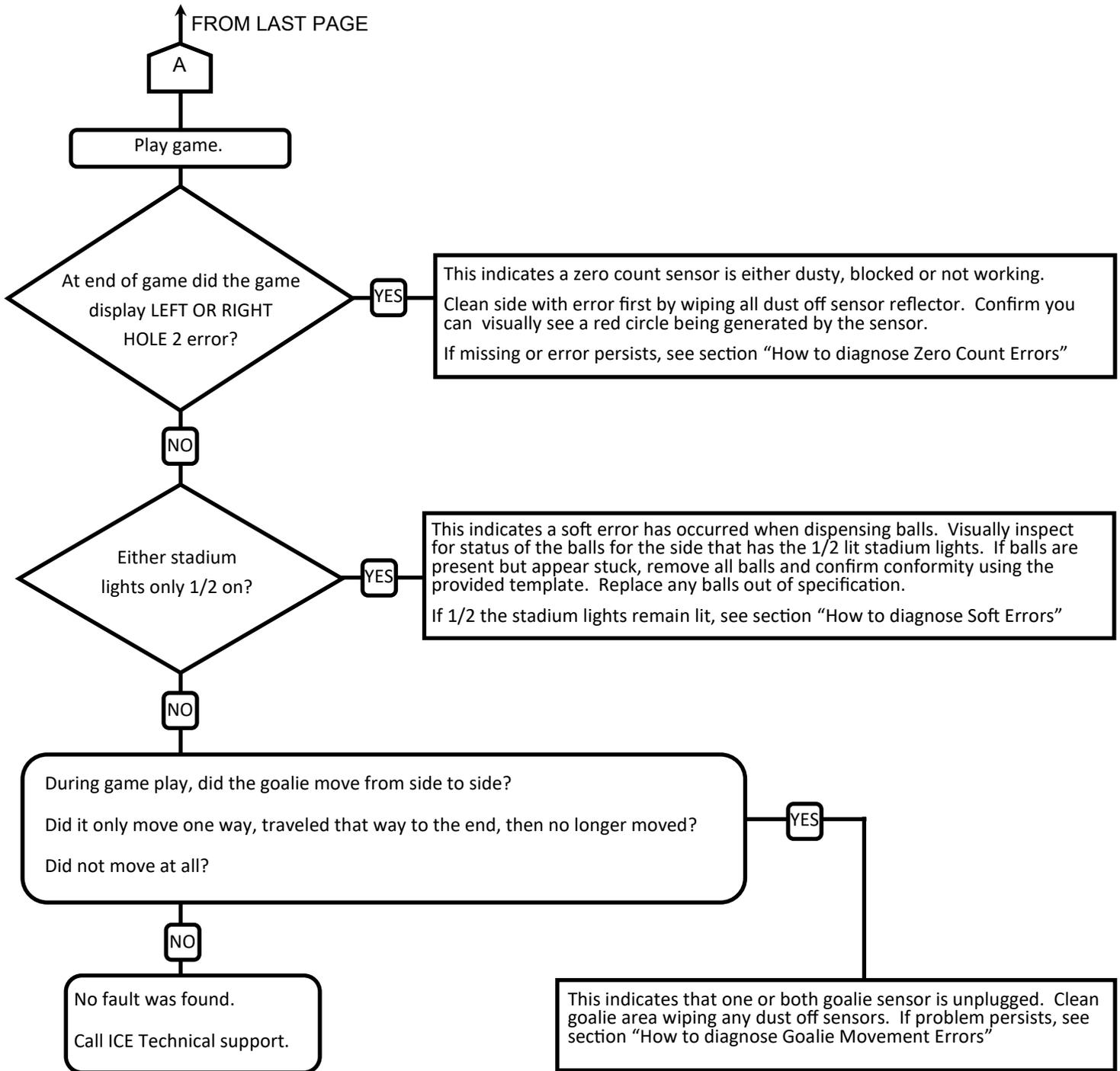
This flowchart is based on Ver1.09. Other versions will react differently.

UPDATE YOUR SOFTWARE TO 1.09!

Visit www.icegame.com's support page for details.



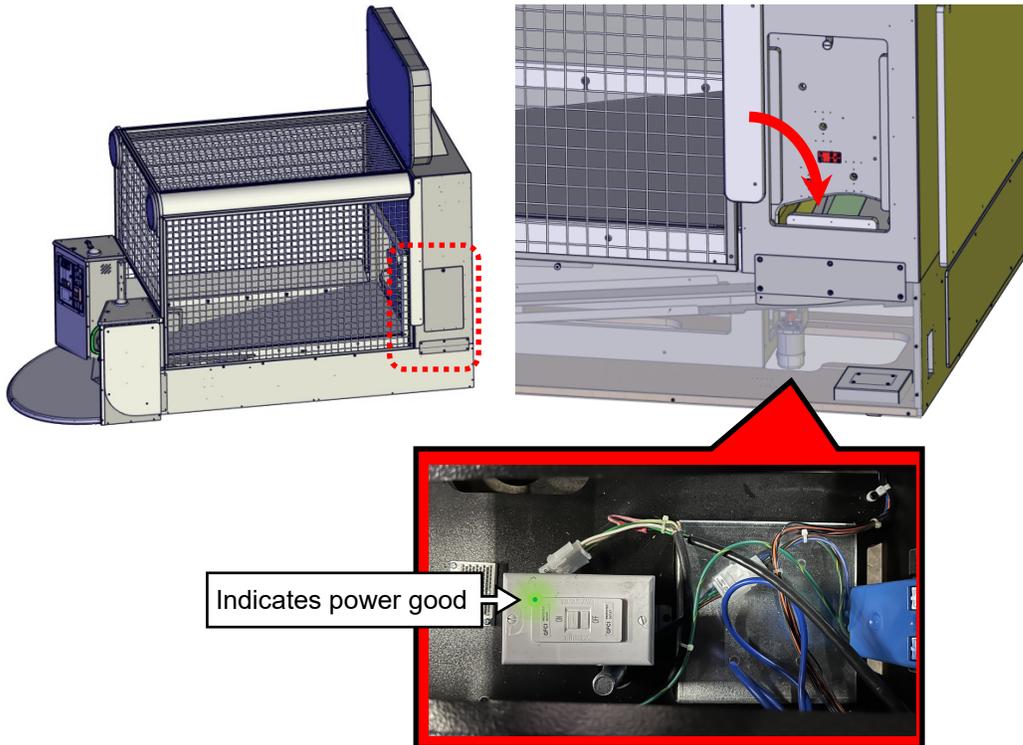
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Questions? CALL ICE TECH SUPPORT:
(716) 759-0360 or www.icegame.com (support)

How to diagnose power issues:

Step 1: Open the back side access panel. Look at the bottom of the cabinet for the GFI Indicator LED. It should be on (currently the color is green but can change in time).



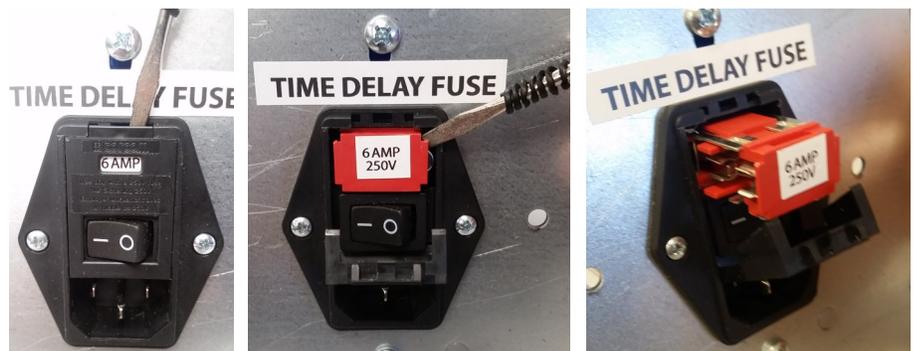
If green LED is on, got step 3.

If green LED is off, check the power switch at back. Make sure it is on I and no O.



If the switch is on, verify the time delay fuse. To do this unplug the AC cord. Do not proceed with the AC cord plugged in!

Use a small flat blade screw driver to pry the fuse holder open.



In most cases, the fuse will have a burnt mark in the center but it is always better to measure the ohms between the ends of the fuse. It should measure below a ohm. Anything more, replace the fuse. If still more than an ohm, replace the power module.

RED PROBE

BLACK PROBE

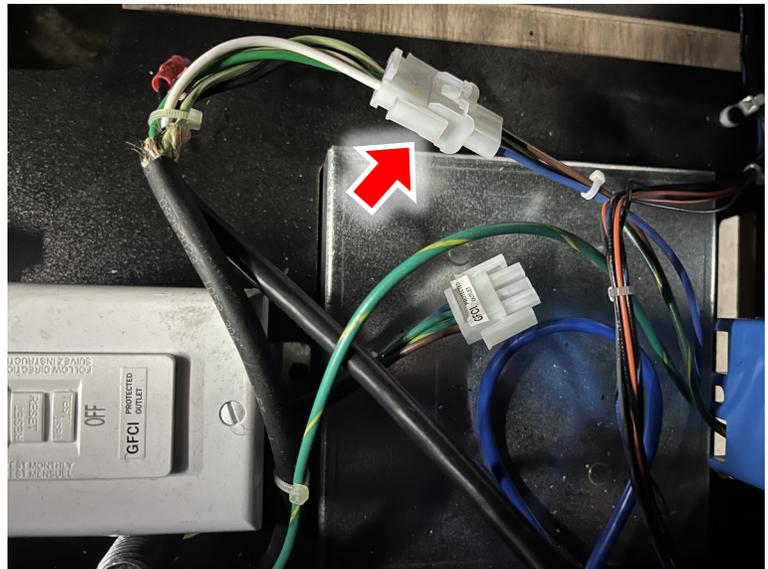
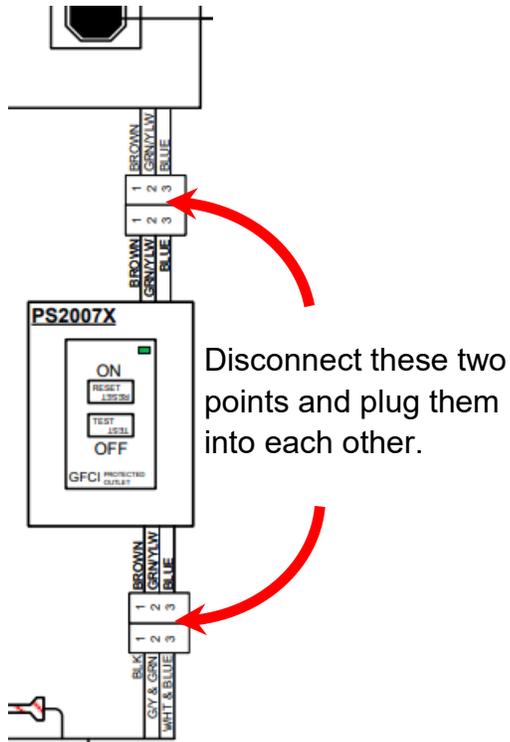
Step 2:

Press the “on” button. If the LED comes on but then pops back out to off, the incoming AC has a ground fault.

Call your building electrician to repair it. You can confirm this by bypassing the GFI. If the game powers on, your outlet has a bad earth ground or reverse neutral.

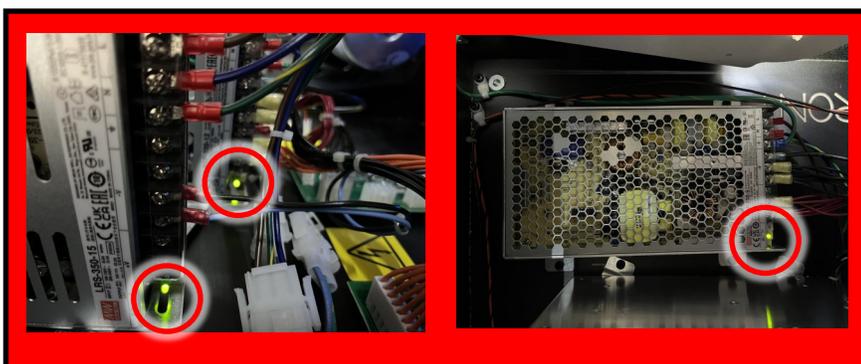
Do not operate the game until fixed.

Do not operate the game without the GFI.

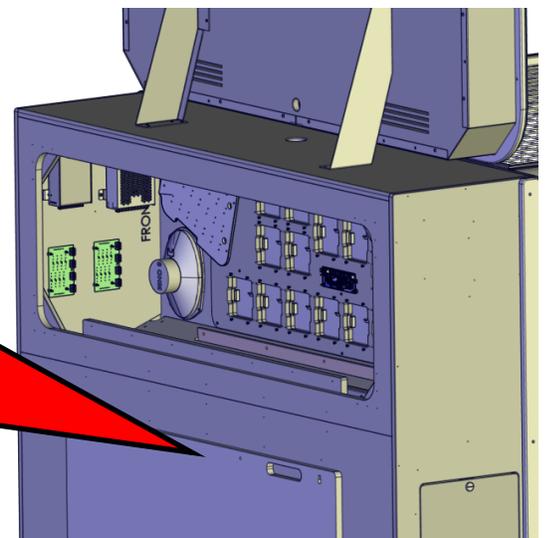


Step 3: Open the upper back door. Confirm all power supplies have their power on indicators on.

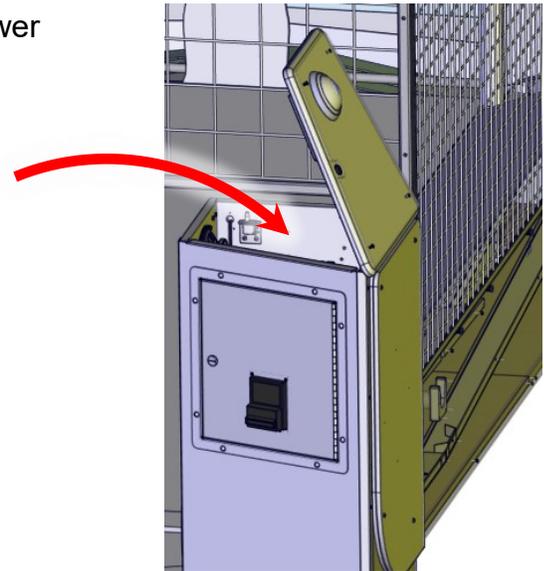
If missing, replace that power supply. Note, some units might only have two power supplies.



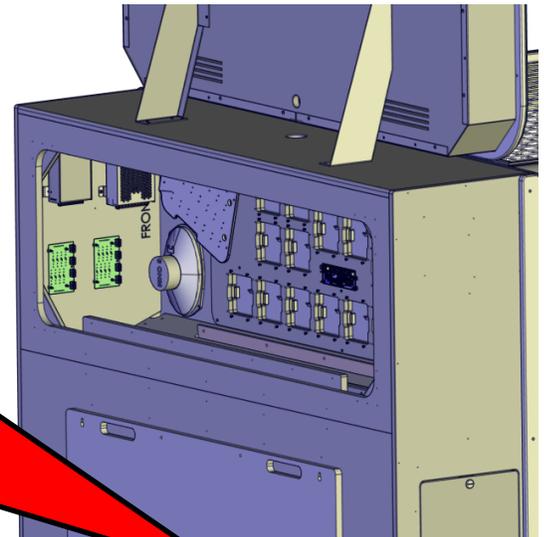
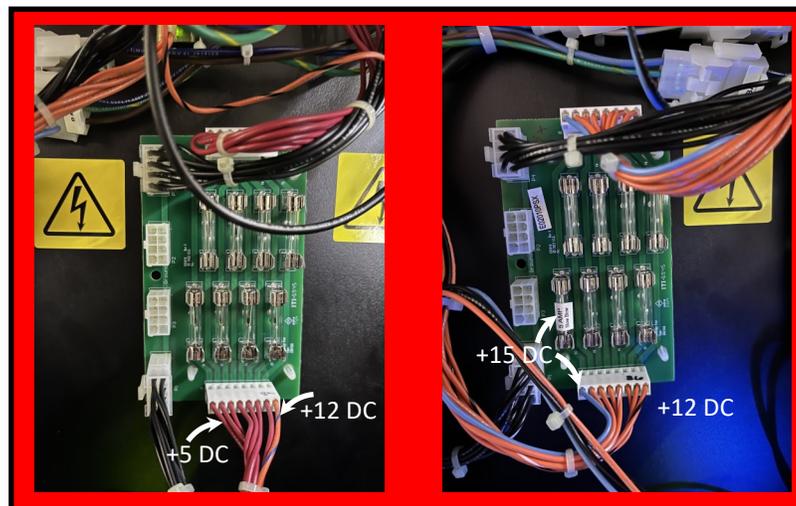
You can also measure their outputs using a meter. Replace as necessary.



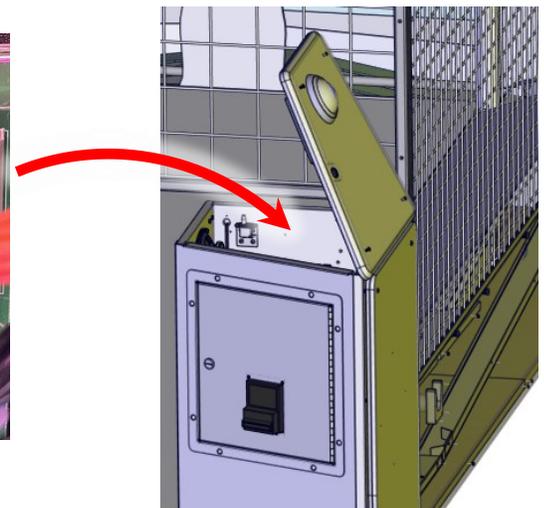
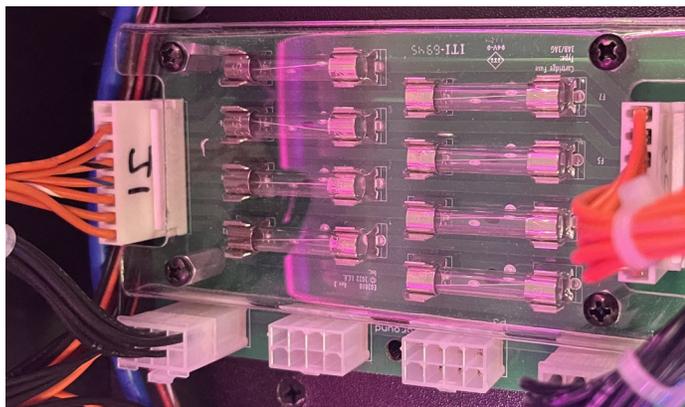
Open the right podium top access panel. Look down at the power supply and confirm the power indicator is on.



Step 4: Confirm on the red wires +5 volts DC from the fuse board replacing any bad fuses.
Confirm on the orange/some color wires +12 volts DC from the fuse board.
Confirm the light blue wire on J1 for +15 volts DC.

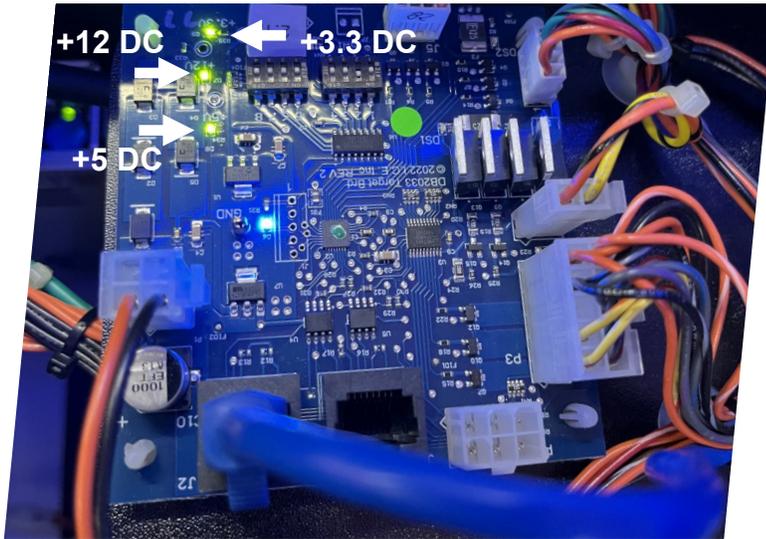


In the right podium, measure the voltages at the fuse board.
Connector J1, pins 1 through 7, replacing any fuse found bad.



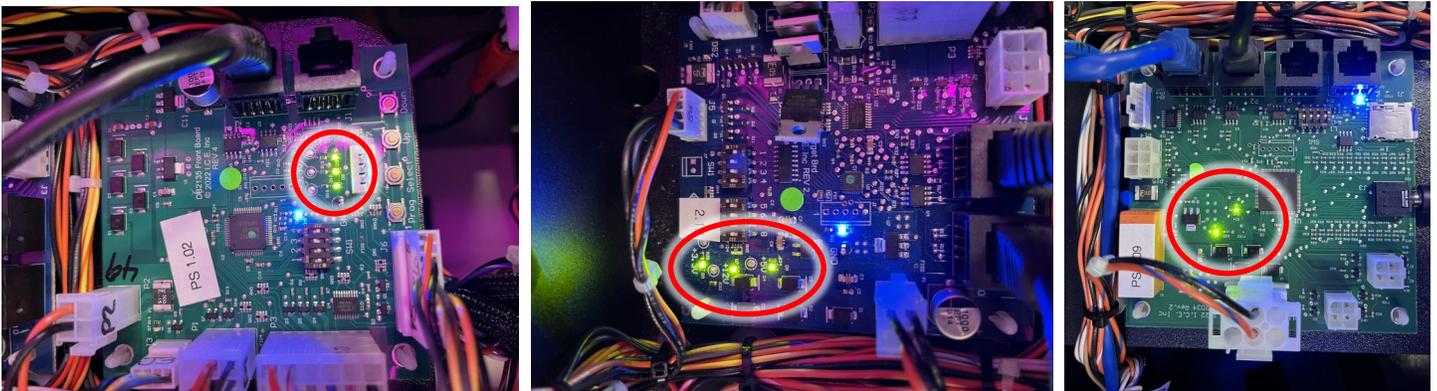
Step 5: In the right podium, confirm +3.3-, +5-, and 12-volt LEDs are on.

If missing, check harnessing going to P1 for +12 DC. If present, replace DB2033X board.



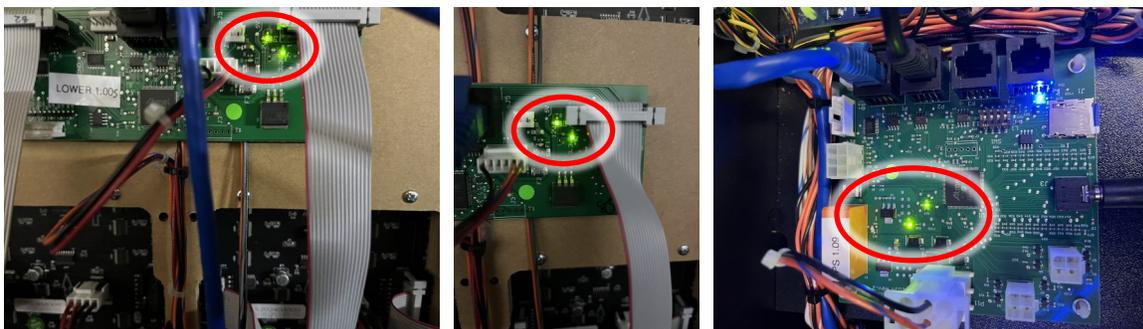
In the left podium, confirm 3.3-, 5-, and 12-volt LEDs are on for each board. LEDs are labeled.

If missing, confirm power wiring has +12 VDC and that replace board if missing.



At back of game, confirm +12 is present at each display board (upper and lower)

At back of game, confirm 3.3-, 5-, and 12-volt LEDs are on for the goalie board.



CONTACT ICE SUPPORT IF NO POWER ISSUE CONTINUES.

How to diagnose COMMS ERROR:

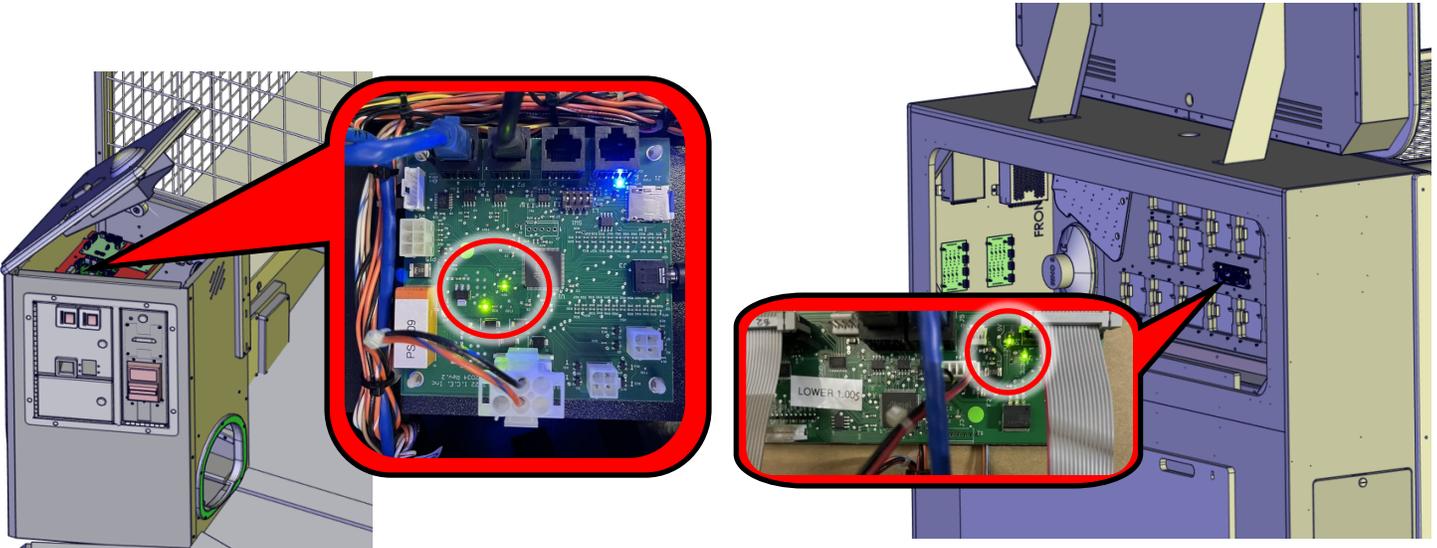
A COM error means the bottom back display board is not talking to the main board. There is a network cable that goes from the main board, along the left side of the cabinet to the back.

It is recommended to have a 15 feet RJ-45 cable to troubleshoot.

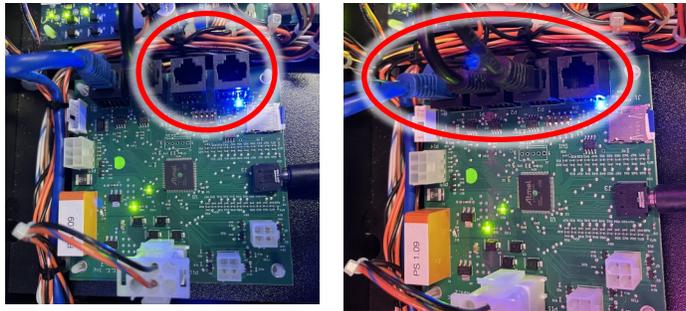


Step 1: Confirm both the main board and bottom back display board has power.

SEE “How to diagnose power issues” if LEDs are not on.



Step 2: Using a RJ-45 cable, connect one end of the cable to any open network connector.



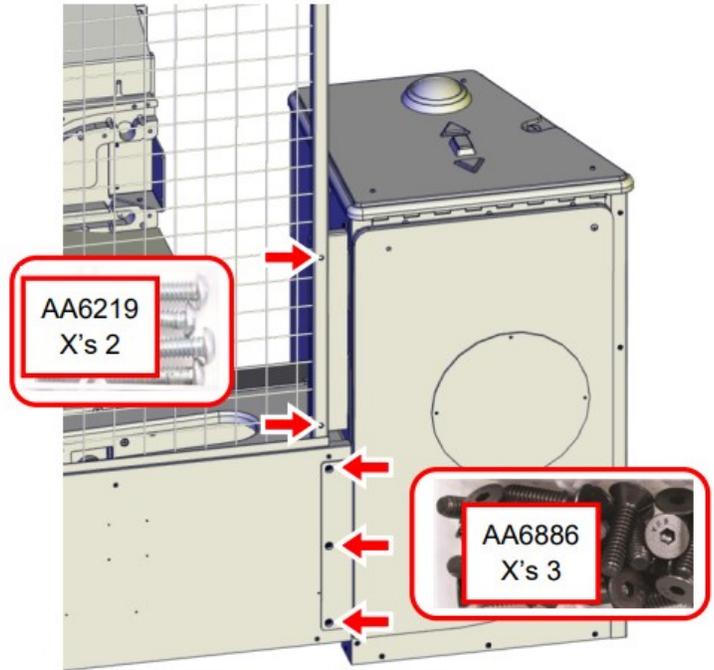
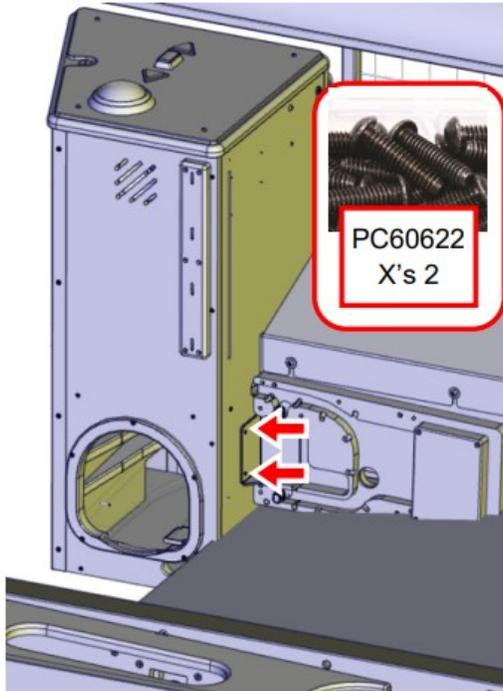
Disconnect the cable going into the bottom back display board. Then connect the other end of the new cable to the network connector you just unplugged the cable from.



Step 3: Did the COMS error screen go away? If not, skip to Step 4. Do not follow below.

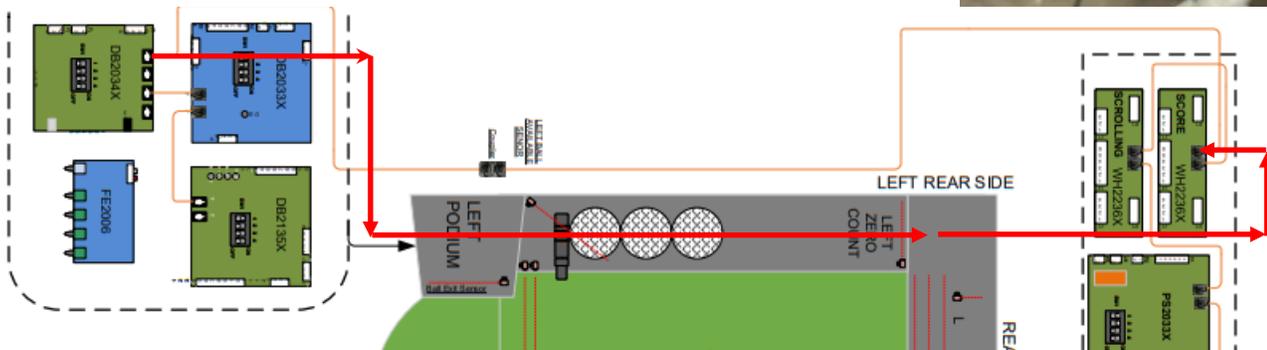
Examine the network cable connector located where the front right podium to the attached to the main cabinet. Some disassembly will be required to access this.

It is necessary to disconnect the right podium from the cabinet to run a new network line.



Carefully pull the right podium away to expose the network connector. Is it damaged? Is it plugged in correctly. If all looks good, run a new network line from the right podium through the left floor cabinet below and out of the way of where the balls travel. Then up the back following the old cable. Remove the old network line. Use wire ties to secure it.

Ensure COMS error is not present before attaching Podium.

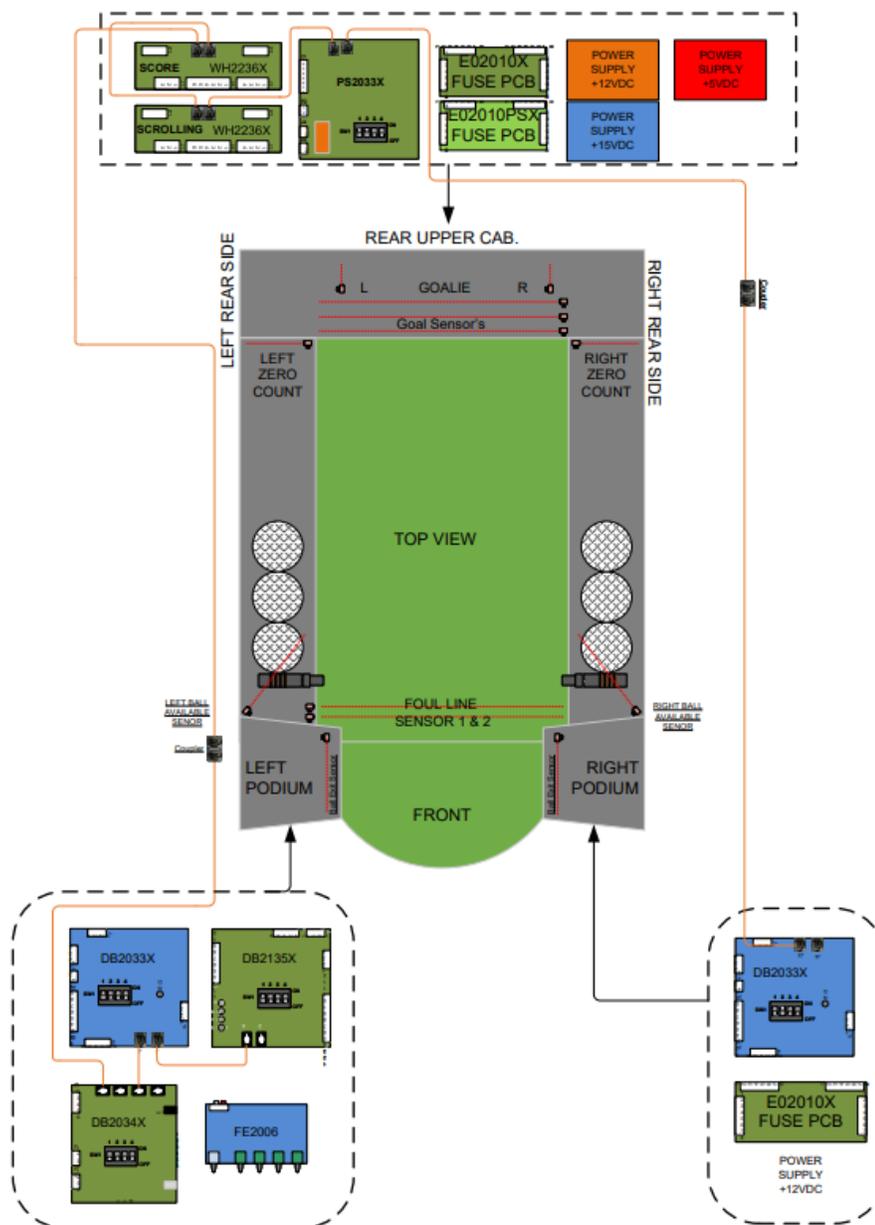


Step 4: Disconnect all network cables from the main except for the test cable going to the back lower display board. Only the main board and display board should be attached to the network connectors. **Did the COMS error go away? If it does, go to Step 5.**

The issue would be either the main board is bad or the back lower display board did. Replace boards to resolve. END OF TROUBLESHOOTING.

Step 5: The network starts at the main board and branches out in two directions. One direction goes to the back bottom display board. Then it connects to the upper display board, goalie board and finally to right target board. The other direction connects the left target and left front boards to the network.

Start by disconnecting the left face board (furthest away) in the left podium. If the COMS error goes away, either that jumper cable or the board itself is bad. Repeat this process for all boards. Replace patch cables before replacing boards. Orange wires below is the network path.



How to resolve other Communication Errors

Other communication issues can occur between boards but they would not cause the display to show “COMMS error” but will cause other issues like loss of motor functions or sensors to appear to be blocked when they are operating normally. This is why we have added the Diagnostics feature of the game. This feature allows you to check the status of all sensors and confirms if boards are communicating with each other or not.

How to access diagnostics:

In the left podium, press the “Down” button until the display shows a bunch of letters and numbers. This is the diagnostics screen.

It alerts you to the status of sensors and communication between boards.

Looking on the right shows the communication status of all the boards. White indicates they are communicating; orange indicates the board is not. Replace any network cable connection from the last working board to the first failed board. See wiring schematic for route of wires.

M orange indicates no communication to Rear cabinet Matrix board (upper display board, WH2236X -Score)

N orange indicates no communication to front board left podium DB2135X.

O orange indicates no communication to target board 1 left podium DB2033X,

P orange indicates no communication to target board 2 right podium DB2033X.

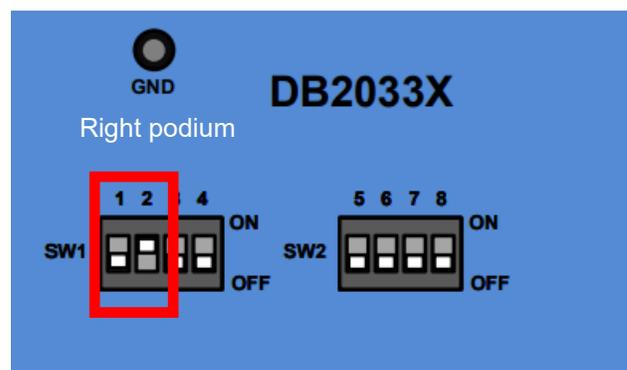
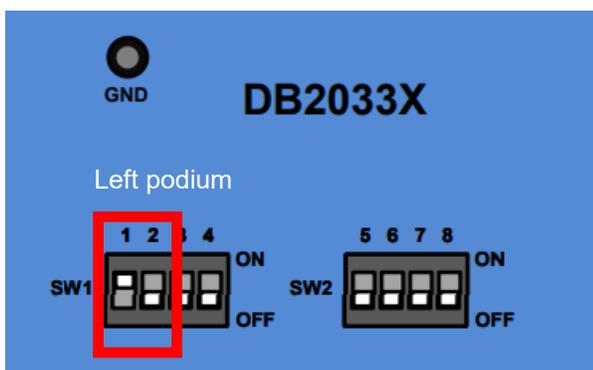
Q orange indicates no communication to goalie board rear cabinet PS2033X.

R orange indicates no communication to goalie board rear cabinet PS2033X.

FYI : Q and R will both be orange when no communication is established to the goalie board.

When replacing BD2033X target boards, you must set the ID number before you install them in the cabinet. Dipswitches 1-2 sets the location. For left podium install, switch 1 is on and 2 is off. For right podium usage, dip switch 1 is off and 2 is on.

IMPROPER DIPSWITCH SETTINGS WILL CAUSE LOSE OF COMMUNICATION!



How to diagnose Goalie Movement ERROR:

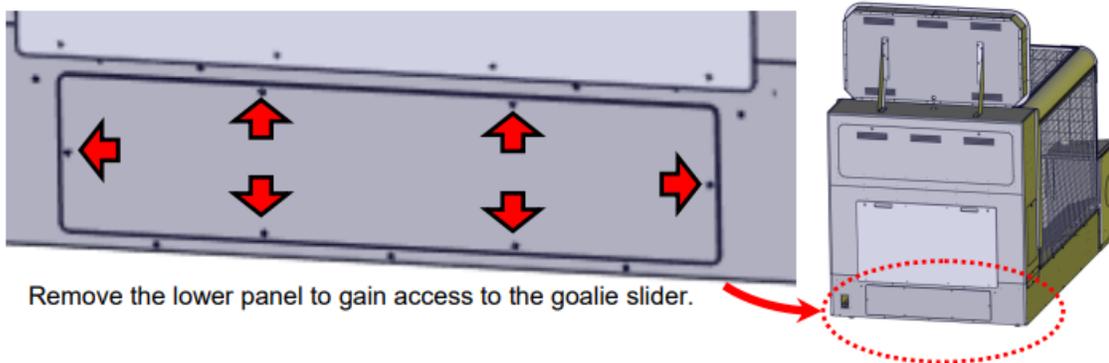
The terms Left and Right are always from standing in front of the game.

When the game is powered on with the left goalie sensor blocked or if it is defective, the game will display “left sensor/ call tech then right sensor/ call tech” and wait till that sensor is fixed. When the right goalie sensor is blocked or defective, the game will displays right sensor/call tech and wait till the sensor is fixed. If either sensor is blocked or becomes defective during game play, the goalie would not move towards that sensor but would not display any errors until the game is rebooted.

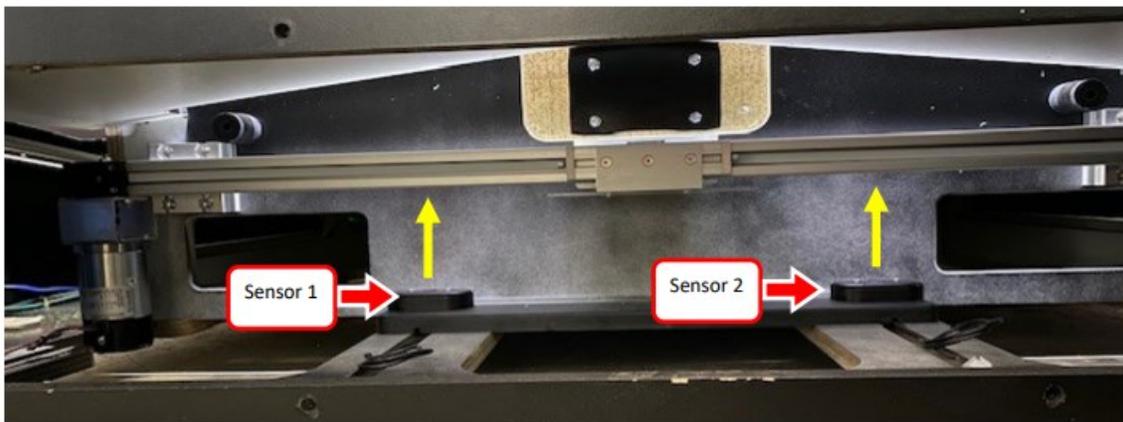
Step 1: Power cycle game to determine which goalie sensor is the issue **If no error, skip to step 3.**

Step 2: Wipe goalie sensors with a clean cloth. Power cycle game. Continue if error is still present.

A: Remove the lower panel to gain access to the goalie sensors.



B: Wipe the two sensors clean using a soft rag.

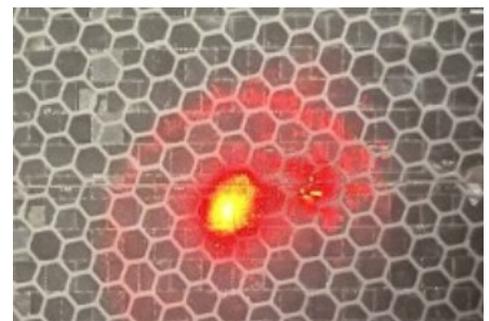


C: Power cycle game. Did the errors clear? If yes, end of troubleshooting.

STEP 3: Confirm that both sensors are powered on.

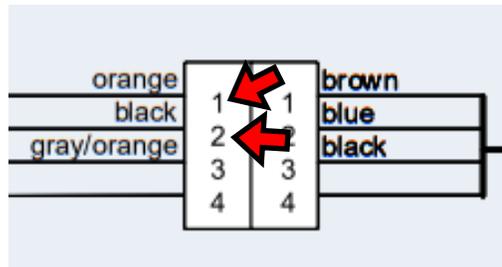
You should see a red glow coming out of the sensor. If you move the goalie by hand over the sensor, you will see a narrow red dot appear on the reflector.

If both are off, confirm the sensors are plugged in. See how to diagnose power issues only if both are missing.

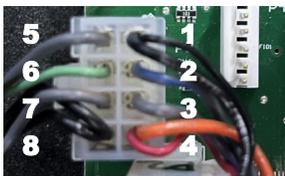


Step 4: If one sensor is out, confirm you have +12 at the sensor.

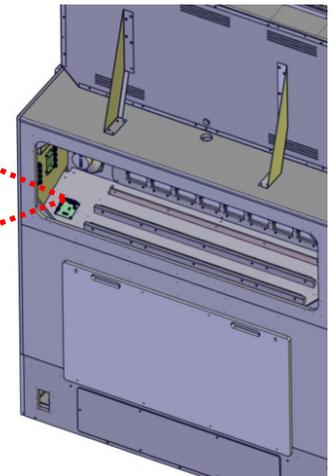
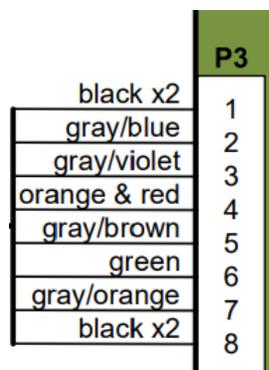
Measure between orange and black. You should measure +12 volts DC.



If present, replace sensor. If not, confirm +12 VDC is available at the goalie board.



P3

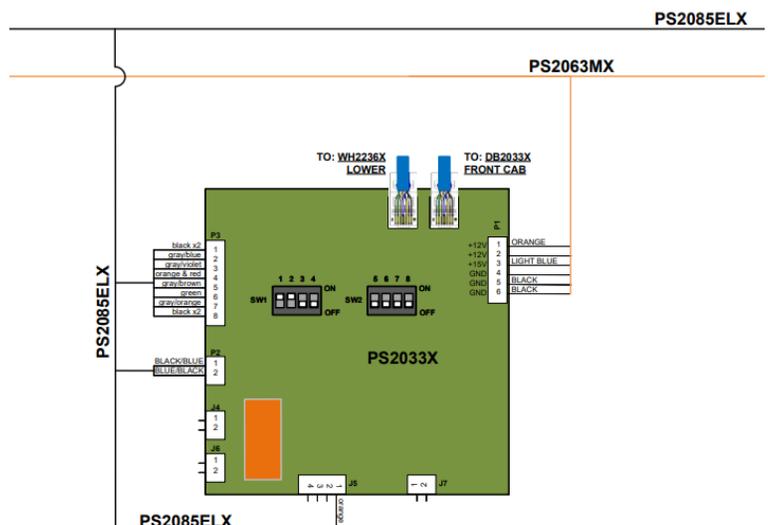
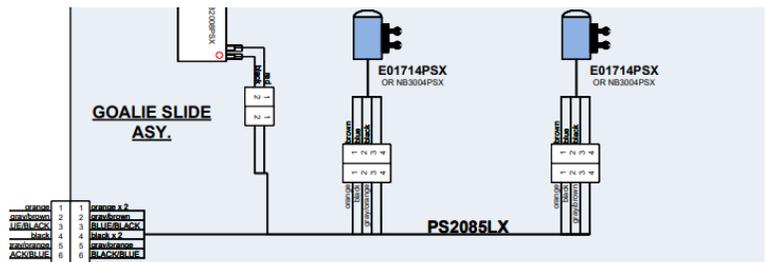


Remove the back upper access panel.

Locate P3 on the goalie board. Measure

Pin 1 and 4 then 8 and 4. If +12 is missing, measure at P1, the orange wire and black. If +12 is missing, see how to diagnose power issues.

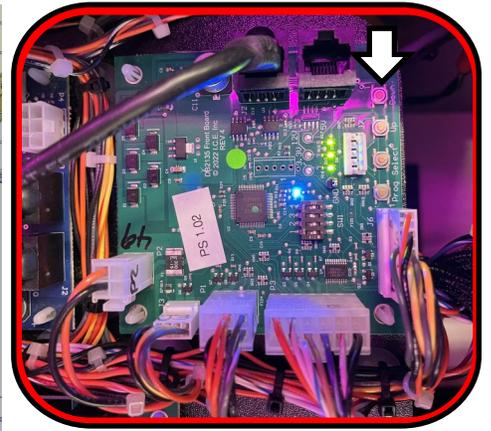
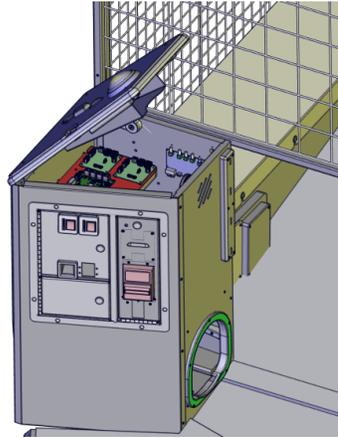
If +12 is present at both sets of pins, repair the harness going from P3 to the defective sensor.



STEP 5: Enter Diagnostics.

Open the left podium and press the “Down” button until the screen shows a bunch of letters and numbers.

This is the diagnostics mode.



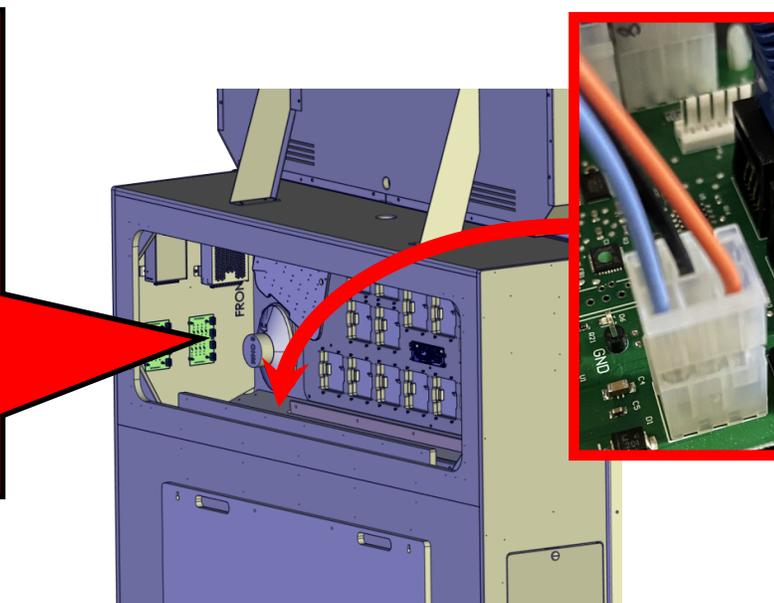
The numbers and letters on the left side are for status of sensors and buttons. The letters of the right indicate status of boards networked. Look on the left side at 6 and 7. If they are white, the game believes they are blocked. If they are red, they are working.

Are all the right letters white?

If R and S are red and 6 and 7 are white, there is either no power at the goalie board or the goalie board is defective. If you already confirmed power is present, replace the PS2033X goalie board.

If Q, R, and S are red, then the network communication is at fault. See the section on how to resolve other Communication Errors.

STEP 6: If both sensors appear to be working (moving the goalie over the sensors causes the numbers 6 and 7 to turn white) but the goalie still will not move, confirm the fuse for +15 volts on P1 of the goalie board. Light blue (pin 3) and black (pin 5 or 6). If +15 volts DC is missing, replace with 5 amp slow blow. If the fuse blows right away see section resolving goalie slide assembly issues.



How to diagnose ball Exit sensors Errors.

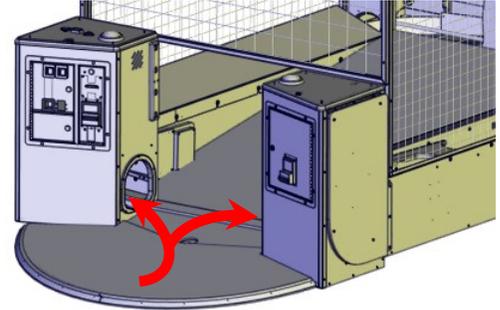
Step 1: At the front of the game and at each podium is a sensor that monitors balls that are dispensed. When the sensor is blocked, LEDs will flash. If these remain flashing, either the sensor is dirty, the sensor is misaligned or the harness to the sensor is damaged.



ON



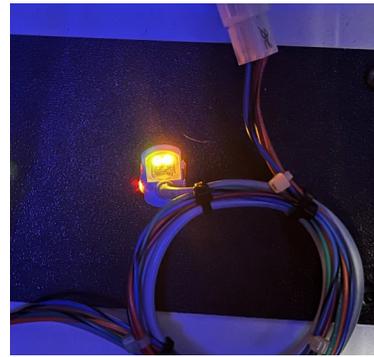
OFF



Open the podium that is flashing. Look down into the podium. You should see two small LEDs, one yellow, one green. When the sensor is blocked or misaligned, it will only show the green LED. Clean the area and inspect the reflector for damage if no obstruction is found in the exit hole.



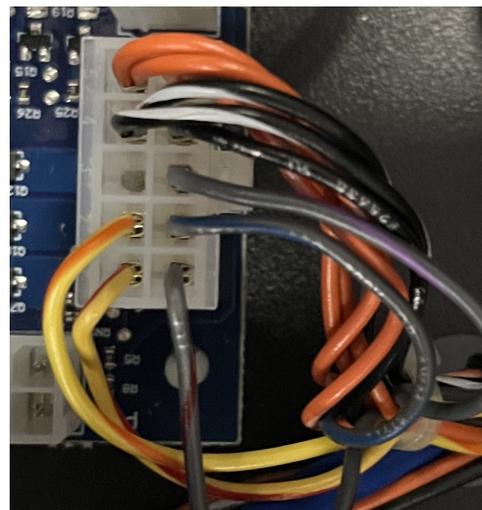
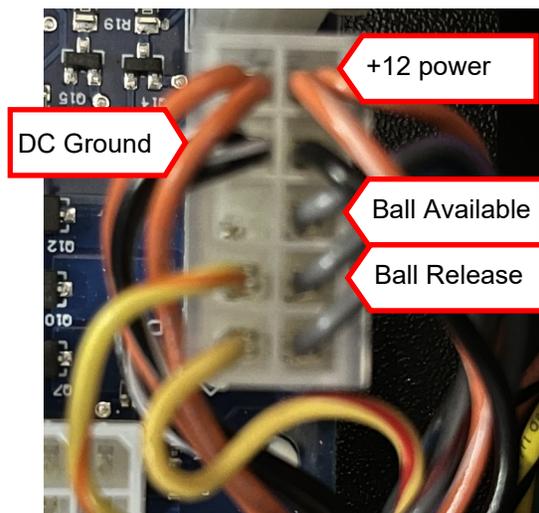
Blocked or reflector is misaligned or missing.
Only green is on.



Not blocked and working.
Both LEDs are on.

Step 2: Confirming power and output of sensor:

If the LEDs are off, the sensor is either damaged or the wiring to it is damaged. Confirm the wiring back to the target board, P3. Confirm the sensor output at pin 7 for the signal +12 when not blocked, .5 or less blocked, 3.5 when wiring is open. Pin 4 and pin 10 are the ground and +12 power wires. Wiring is the exact same on each side.

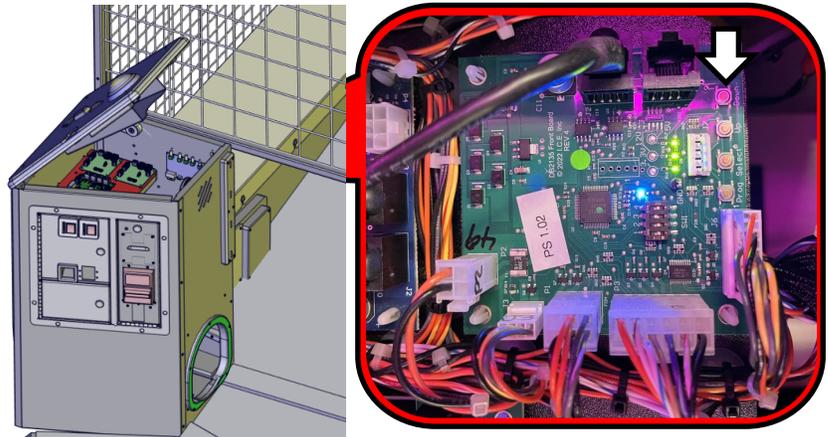


Step 3:

Another approach to determine if the sensor is working or not is to use the diagnostic screen.

Press and hold the down button in the left podium.

The screen will show a bunch of letters and numbers on the left and letters to the right.



Are all the letter white to the right? Then there is no issues with comms or power to the boards.

If any of these are RED, go back to section “How to resolve other Communication Errors”

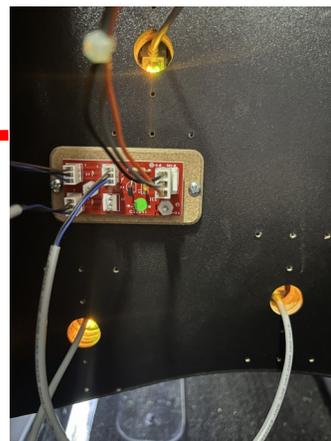
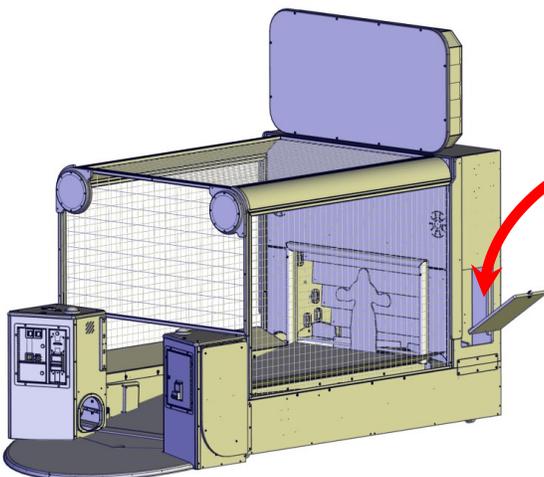
Is 3 or 4 white? If red, the sensor is reporting unblocked. Placing your foot into either exit hole will cause 3 or 4 to turn white when working. If white all the time, the sensor is reporting blocked. Go back to the last step to confirm sensor has power and the output correct.

How to diagnose Score Sensor Errors:

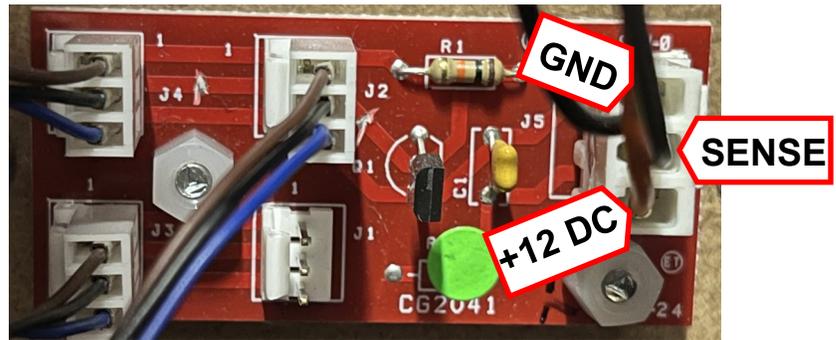
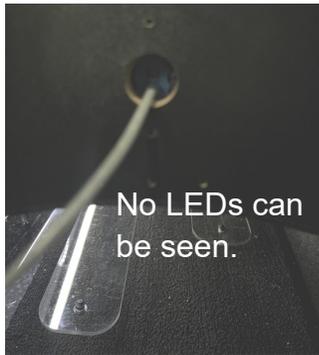
The game will generate this error once the game has a credit and the below condition occurs.

There are three sensors used to detect a ball in the goal area. If one of them is blocked for more than 5 seconds, this error will be displayed, and game play will be disabled until repaired.

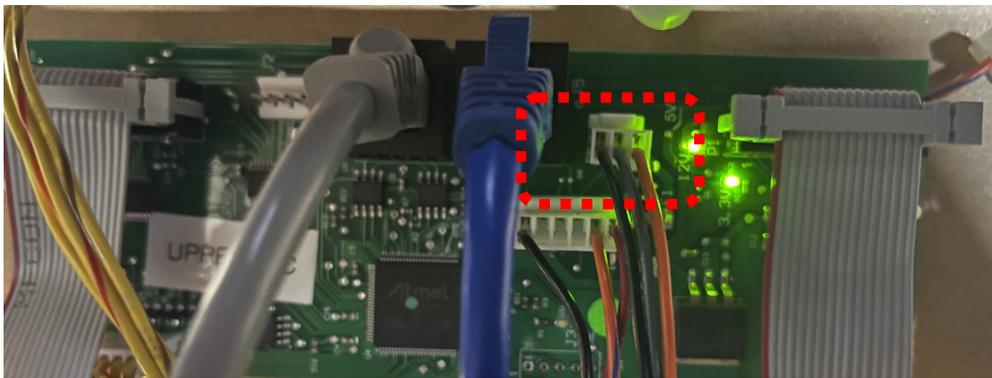
The sensors are connected in parallel which means if one is blocked, all are blocked to the game. At the back of each sensor, you will find two small LEDs that should be on. One green and one yellow. This indicates the sensor is working and aligned.



Step 1: If LEDs are missing on all three sensors, confirm +12 DC is present at J5. Otherwise skip to step 4 if only one is out or missing both LEDs.



Step 2: If missing, confirm harness is plugged in at J1 of the top “score” WH2236X display board.



Step 3: If no power is indicated (the two green LEDs are off on the above board), see section “How to diagnose power issues”.

Step 4: If only one sensor has no LEDs, follow the harness from the sensor back to the sensor inverter (CG2041X). This board combines the sensor's outputs into one.

Move that harness to the open connector to see if the sensor LEDs comes on. If still no LEDs, replace the sensor. Unplug the sensor until the new one arrives. The game will function with only two sensors. It might miss a score or two.

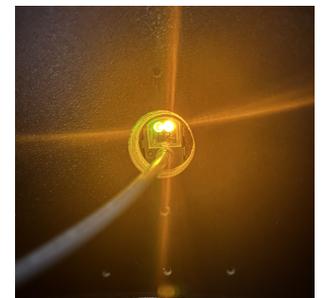


Step 5:

For any sensor that has only the Green LED on, check the reflector on the opposite side. Clean that reflector. If the yellow LED doesn't come on, replace the sensor.



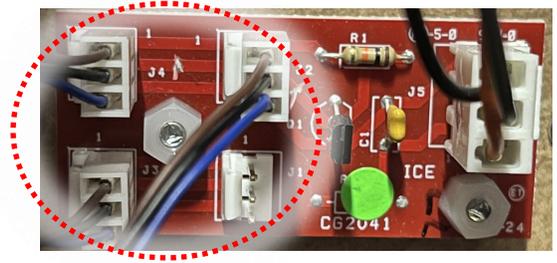
Blocked or no reflector



Working, Not blocked.

Step 6:

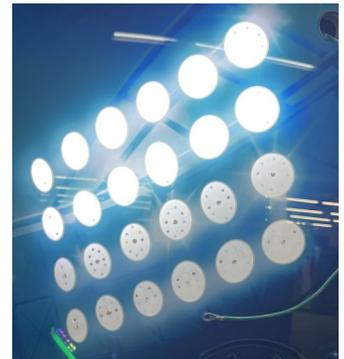
Unplug all the sensors. If the error is cleared, then plug one sensor at a time waiting about 15 seconds between plugging the next sensor in. Repeat until the error is displayed again. Replace that sensor which caused the error to reappear.



Step 7: If the error didn't clear, unplug the CG2041X board. If cleared, replace CG2041X board.

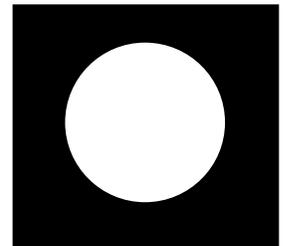
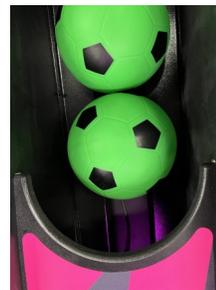
Step 8: If error persists, contact ICE Tech Support.

How to diagnose Soft Errors:



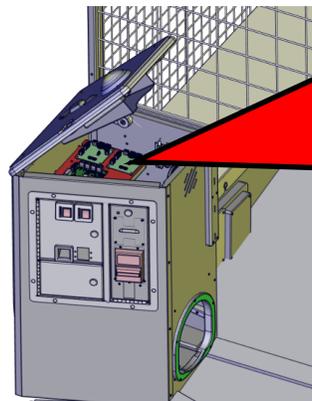
½ the stadium lights will be out at the end of the game for the side that has a blocked sensor (or jammed ball). Instead of all four rows of lights, only the top two will be on. The lower half will be off. This indicates that on the side the ½ lighted stadium light is on, there could be a ball deformed preventing balls from being dispensed, there are no balls present, or sensor issue.

Inspect all balls using the provided template to ensure they meet specifications for use in the game. It is also recommended that you clean the rails to ensure no foreign objects are causing the balls to stop rolling.



After correcting any issues with the balls, enter Diagnostics by opening the left podium and press the "Down" button until the screen shows a bunch of letters and numbers.

This is the diagnostics mode.





Press the dispense button on the left. Confirm a ball comes out the left and right making sure whatever button you pressed, the ball comes out that side.

If it doesn't dispense a ball on a side but if you press that same side again it does, see section "How to correct double tap to dispense". A and B should be white if a ball is ready to be dispensed. If they are red and a ball is present at the motor, check the sensor, harness to the sensor, and target board for that side. See also "Call tech, left or right 1 or 2 blocked"

Call tech, left or right 1 or 2 blocked

This condition can occur if too many balls are loaded into the game, if either of the side exit sensors are damaged or blocked, or the through sensors are damaged or blocked. At the back of each sensor you will find two small LED lights.

When blocked or misaligned, they will only have the green LED on.



When unblocked and aligned, they will have both green and yellow LEDs on.



Make sure the sides are balanced with equal amount of balls at each side. No more than 3 balls. Remove any balls in excessive of 7 or more. Never allow more than 6 balls to be loaded into the game. If too many balls are present, it will cause the zero count sensor and ready sensor to be blocked. This will disable that side during play. If any of these sensors go bad or become misaligned, the game will shut down that side. If both sides have both zero count and ball ready sensors blocked, the game will give no balls to give error or ball jam.

Make sure to be in diagnostics mode and check the status of each sensor. See "How to diagnose Soft Errors" to enter diagnostics. Numbers 3 and 4 are the left and right exit ball sensor. Letters C and D are the right and left zero count sensors. Letters A and B are for ball ready to be dispensed.

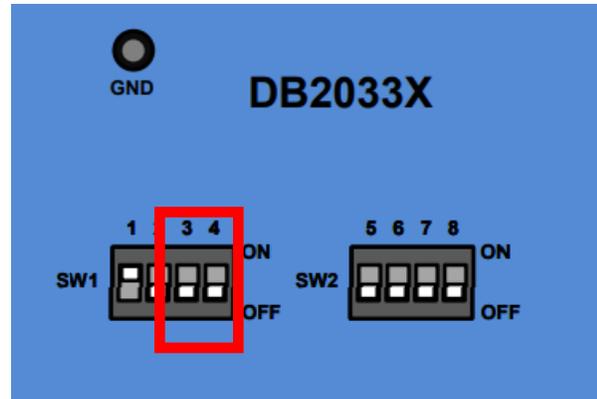
How to correct double tap to dispense

If you find during play that you must double tap one side to have a ball dispensed, the motor timing needs adjusting. Located in each podium is the target board for the motors. They have small dip switches on them to adjust the timing. Switch bank 1 has 1 - 4 while switch bank 2 has 5-8.

Dip switch 3 and 4 are the two you will need to adjust. Do not adjust any others!

Here is the settings for the dip switches:

- 3 4 Speed
- Off Off 100ms (shortest)
- On Off 125ms
- On On 150ms (longest)



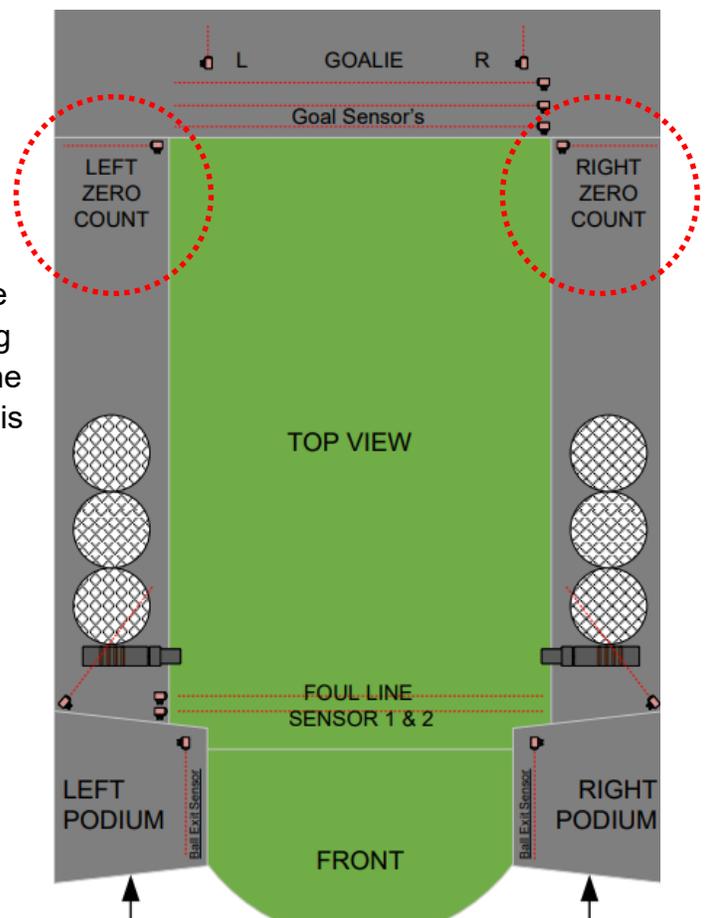
How to diagnose Zero Count sensors

(Left or Right hole 2 error)

This indicates the zero-count sensor for that side is blocked or disconnected. This sensor is located at the back, where the balls return into the trough.

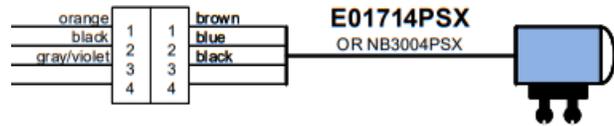
Confirm the sensor has power by looking removing the side panel for that side and look down. You should see the sensor's backside. It will have two LEDs, one being green, one being orange. Put your hand underneath the sensor to block it. The orange LED should turn off. This indicates the sensor is working.

If no LEDs are on, the sensor is either unplugged, bad harnessing, bad sensor, or bad goalie board. See also "Call tech, left or right 1 or 2 blocked"



If LEDs work as described, measure the voltage coming out of the sensor. Gray/violet is the output, orange is +12 and black is ground. Be careful, the sensor has black as its output and blue as the ground. A proper sensor will measure .5 VDC when blocked, +12 VDC when not blocked.

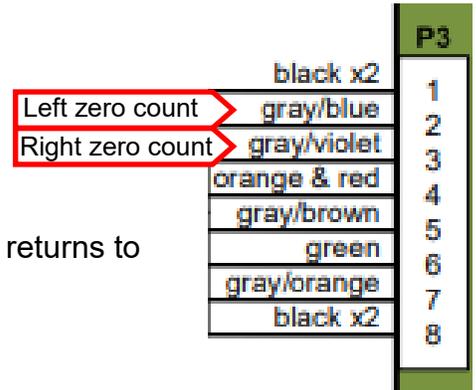
Replace sensor if voltage doesn't drop.



If LEDs do not light, measure the voltage to the sensor for +12 VDC. If present, replace sensor.

If +12 VDC is missing or if all seems normal in how the LED's work, measure at the back goalie board P3 for both the +12 being present and what signal the sensor is putting out.

For missing +12 VDC on goalie board, see section "How to diagnose power issues". If LEDs work as described measure the output at P3, pin 2 for the left zero count, pin 3 for the right zero count. If 3.5 VDC is found, the harness is bad and needs to be repaired or replaced. If voltage drops to .5 VDC when blocked and returns to +12 VDC when not blocked, replace the goalie board.

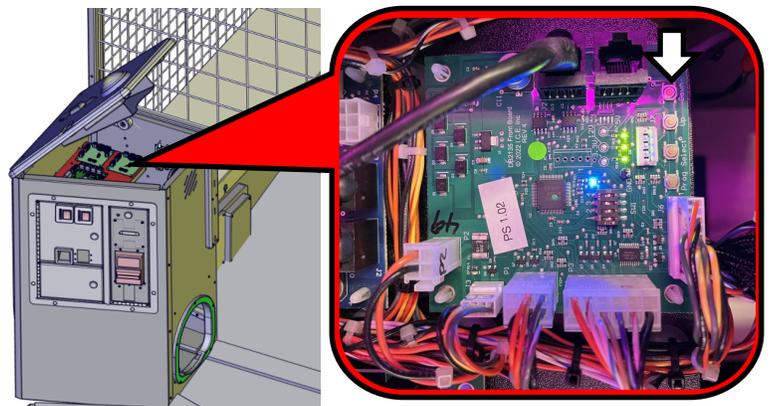


How to diagnose Foul line sensors

No errors will shown but will cause the goalie to move and display white 1 and 2 in diagnostics. Enter diagnostics and confirm 1 and 2 are not white. If they are white, stick your foot in front of the foul line. Did it change color? Confirm sensors are aligned with reflector. Measure the voltage at P1 on the DB2135X in the left podium between pins 3 and 5 for one pair, 6 and 5 for the other. 3 is the top sensor output, 5 is the bottom sensor output. When blocked, it should read .5 VDC or less, not blocked it should read +12. If you read 3.5 volts DC they are not plugged in or the harness to them is bad.

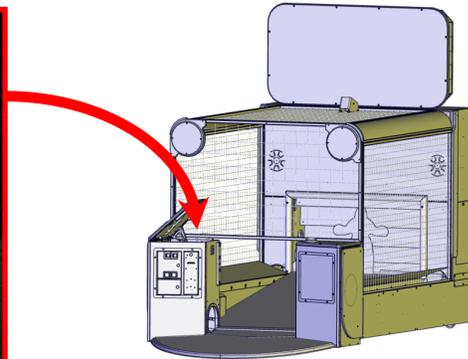
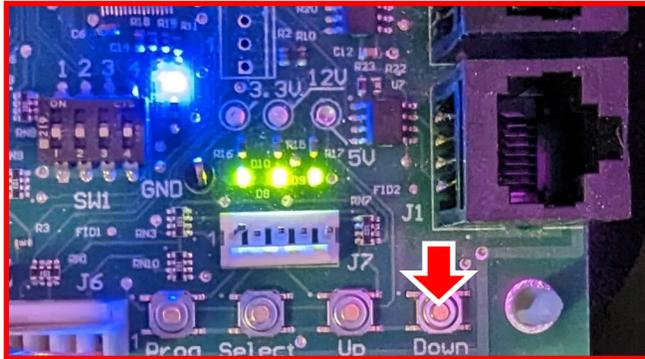
Enter Diagnostics by opening the left podium and press the "Down" button until the screen shows a bunch of letters and numbers.

This is the diagnostics mode.



World Football Pro Diagnostic Menu

To enter diagnostic mode, in attract mode (not in game mode), open the left podium lid and press and hold the down button for five seconds.



Left side numbers are inputs, right side are boards

LEFTSIDE:

- | | | | |
|----------|---------------------------------------|----------|---|
| 0 | Goal input from Score Display Board | 1 | Foul line 1 from Front Board |
| 2 | Foul Line 2 from Front Board | 3 | Left Exit Ball Sensor Target board 1 |
| 4 | Right Exit Ball Sensor Target board 2 | 5 | Cheat Sensor from Score Display Board |
| 6 | Goalie Right from Target 3 | 7 | Goalie Left from Target 3 |
| 8 | Left Ball Release Button board 1 | 9 | Right Ball Release Button board 2 |
| A | Left Ball Available from Target 1 | B | Right Ball Available from Target 2 |
| C | Right Zero Count | D | Left Zero Count |
| E | Left Arrow from Front Board | F | Enter Button from Front Board |
| G | Right Arrow from Front Board | H | Program Button from Front Board |
| I | Select Button from Front Board | J | Up Button from Front Board |
| K | Dn Button from Front Board | L | SD card audio files(s) incorrect / SD card Removed (after Boot) |

RIGHTSIDE:

- | | | | |
|----------|---|----------|---|
| M | Score Matrix Board – Rear Cabinet | N | Front Board – Left Front Podium |
| O | Target 1 Board Left Front Podium | P | Target 2 Board Right Front Podium |
| Q | Target 3 Board – Rear Cabinet Board (or Goalie board) | R | Right Side Time of Flight Rear Cabinet or Goalie board emulated |
| S | Left Side Time of Flight Board Rear Cabinet | | |

Note that the scrolling sign does not currently display a missing code, since if it is not working then how can it tell you it is not working since there is no way to know it. No communication for M-S would be red.

For sensors WHITE indicates the sensor is blocked. Red indicates unblocked.

There are two numbers that are below the Button indicators. The one on the left, or the first number, refers to the value that is being read from the bar/goal piezo. The one on the right, or second, refers to the valued being read by the goalie piezo. This is useful to set the sensitivity for the audio triggers if there is an issue with the piezo.

Attention!

Before using these balls in your game, you must first over inflate them for at least 24 hours. This will allow any creases that has formed in storage to work themselves out before use.

Failure to over inflate them might case “flat spots” to form where the crease is and prevent the balls from rolling properly.

After 24 hours, release some air and use the gauge included with your game. Drop the balls through the gauge. There should be some friction as they pass but should fully drop through.

