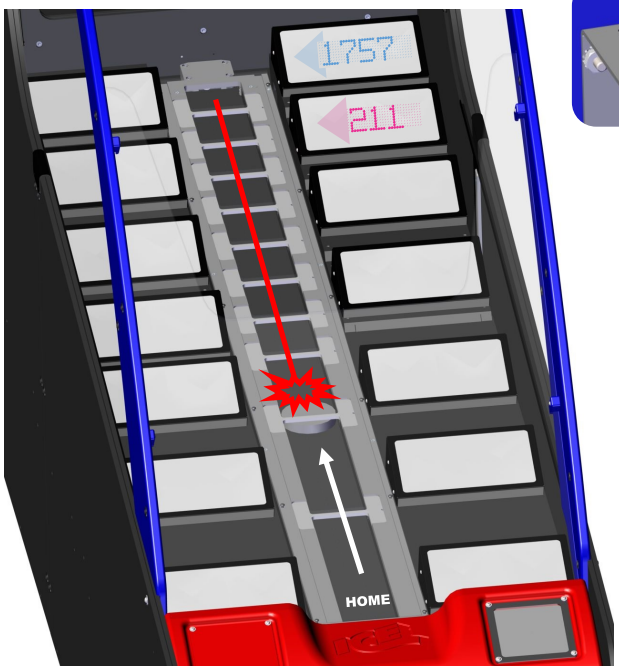
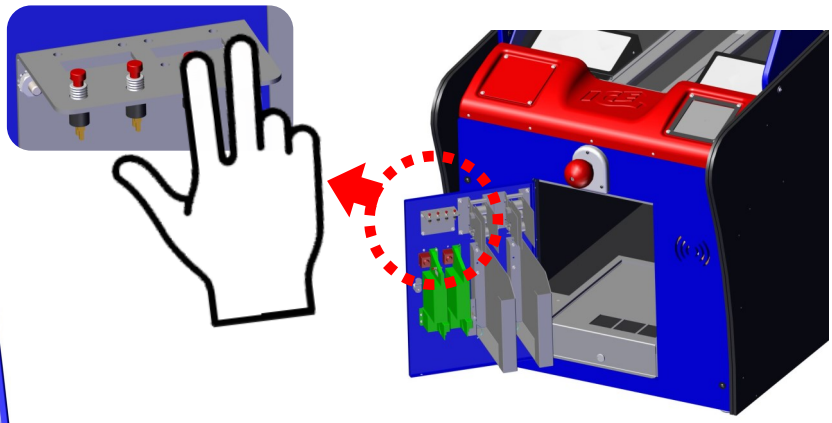
Error 4 :Indicates that the main board lost communication with the laser.

Solution: Press and hold both the UP & DOWN buttons for 6 Seconds.

The laser should constantly be trying to read the position of the puck.

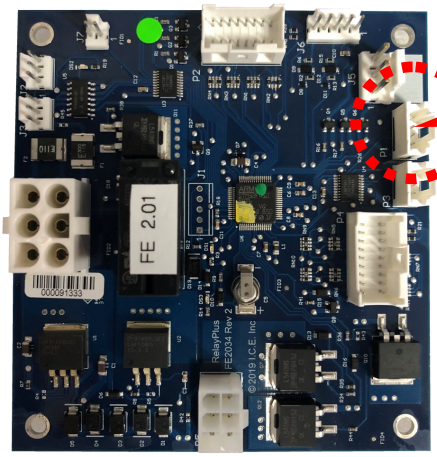
At the back of the playfield and on the right side, the back two displays will show a value.





As the puck moves away from the home position, the values should decrease.

If the value does not change, Verify the following:

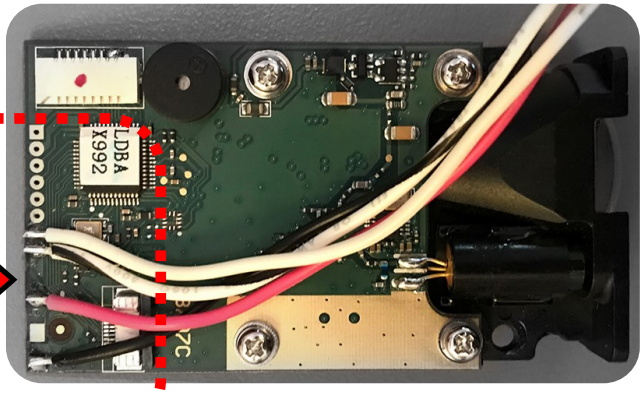


P1

Pink wire	= +3.3 volts DC
White wire	= Receive LASER
White/black wire	= Transmit LASER
Black wire	= DC Ground

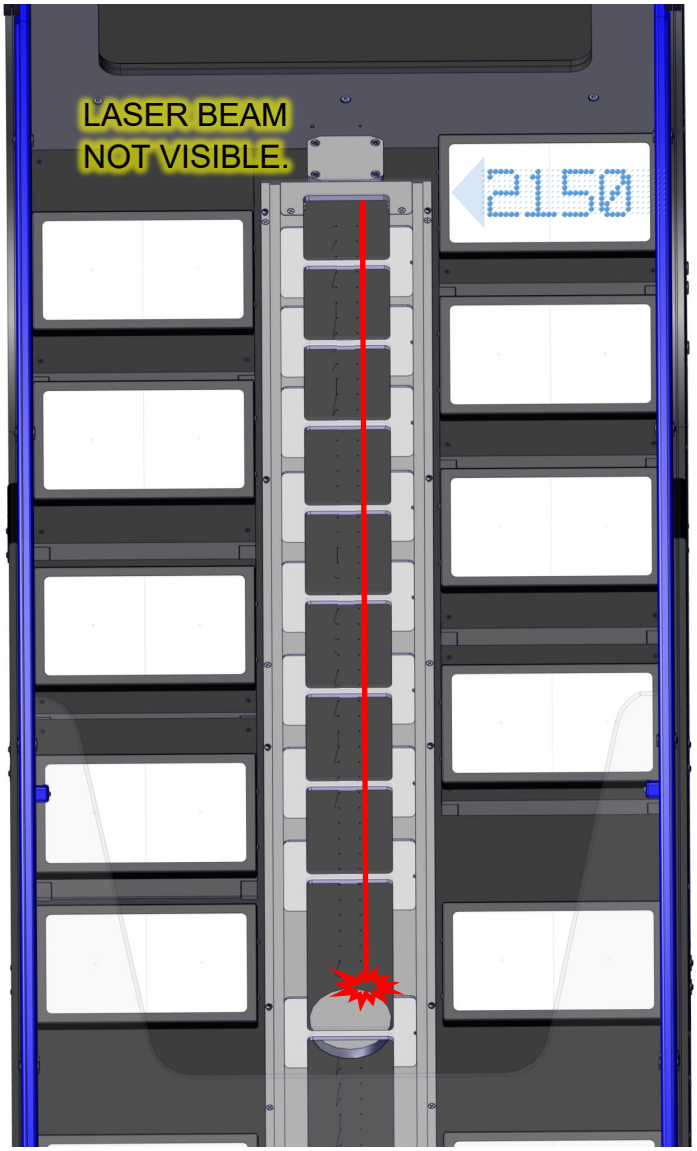
If after checking the harness , verify the wires are soldered to the laser board. They are underneath.

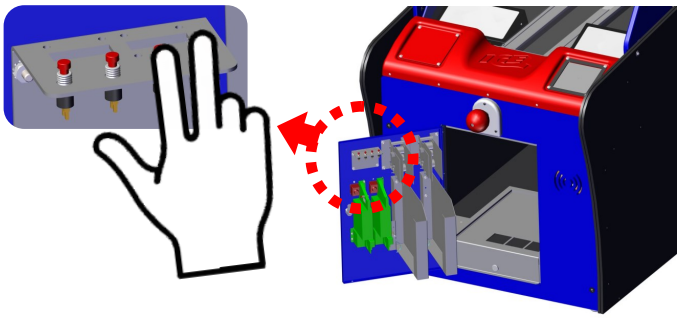
You must unmount the laser board from the game. It is located at the back.



Error 5 : Indicates the laser is not aligned.

Solution: Open the front door of the game, press and hold the UP and DOWN buttons for ~6 seconds. This will put the game into a test mode with the laser constantly on, and the last zone display (right rear) will display the measured distance of the puck.

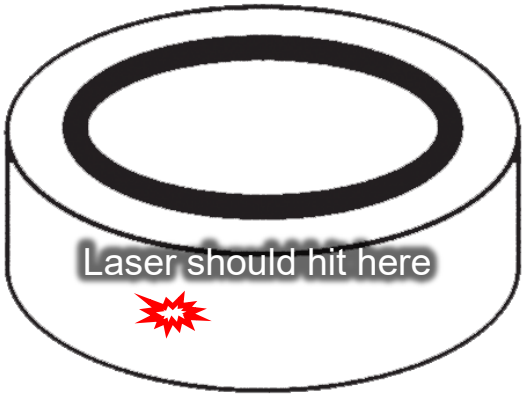




When the laser is in proper alignment and the puck is in the home position, the rear display will report between 2100 & 2250.

The laser beam should run along the right-side air holes of the playfield and centered between the top and bottom edges of the puck. The beam should at no point reflect off the playfield or any other surface in the game.

If the above criteria is not met, adjust the laser.



Error 5 : Indicates the laser is not aligned.

UP/DOWN ADJUSTMENT

With the game in test mode, open the rear door and using an 11/32” nut driver or wrench adjust the rear 2 nuts pictured below.

Check from rear every ¼ turn to inspect position of beam, and make sure to adjust each nut evenly

- Tighten to raise the beam.
- Loosen to lower the beam.

LEFT/RIGHT ADJUSTMENT

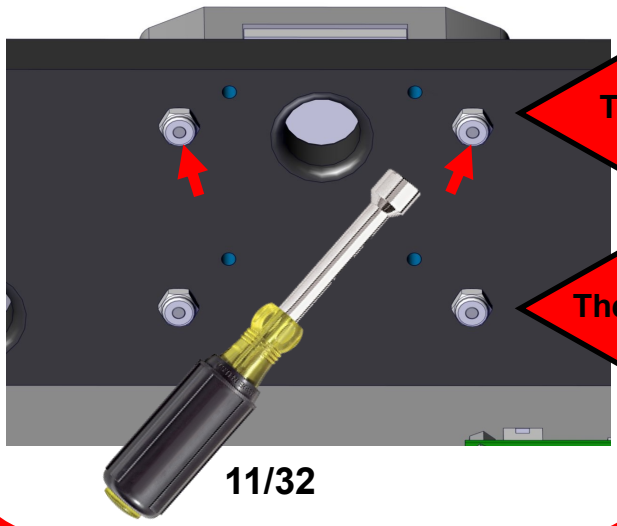
If not already in test mode, to make this adjustment, power cycle the game and while the table is in the up position open the back door to keep the playfield up.

Open the front door and hold the UP & DOWN buttons for ~6 seconds until the game enters the test mode and the laser turns on.

Remove the front glass and one side glass to access the laser mounting block.

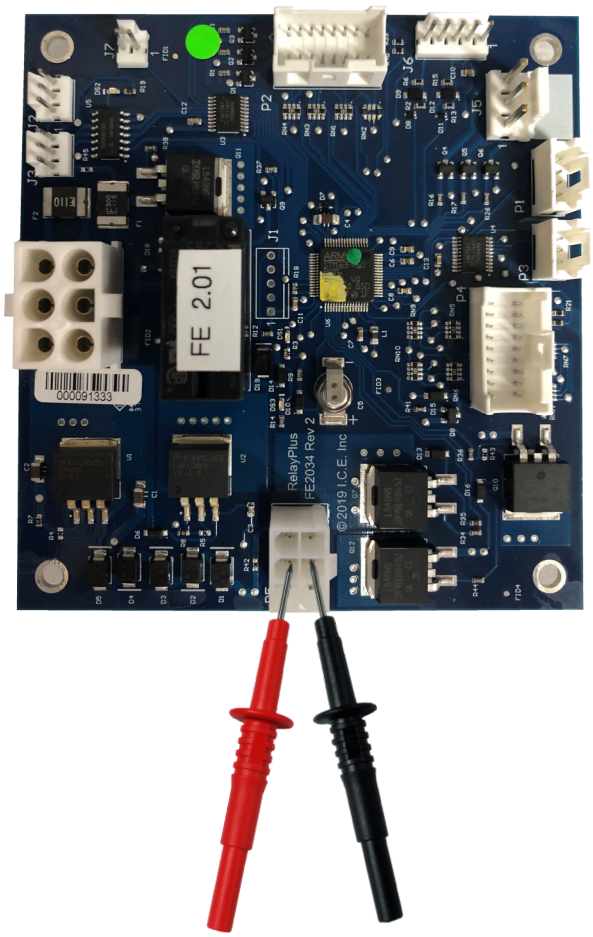
Using a 5/32” Allen wrench (on top) and an 11/32” wrench (on bottom), lightly loosen the front screws pictured and adjust the beams position until it follows the right-side air holes and tighten.

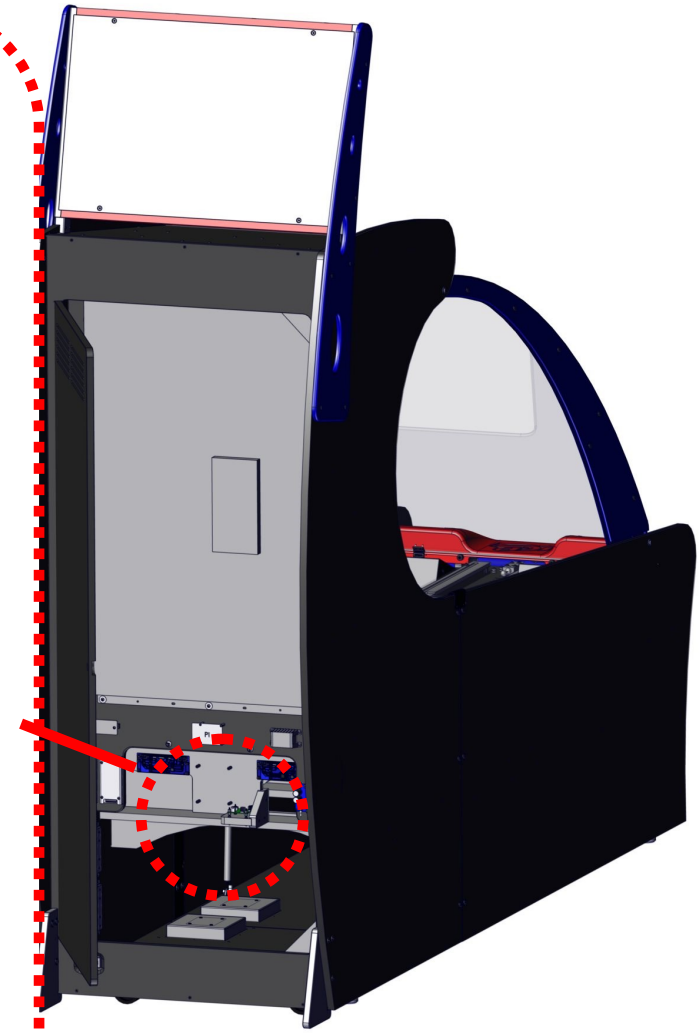
If you have a second person to assist, then skip step 1. One person can access from the rear door while the other goes from the side.



Error 6 : Indicates blower motor failure.

** HARNESSES NOT SHOWN **





-12 or +12 Volts DC

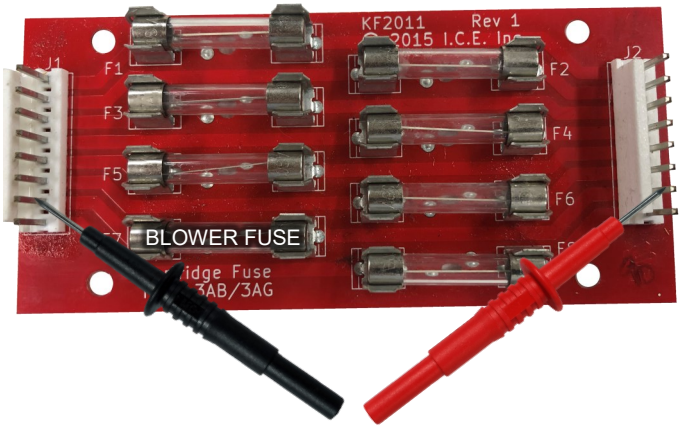
Depends on direction

Measure voltage between pin 2 (orange / blue wire) and pin 5 (black/blue wire) of P5 on the I/O board.

If present but playfield doesn't move, check wiring.

Error 6 : Indicates blower motor failure.

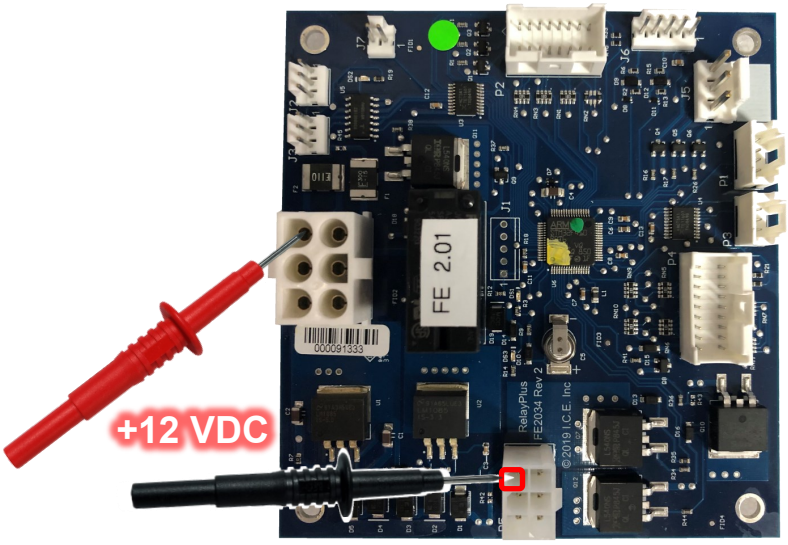
Step 1: The power to the blower is provided by the fuse board. With the **power off**, measure the resistance between pin7 of J1 and J2. If open, replace 7 amp fuse.



** Harnesses not shown

Should measure less than a ohm with power off.

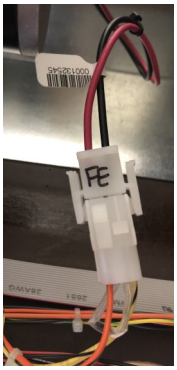
Step 2: Check the blower output from I/O board. Measure for DC voltage between pin 3 of P5 and pin 3 of J4.



** Harnesses not shown

Step 3: Check harnessing from I/O board to blower.

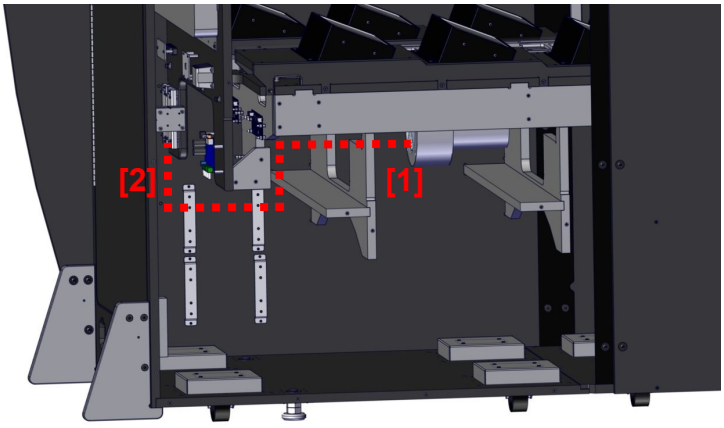
[1]



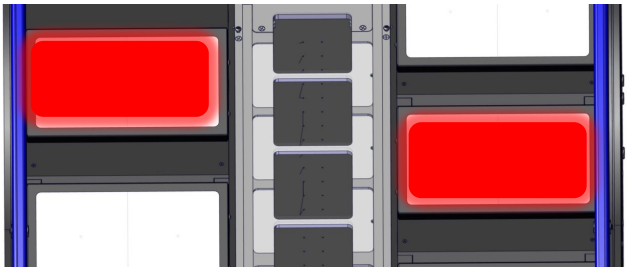
Blower motor connector

[2]

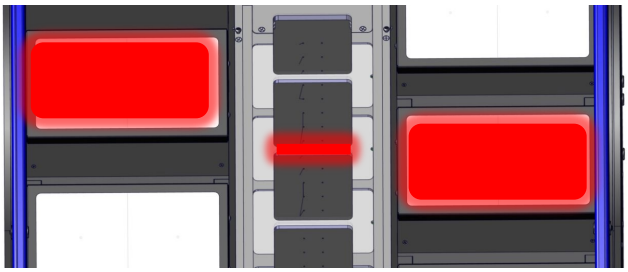
+12 VDC to Blower



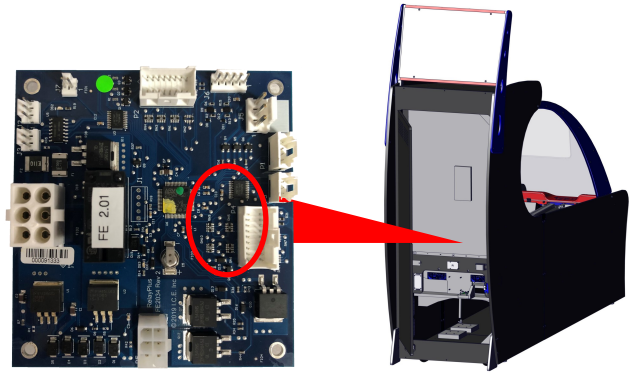
Error 7 : Indicates playfield sensor failure.



If a sensor appears failed at startup, the game will blink the surrounding dot matrix to indicate which position or positions are not being seen.

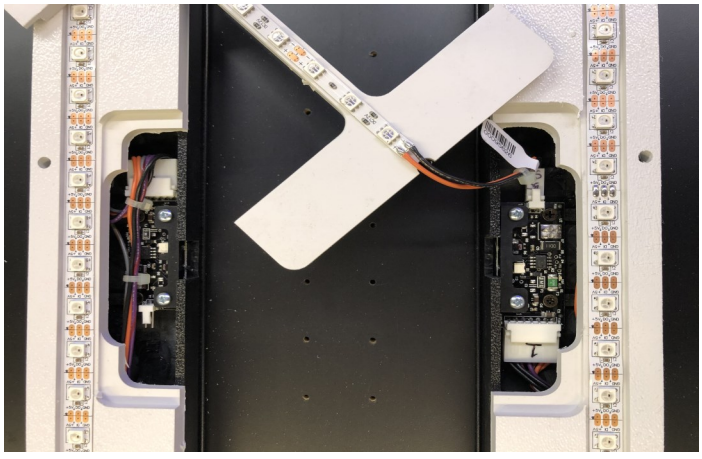


If debris are blocking the sensor at startup or the sensor failed thinking it is blocked, the game will also light the strip across the sensors that are blocked.



If all sensors fail self check, check harness the connection at P4 of I/O.

Each sensor block has two sensors. Lift up on the LED bar to access the sensors.



Error 7 : Indicates playfield sensor failure.

All sensor boards are the same, they are installed 180 degrees and across of each other.

Power for each sensor is daisy chained through the last sensor in the chain.

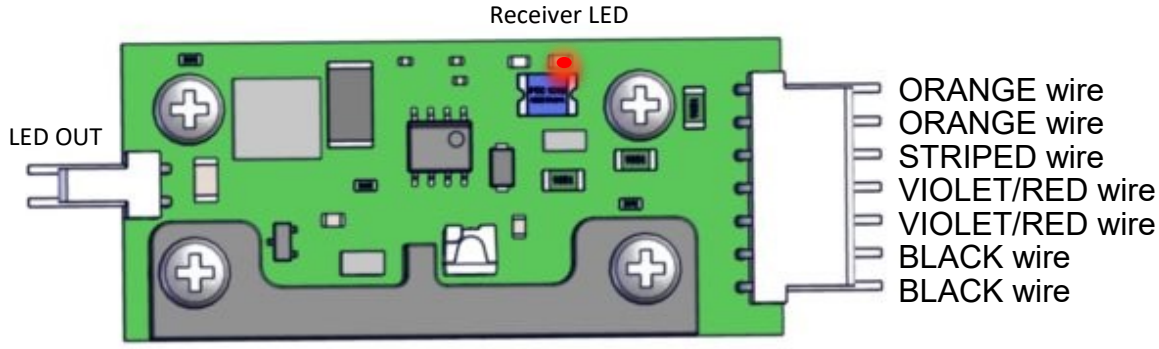
The output of the sensors (sense line) are tied to the adjacent sensor output.

Striped wire color is different for each location. It is the output of the sensor which is tied to the adjacent sensor across from it.

Sense lines go back to the I/O board to connector P4.

Sense lines should be at +5 volts when not blocked.

Sense lines should drop to 0volts when blocked.



Step by Step Sensor Checking:

Measure orange wire to black wire, is 12 volts present?

NO? FIX HARNESS; CHECK POWER SUPPLY.

IF YES? Is the sensor blocked?

YES? Clear debris. Sensor error will clear if removed.

NO? Continue

Is the Receiver LED ON one of the sensor?

YES? REPLACE Opposite sensor (NOT THE ONE WITH THE LED ON!)

NO? Continue

Measure Violet/RED wire to Black wire.

Voltage around 12 VDC?

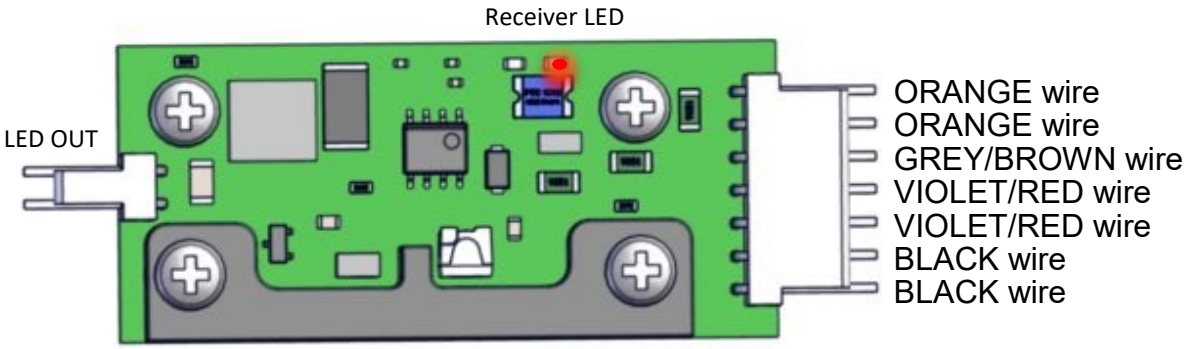
NO? Fix Harness, confirm enable line back to connector P4, pin 1.

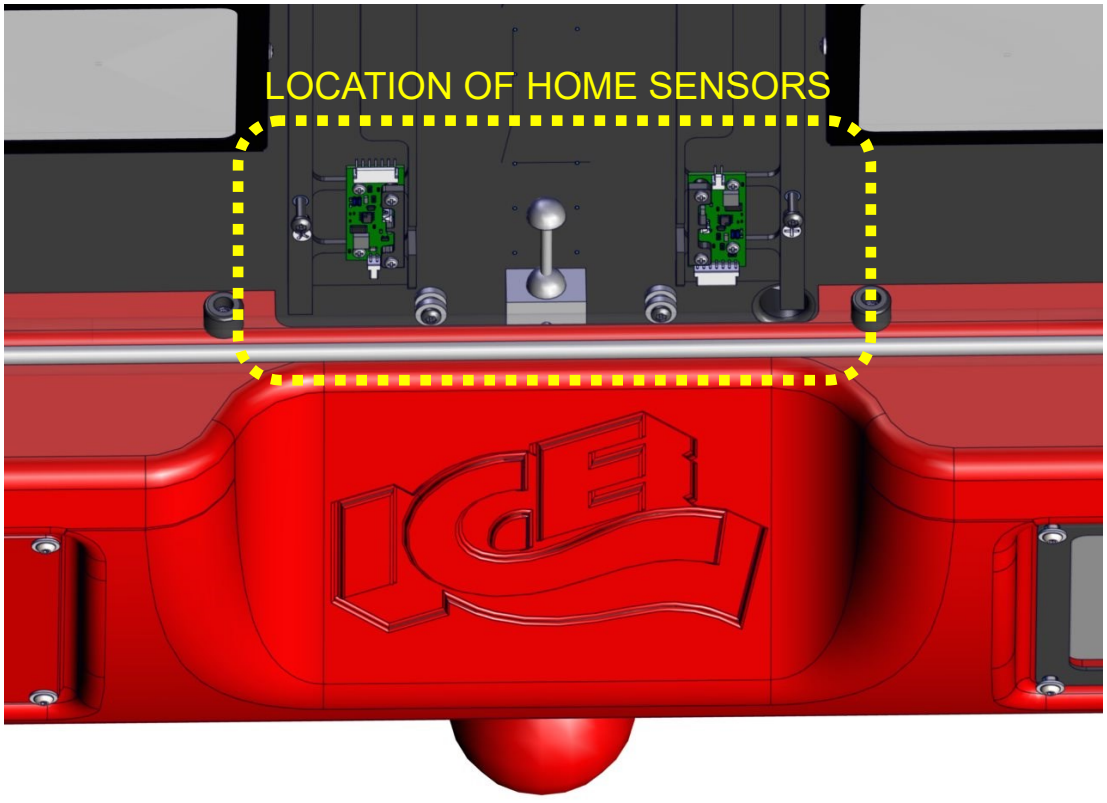
YES, Continue

Replace both sensors.

Error 8 : Indicates home sensor failure.

- The home sensors are the same as the score sensor.
- Power for the sensor is daisy chained through the last sensor in the chain.
- Grey/Brown wire is the output of the home sensor which is tied to the adjacent sensor.
- The home sense line goes back to the I/O board to connector P4, pin 3.
- The sense line should be at +5 volts when not blocked.
- The sense line should drop to 0volts when blocked.



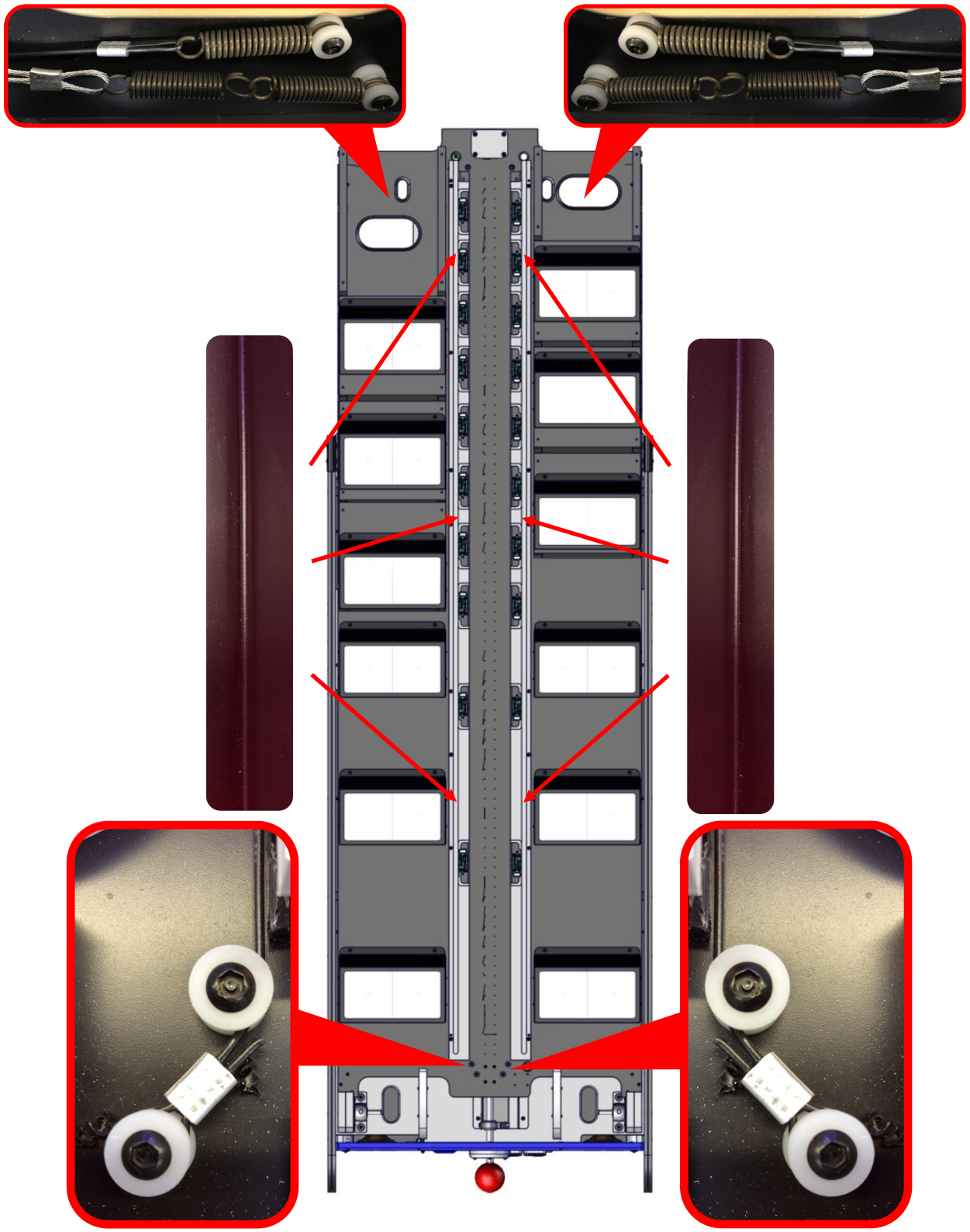


Error 10 : Indicates the puck stopped moving.

Puck did not return to the home position.

CHECK: Damaged or loose lane wire?

Follow the guide wire and ensure the wire is taut and nothing is hung up on it.



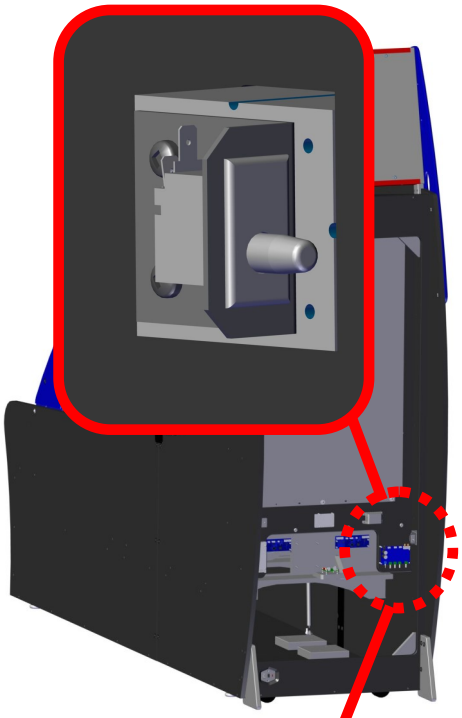
Error 10 : Indicates the puck stopped moving.

CHECK: Airholes blocked or debris on the playfield?

Clean and inspect the air holes on the playfield. The puck should glide with ease.

Error 11 : Indicates that the back door is open.

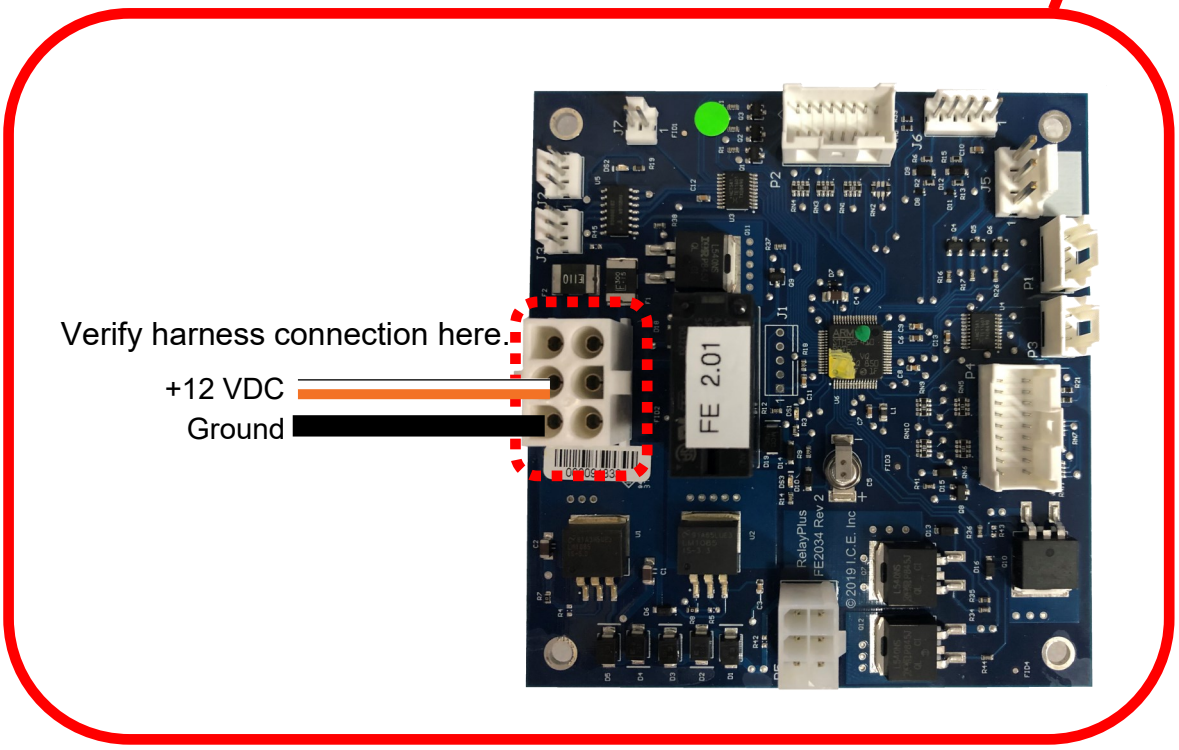
Solution: Check the door and door switch.



If this push switch is in,12 volts should be present at connector J4, pin 2 on the I/O board. It is the orange/white wire.

Measure between pins 2 and 6 (black wire) on the connector.

If you measure 0 volts, the push switch is not engaged, broken, or bad wiring.

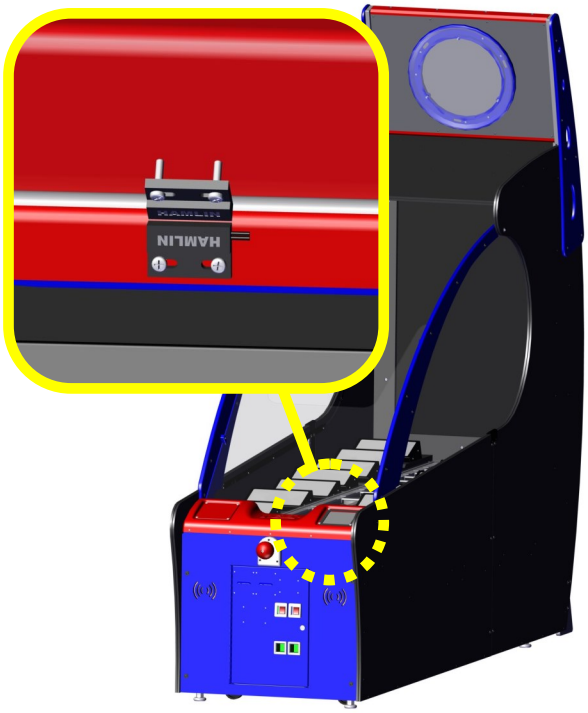


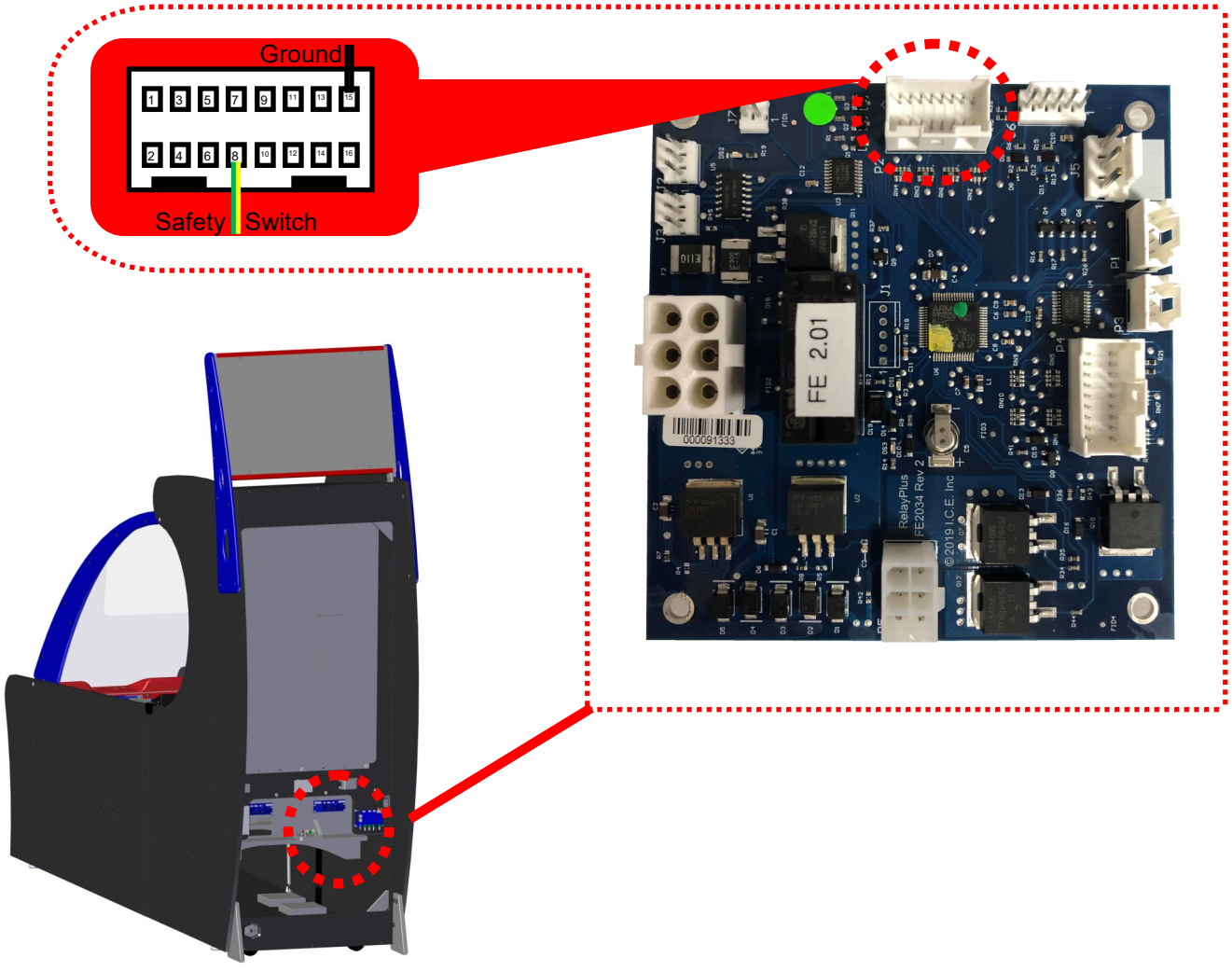
Error 12 : Indicates front glass is not installed.

If this magnet switch is closed, there should be 0 volts at connector P2, pin 8, on the I/O board. It is the yellow/green wire.

Measure between pins 8 and 15 (black wire) on the connector.

If you measure 3.3 volts, magnet might not be present (is the plastic guard off?) or broken wire.





Error 13 : Indicates the table needs leveling or adjusting.

The puck moved away from the home sensor while the table was lowering.

Solution 1: Level the cabinet using the leg levelers underneath the game.

Using a level, adjust the leg levers until the cabinet's playfield is leveled. Place the level on the playfield and adjust the leg levers beneath the game until the cabinet is level.

Power cycle game.