Innovative Concepts in Entertainment
10123 Main Street
Clarence, NY 14120

Table of Contents

Rev S 8/16/2023

SAFETY AND WARNINGS BEFORE YOU BEGIN

WARNING: WHEN INSTALLING THIS GAME, A GROUNDED A.C. RECEPTACLE MUST BE USED. FAILURE TO DO SO COULD RESULT IN INJURY TO YOURSELF OR OTHERS. FAILURE TO USE A GROUNDED RECEPTACLE COULD ALSO CAUSE IMPROPER GAME OPERATION, OR DAMAGE TO THE ELECTRONICS.

NOTE: THIS GAME IS INTENDED FOR INDOOR USE ONLY.

DO NOT DEFEAT OR REMOVE THE GROUNDING PRONG ON THE POWER CORD FOR THE SAME REASON AS GIVEN ABOVE. USING AN IMPROPERLY GROUNDED GAME COULD VOID YOUR WARRANTY.

HAVE A QUALIFIED ELECTRICIAN CHECK YOUR A.C. RECEPTACLE TO BE SURE THE GROUND IS FUNCTIONING PROPERLY.

THIS GAME IS DESIGNED TO DISSIPATE STATIC ELECTRICITY THROUGH THE GROUNDING PLANE OF THE GAME. IF THE A.C. GROUND DOES NOT WORK, THE GAME COULD DISCHARGE STATIC ELECTRICITY THROUGH THE GAME CIRCUITRY, WHICH COULD CAUSE DAMAGE.

THE POWER SUPPLY IS NOT VOLTAGE ADJUSTABLE. TO OPERATE THE GAME AT VOLTAGES OTHER THAN THOSE IT WAS DESIGNED FOR. PLEASE CONTACT OUR SERVICE DEPARTMENT FOR VOLTAGE CONVERSION INFORMATION.

WARNING

DO NOT remove any of the components on the main board (e.g. compact flash and eproms) while the game is powered on. This may cause permanent damage to the parts and the main board. Removing any main board component part while powered on will void the warranty.

ALWAYS REMOVE POWER TO THE GAME, BEFORE ATTEMPTING ANY SERVICE,

UNLESS NEEDED FOR SPECIFIC TESTING. FAILURE TO OBSERVE THIS PRECAUTION

COULD RESULT IN SERIOUS INJURY TO YOURSELF OR OTHERS.

THIS GAME IS NOT SUITABLE FOR INSTALLATION IN AN AREA WHERE A WATER JET COULD BE USED.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

AC Power Information

The games main fuse is accessed through the back of the game at the power mod. Above the power cord is a small panel that contains the main fuse.

The value of the fuse for 120 volt users is 2.5 AMPS at 250Volt type slow blow.

The value of the fuse for 220/230 users is 2.5 AMPS at 250Volt type slow blow.

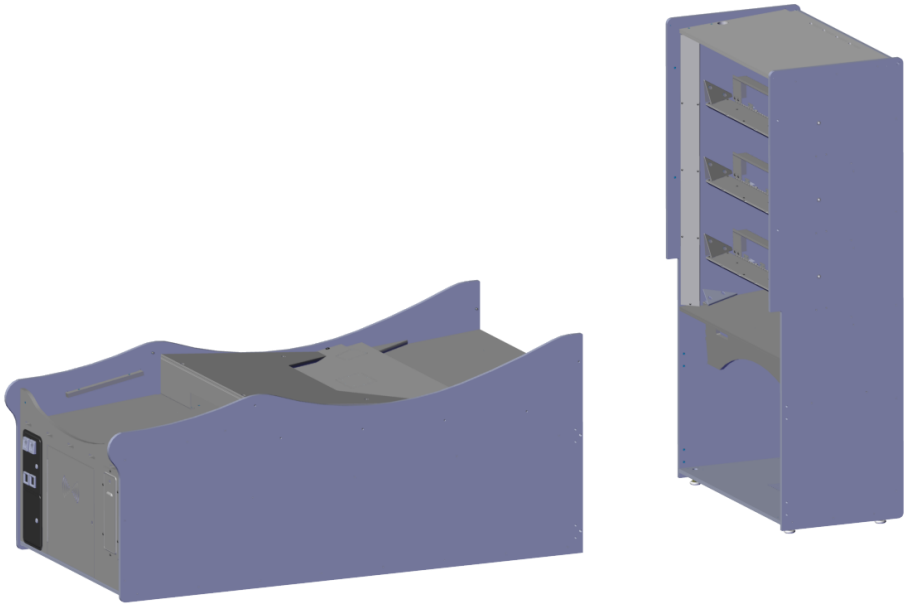
** STOP **

Before you begin to assemble your game locate the parts box and ensure all parts are present.

If any parts are missing please contact ICE Service at (716) 759-0360 Mon-Fri 9am to 6pm Eastern Standard.

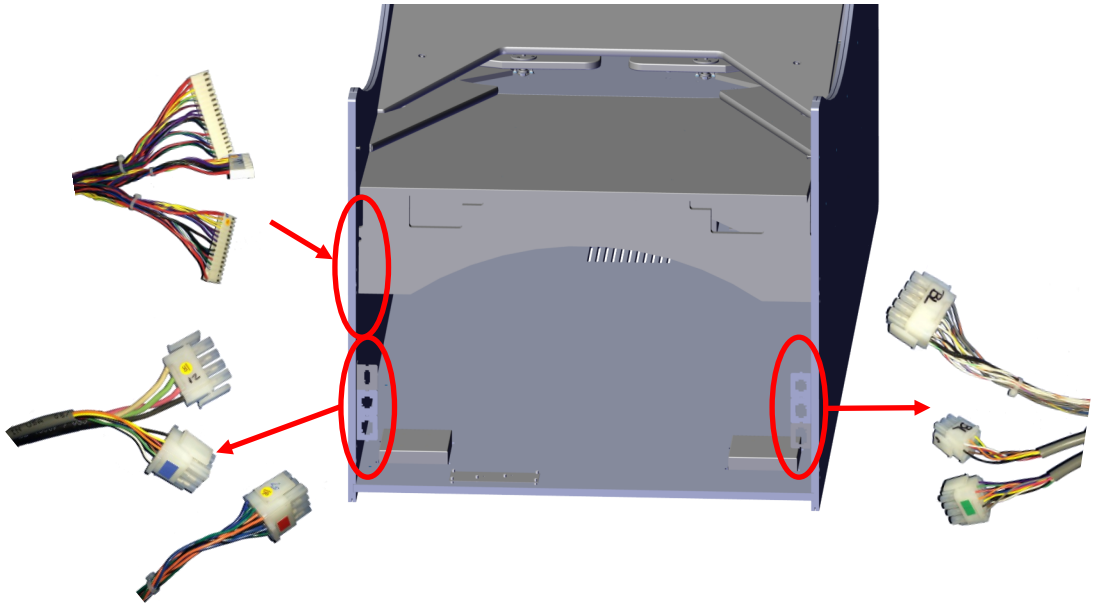
Step 1:

Position the front cabinet and the back cabinet leaving room to connect the wire harnesses.



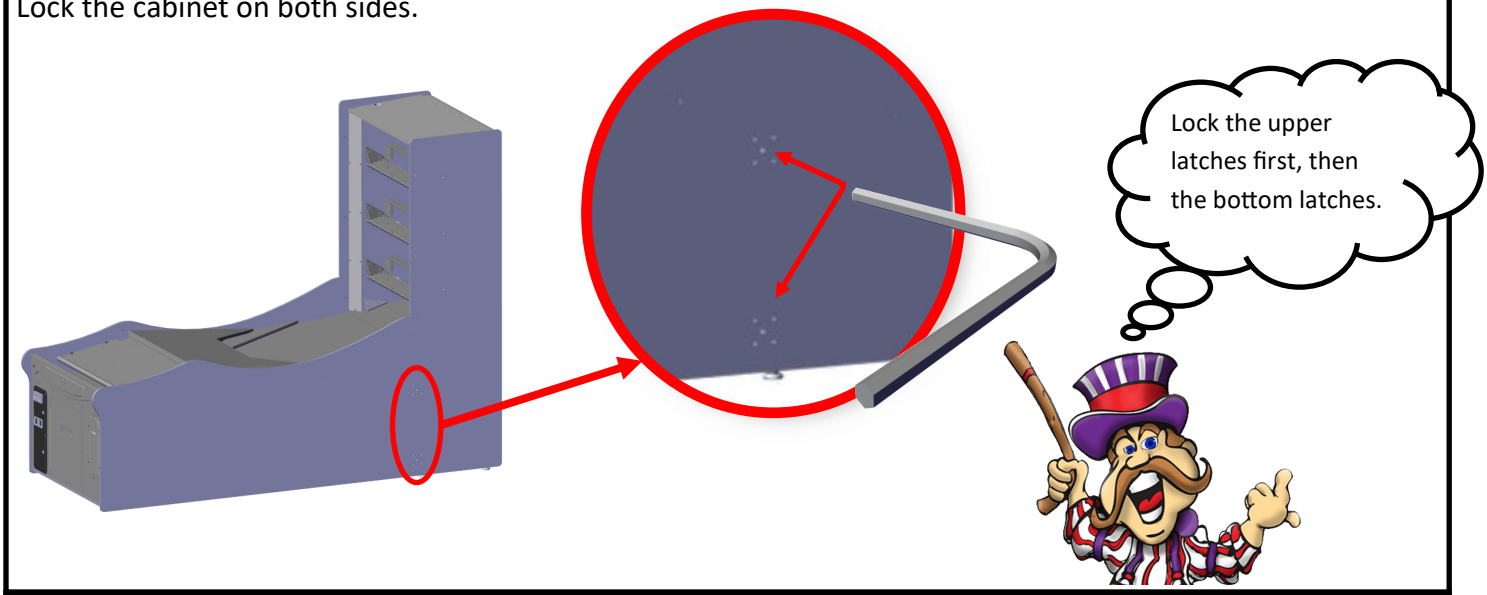
Step 2:

Before sliding the two halves together, you need to plug in the wire harnesses. There are three sets of wire harnesses. The right side of the cabinet has three cables, two of which are colored coded. Blue goes in the middle plug, red to the bottom. The left side has one color plug, green, which goes in the middle. Above that are three connectors on a small circuit board labeled, J4, J5, and J6.



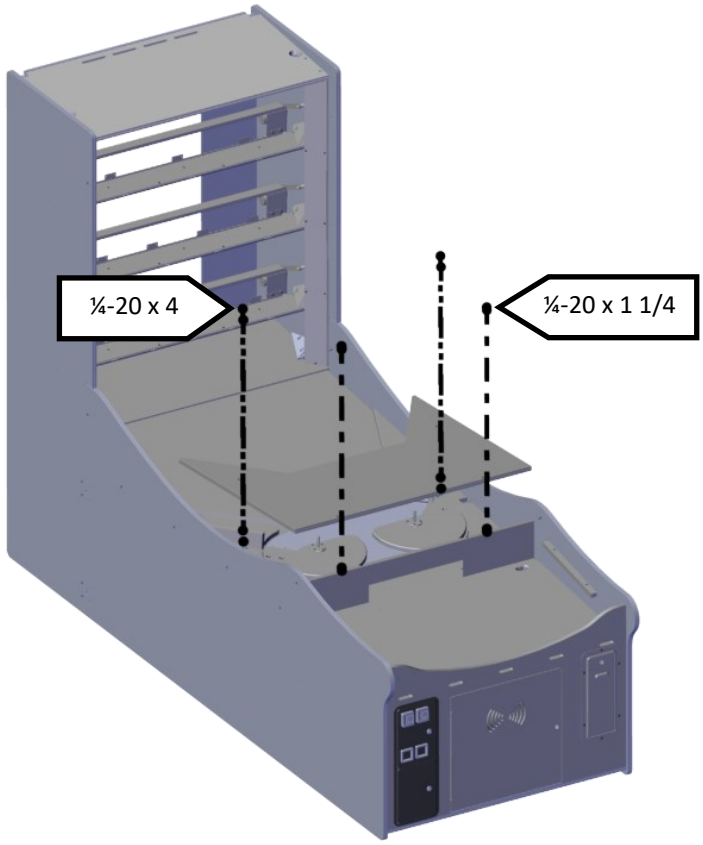
Step 3:

Slide the two halves together and lock the cabinets using the included large Allen wrench tool.
Lock the cabinet on both sides.



Step 4:

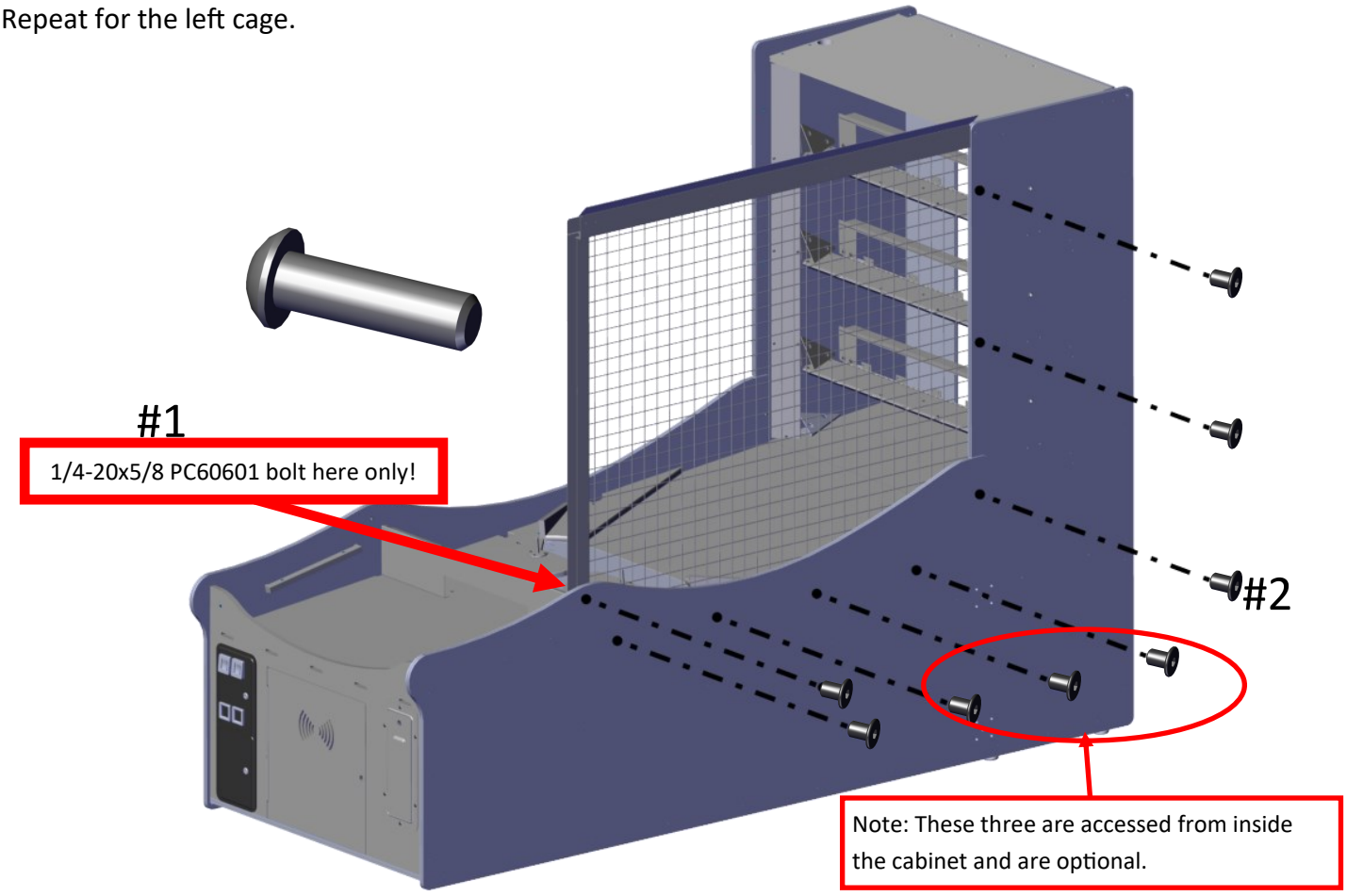
Remove the ball gate cover using an Allen wrench. The long 4" bolts go in the back while the 1¼" bolts go in the front. Set hardware and wood cover aside.



Step 5:

Attach the right cage using ¼-20 x Joint Connectors on the outside and ¼-20 7/8" (AA6799) bolts on the inside. There locations are shown below. The front top bolt is 5/8, not 7/8. See note below!!

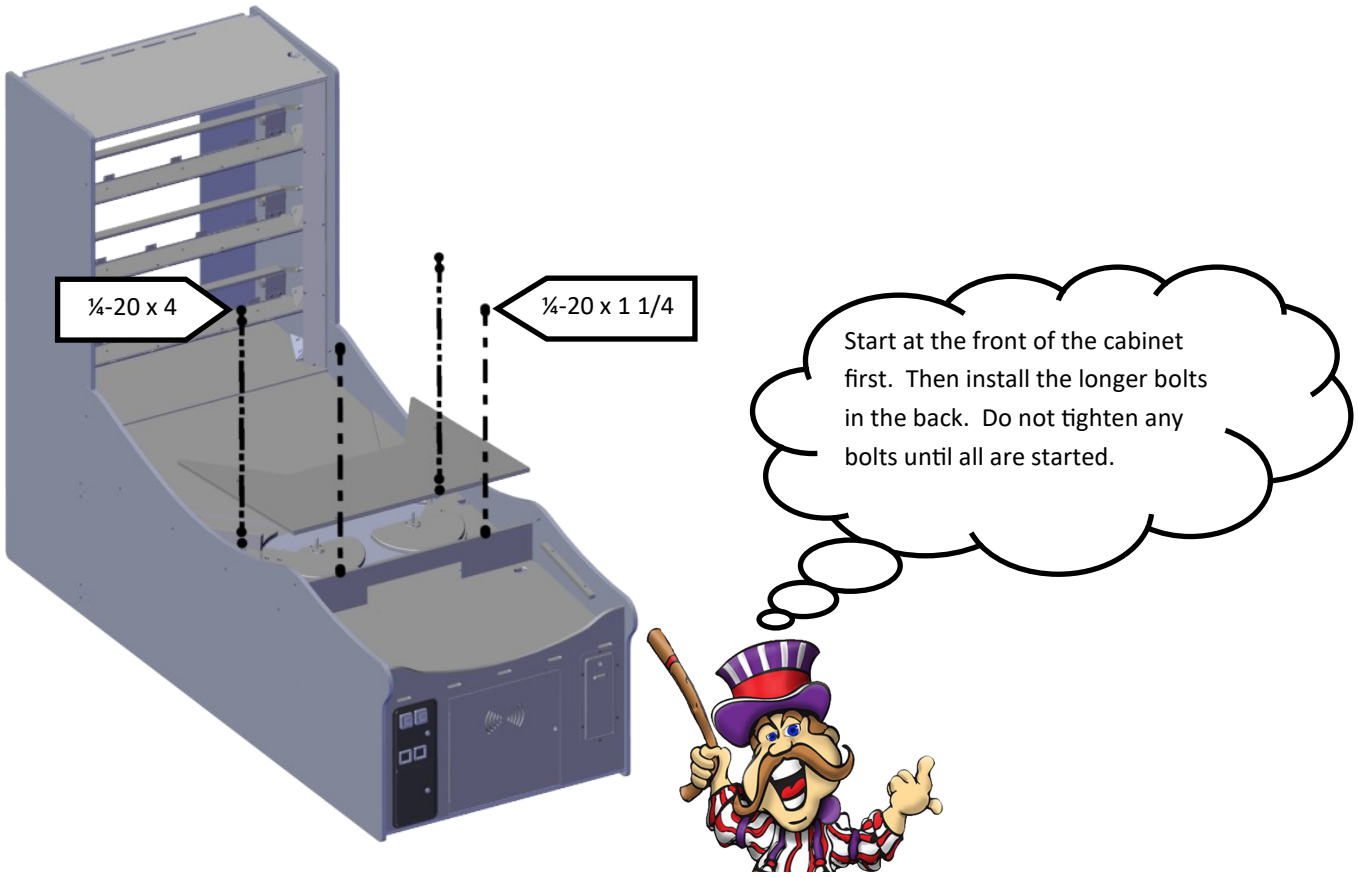
Repeat for the left cage.



Do not tighten any bolts until all of the bolts are in. Start with the bolt labeled #1 and then do #2. This will ensure good alignment as you go. BE CAREFUL OF YOUR FINGERS!

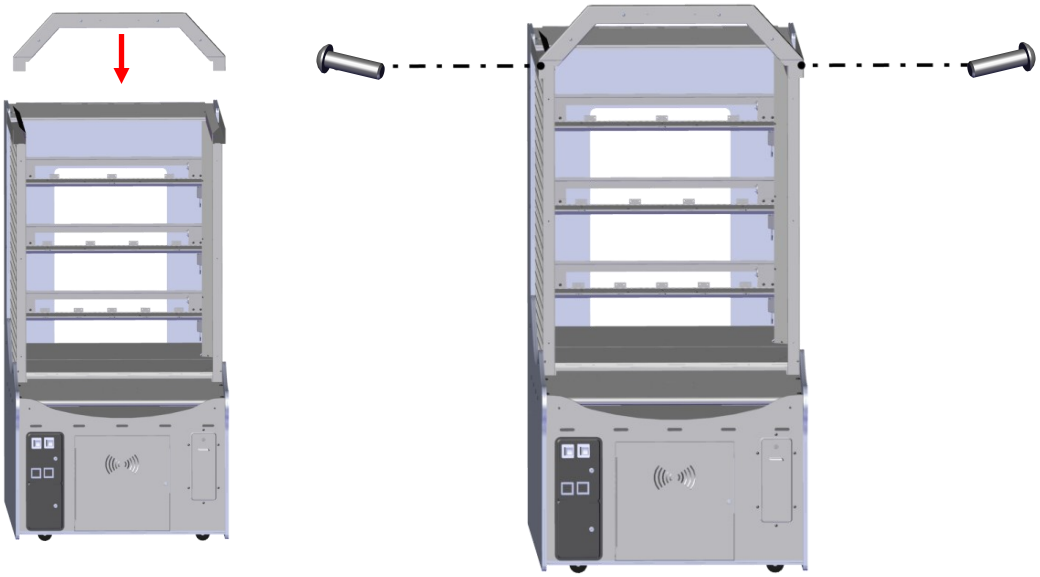
Step 6:

Reattach the ball gate cover using an Allen wrench. The long 4" bolts go in the back while the 1¼" bolts go in the front. Set hardware and wood cover aside.



Step 7:

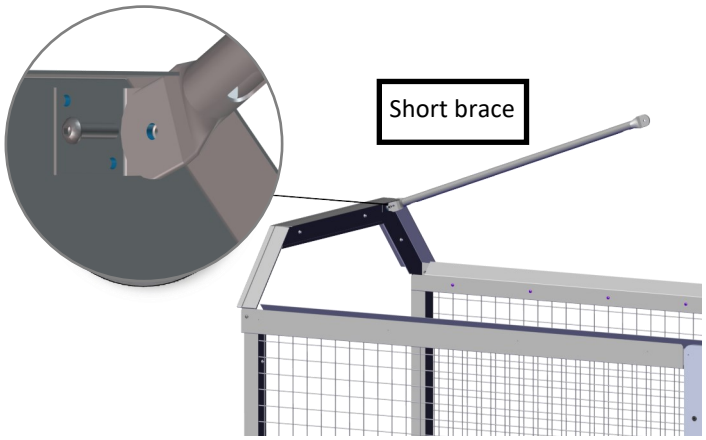
Position the upper brace and attach to the cage sides as shown. Use a ¼-20 7/8" (AA6799) bolt to attach the upper brace to the cage.

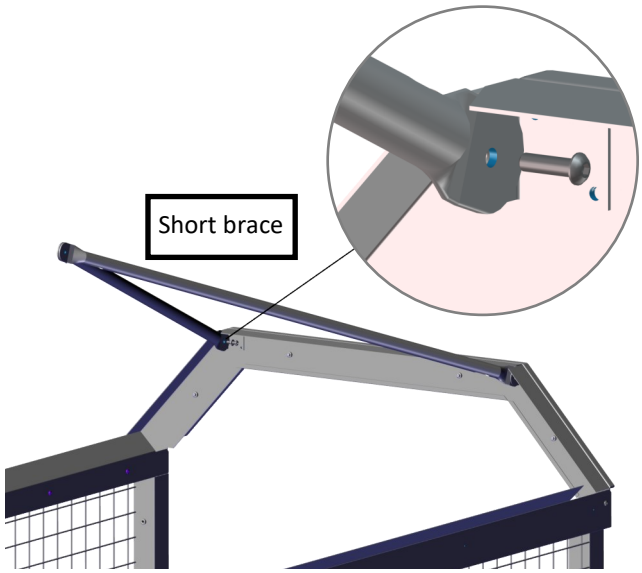


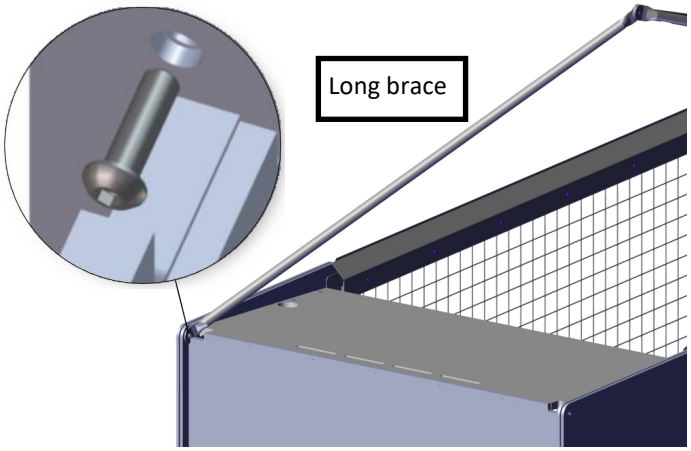
Step 8:

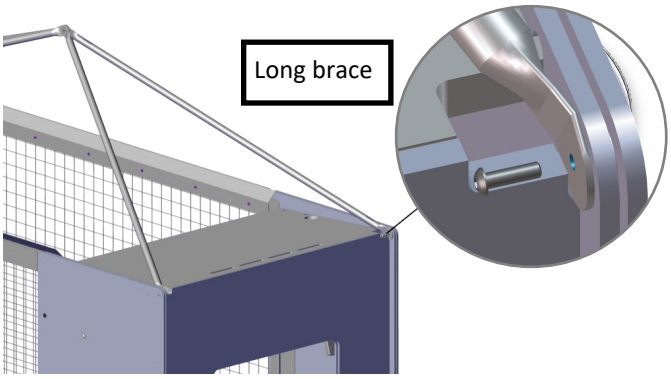
The long braces attach to the back of the cabinet. The short braces attach to the front of the cabinet. Use ¼-20 7/8 (AA6799) bolts to attach arms to cabinet. See below for attaching the cheat sensor to the center.

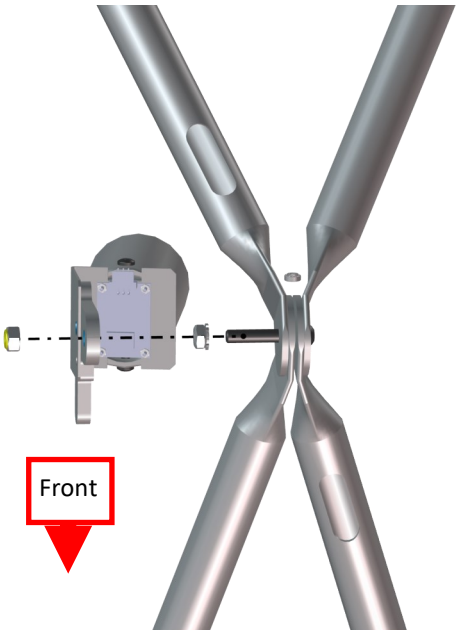
** Caution: Support Arms can swing and cause injury when not fully attached. **

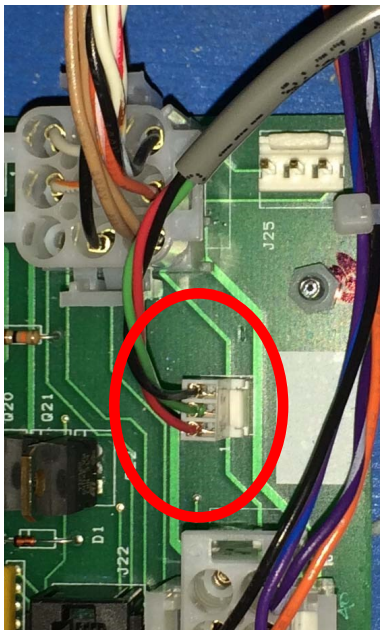








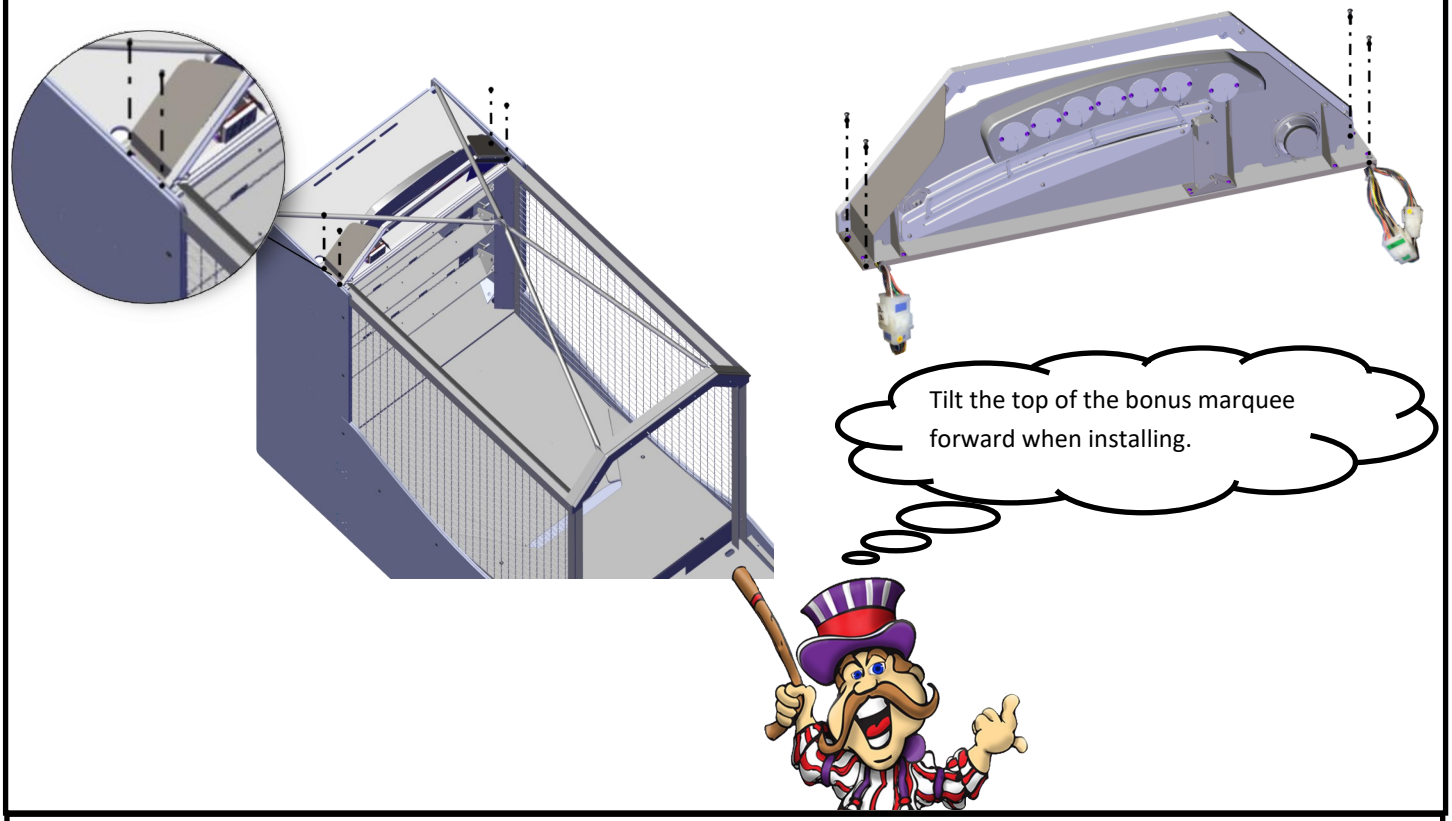




**Note ** Attach the upper braces first using 1/4-20 x 1 1/2" bolt and 1/4-20 keep nut. Then side the bracket for the cheat sensor on the bolt and attach with another 1/4-20 kep nut. The wire harness attaches to the upper brace with a tie wrap, down the right side to the front of the cage, down the cage front and into the wire access hole shown in step 9b. It connects to the main board shown.

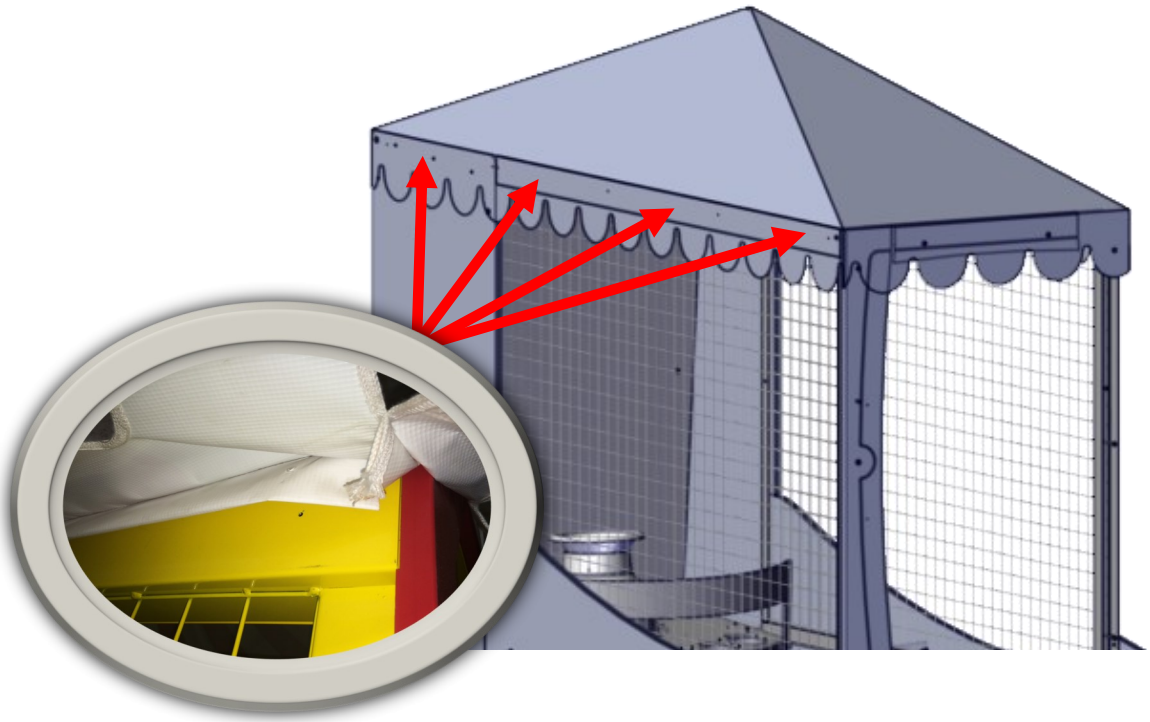
Step 9:

Attach the bonus sign to the top of the cabinet using four ¼-20 1 7/8 (AA6281) bolts and washers as shown. Plug the sign harness through the back. Attach the two harness on the right and one on the left.



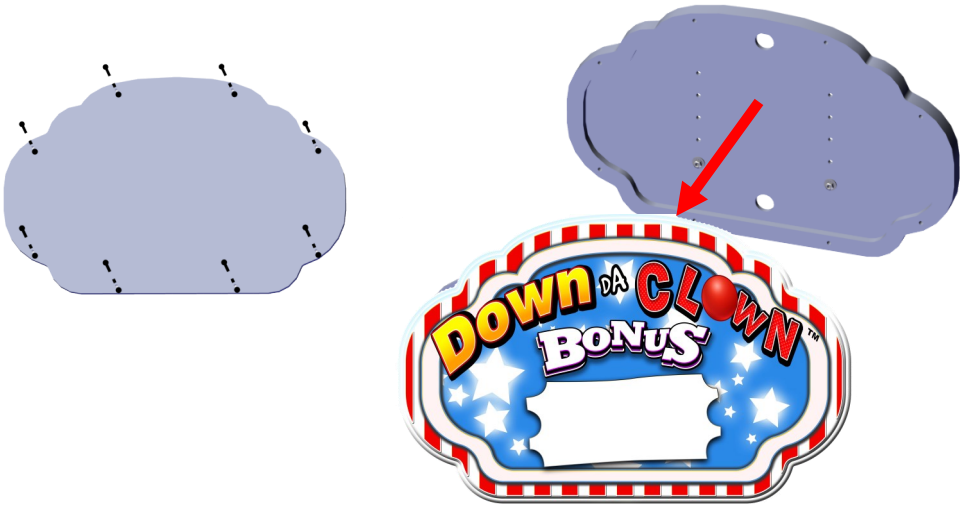
Step 10:

Position the canopy onto the top of the cabinet. Lift the side slightly on the canopy to expose the mounting flap with pre made holes. Front of cabinet has reinforced holes for front mount. Use the self tap screws to attach the canopy to the cabinet. Do not screw through the outside of the canopy!



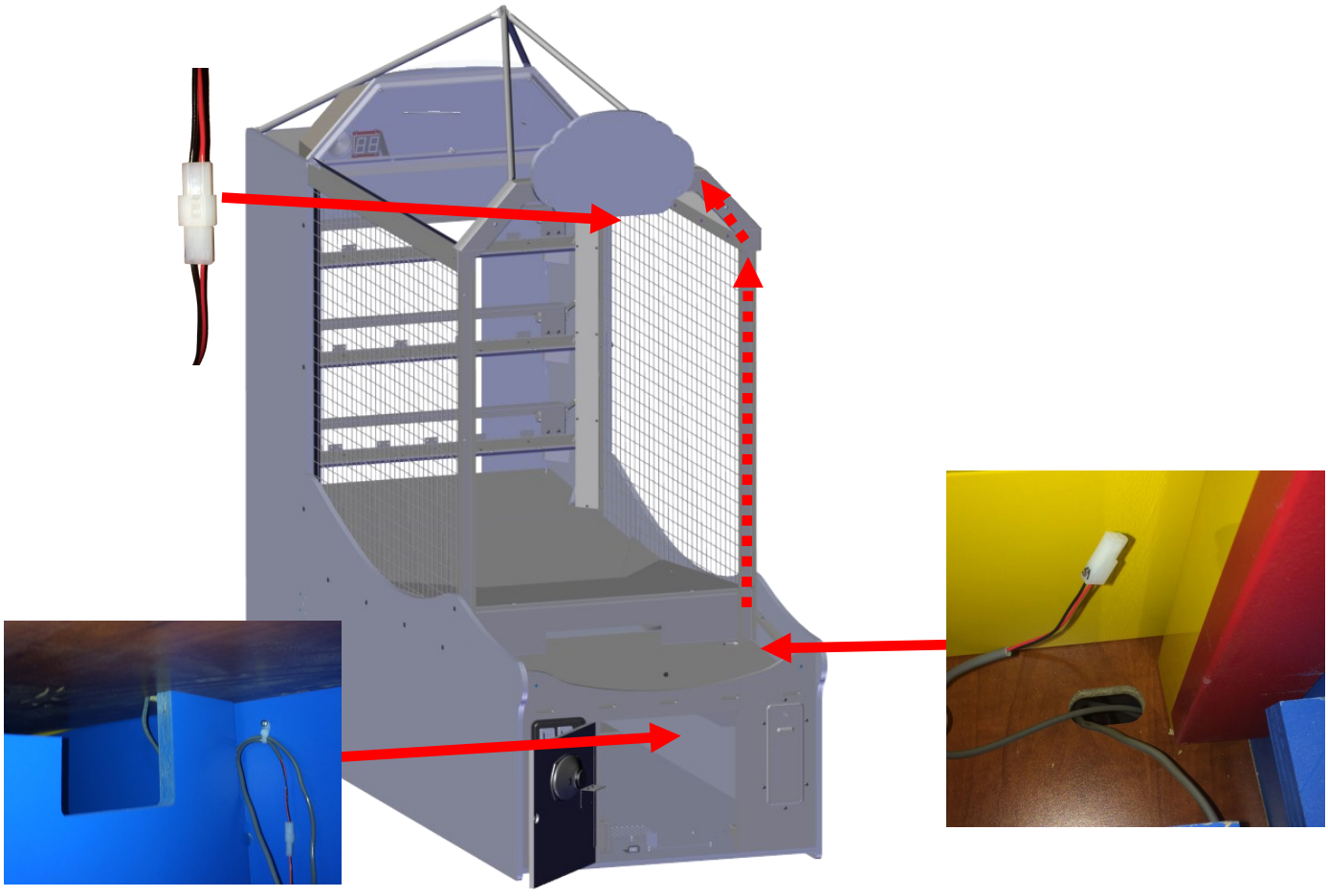
Step 11: **STOP ** if installing two games with Mega Marquee skip to step 13

If you are going to use the Mega bonus sign do not install this sign. Otherwise, remove the eight screws holding the sign together that are on the front of the sign (graphic side). Put the sign and hardware aside.



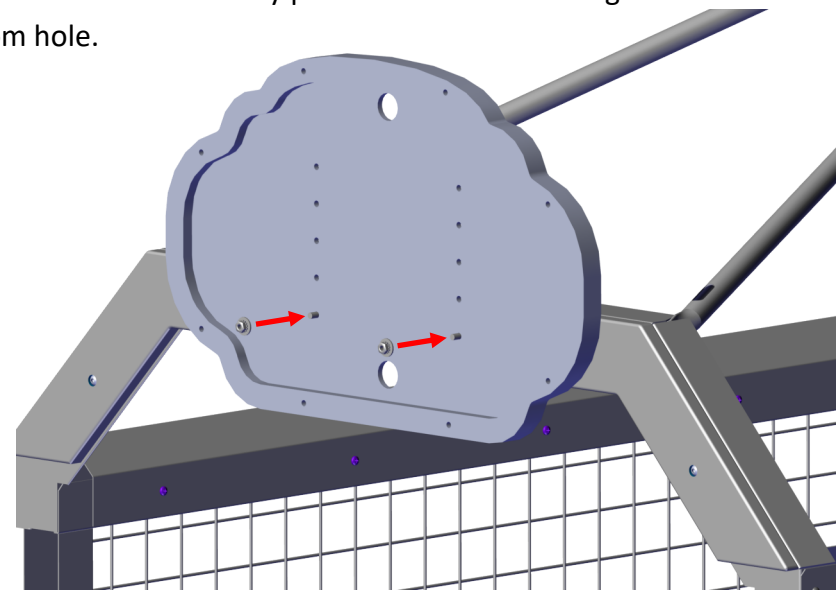
Step 12:

Located inside the cabinet you will find the cable attached to the upper side of the cabinet. Remove the bolts holding the control panel so you can slide the panel to expose the access hole that the marquee wire will travel through. Route the wire through the cage and up to the sign. Attach with wire ties.



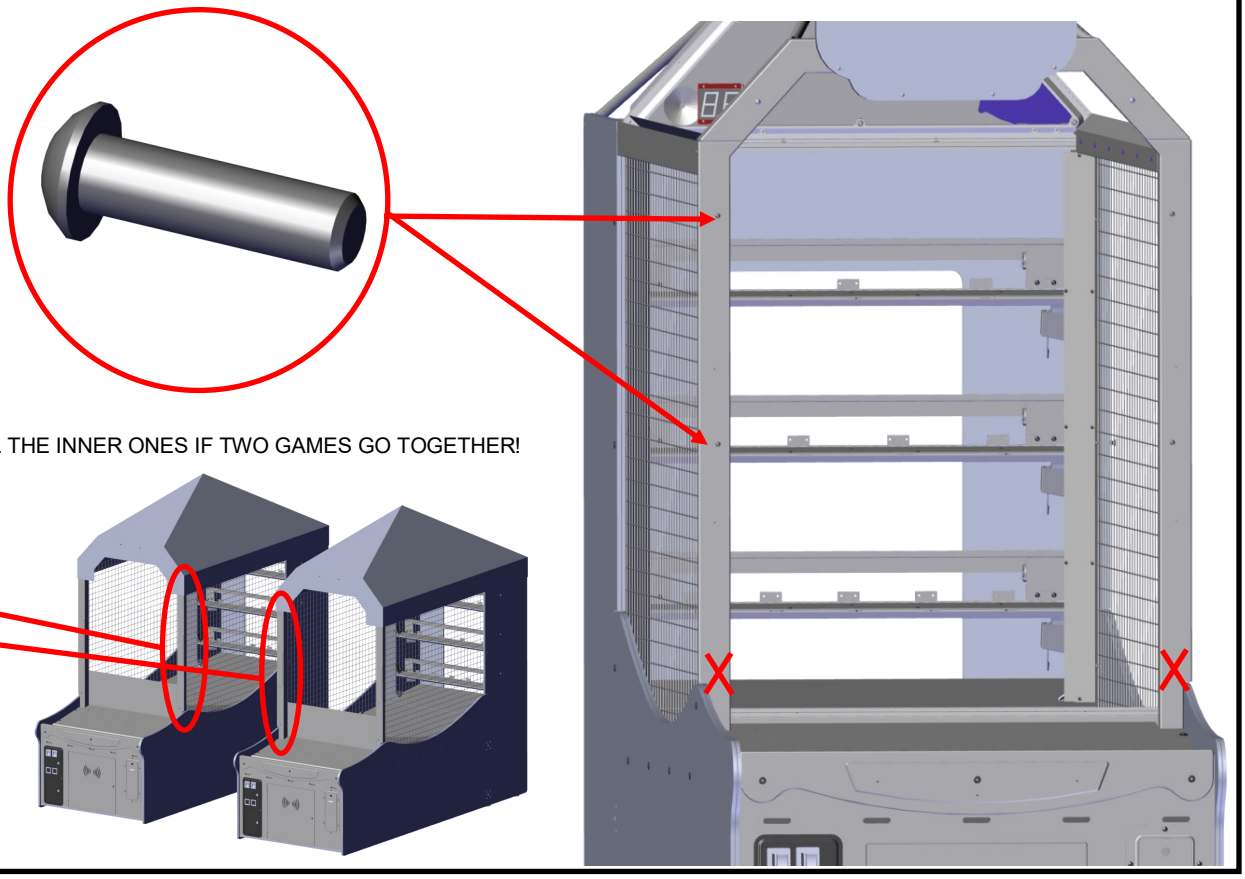
Step 13 :

Connect the wire harness before attaching the sign. Use two ¼-20 (PC60614) kep nuts to attach the sign to the upper support bar. The bolts are already present. Reattach the sign with the hardware you put aside. Install only in the bottom hole.

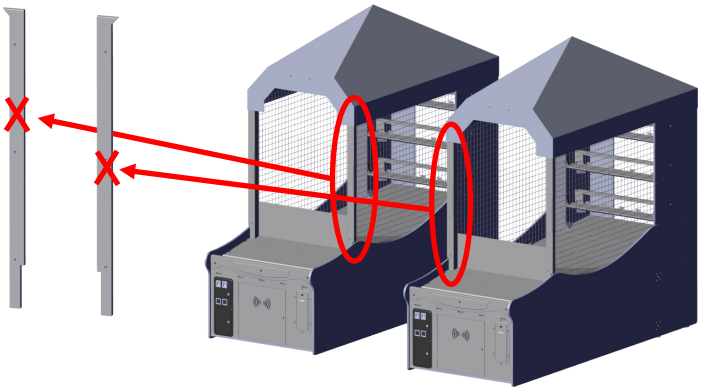


Step 14:

Attach the left and right plastic front covers using 1/4-20 3" AA60636 bolts. Do not install any bolts at the bottom. Do not over tighten. The rebound guard attaches there. See step 14 if installing two games together. Do not install the plastic front cover on the sides that will be together.

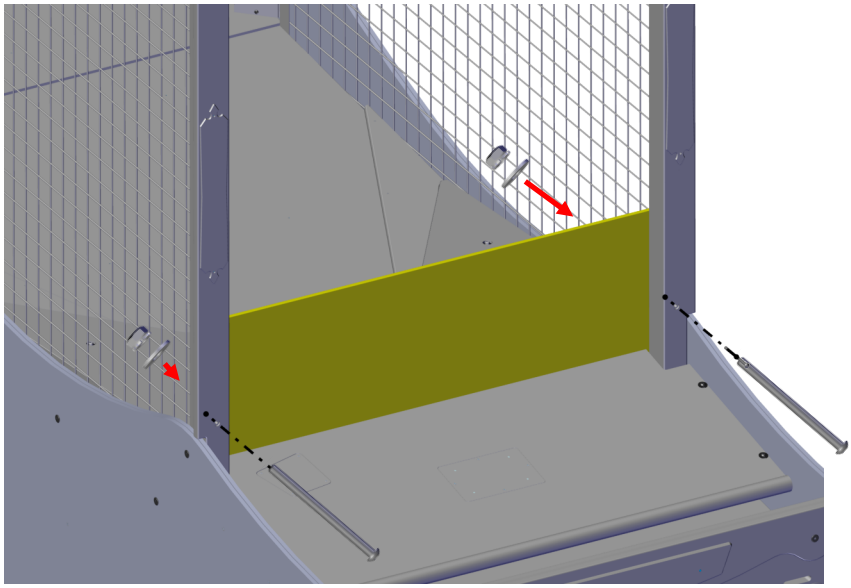


DO NOT INSTALL THE INNER ONES IF TWO GAMES GO TOGETHER!



Step 15:

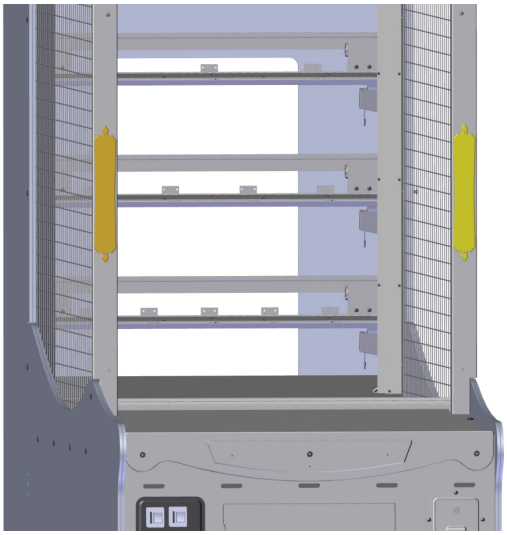
Attach the rebound guard from the back of the cages. The ¼-20 3½" (AA6369) bolts go through the front and the washers plus kep nuts in the back. ***Do not install at this time if you are joining two cabinets together and installing a Mega marquee.***



Step 16:

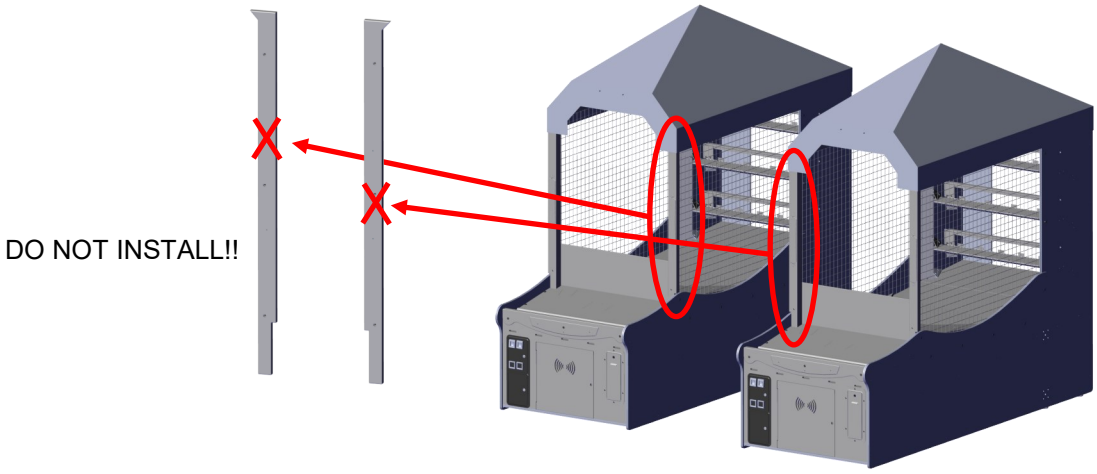
Attach on the right side of the game the plaque that states "pure skill game" using square bit screws and attach your choice of coinage on the left side of the game using square bit screws.

NOTE: Do not install plaques on the sides that will be joined together at this time.



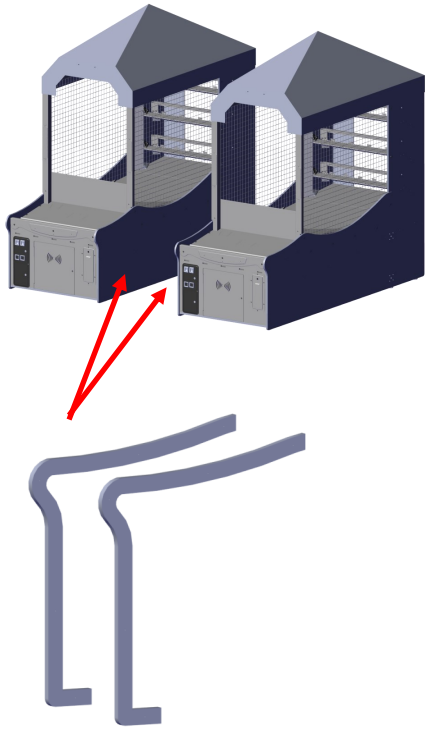
Step 17:

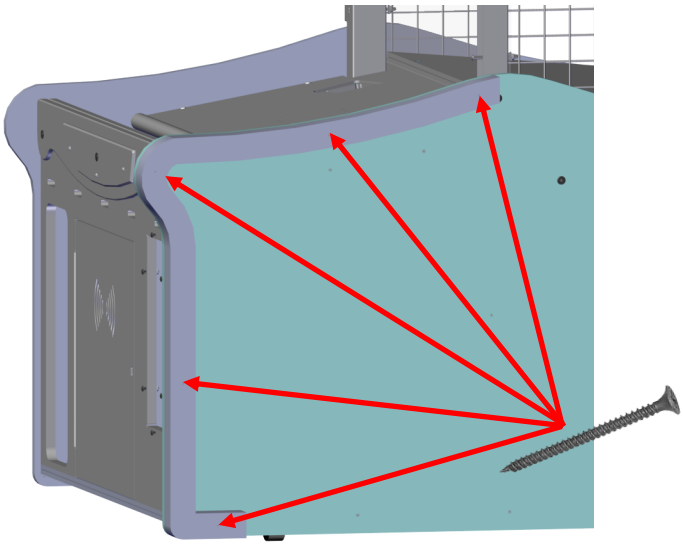
Position the two games together. You should only have the plastic front covers installed on the outer sides of the cabinet. The inner plastic front sides will not be used.



Step 18:

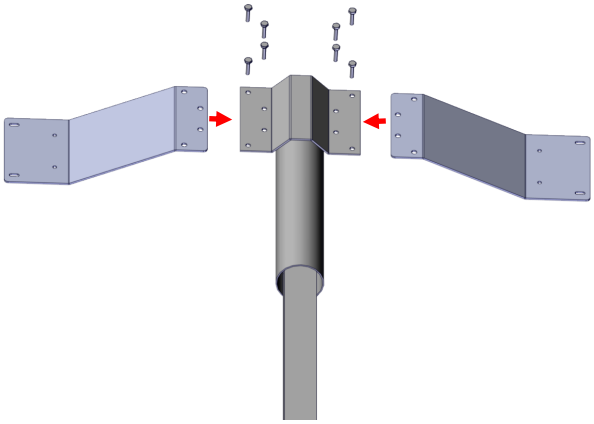
Install the cabinet spacers on the insides of the two cabinets using 1½” drywall screws. Mounting holes are predrilled in the spacers.





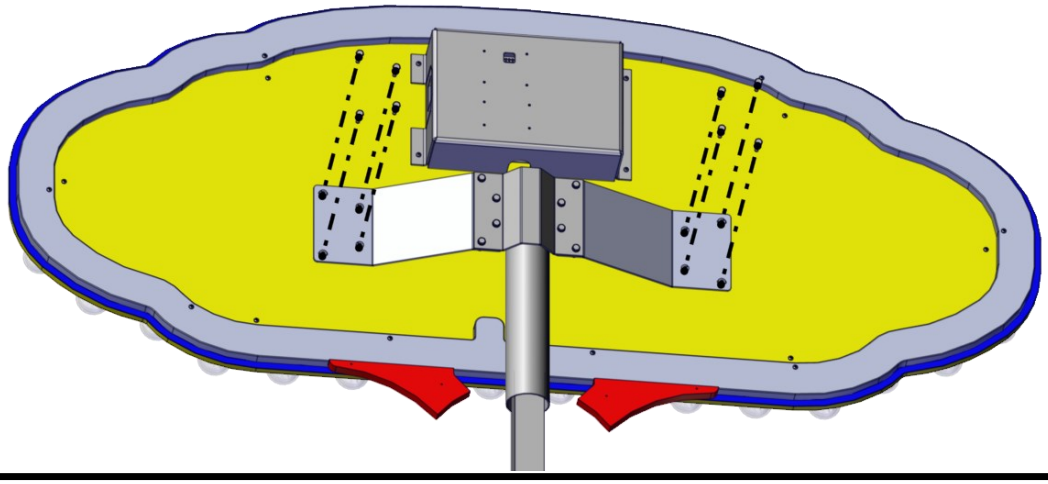
Step 19:

If you pole has the extended support wings removed, locate the 8 1/4-20 x 1“ (6049) bolts from the parts bin and attach the extended wing supports shown below.



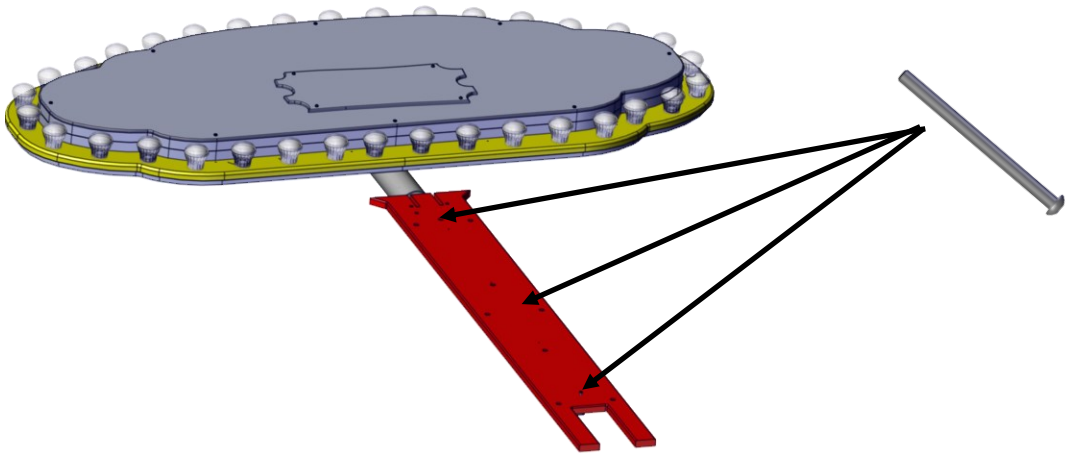
Step 20:

Position the center pole onto of the marquee and attach with 8 1/4-20x1” (6049) bolts.



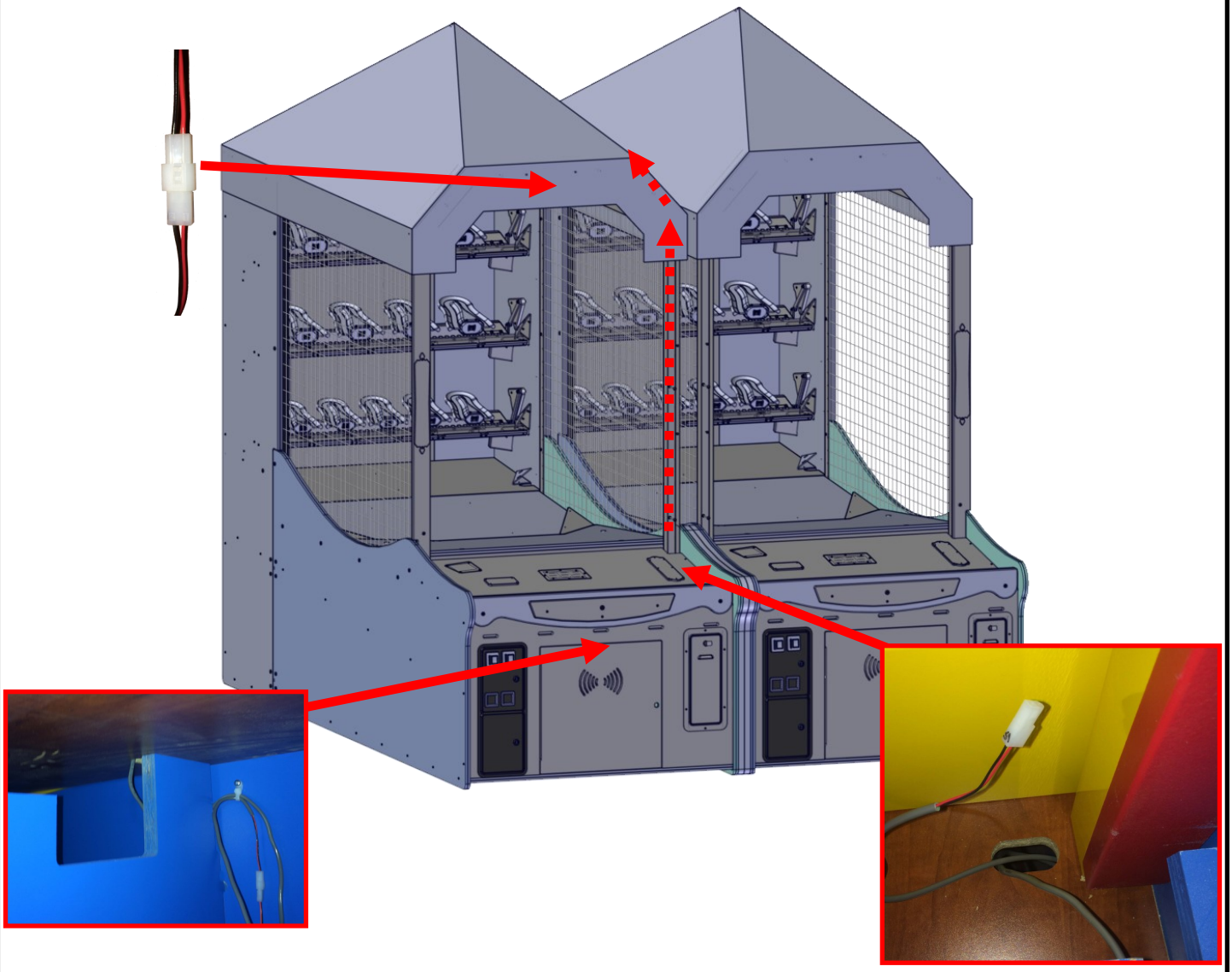
Step 21:

Attach the large red center plastic to the center pole using 6211 Allen bolts.



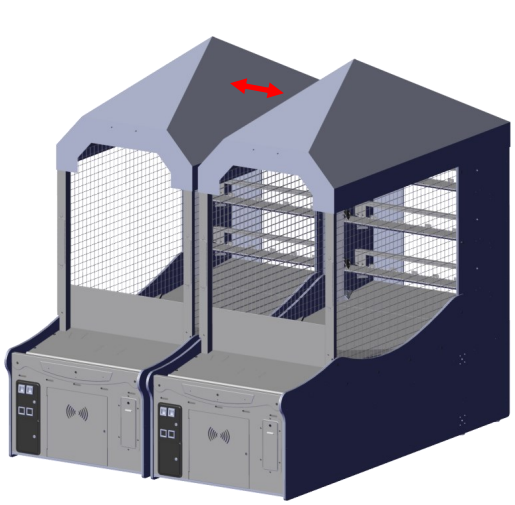
Step 22:

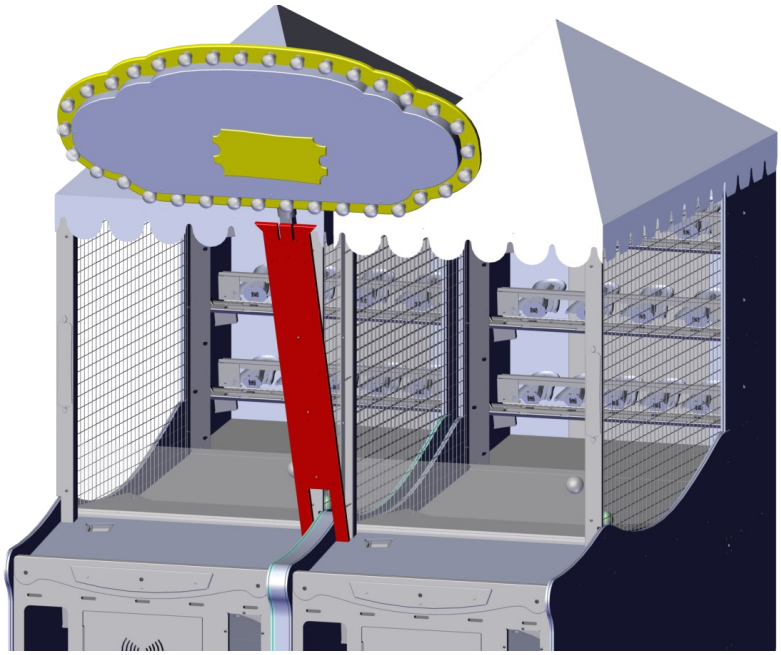
Located inside the cabinet you will find the cable attached to the upper side of the cabinet. Remove the bolts holding the control panel so you can slide the panel to expose the access hole that the marquee wire will travel through. Route the wire through the cage and up to the sign. Attach with wire ties. This power harness is for step 26. You should also run the phone cord at this time. It will be needed in the final step.



Step 23:

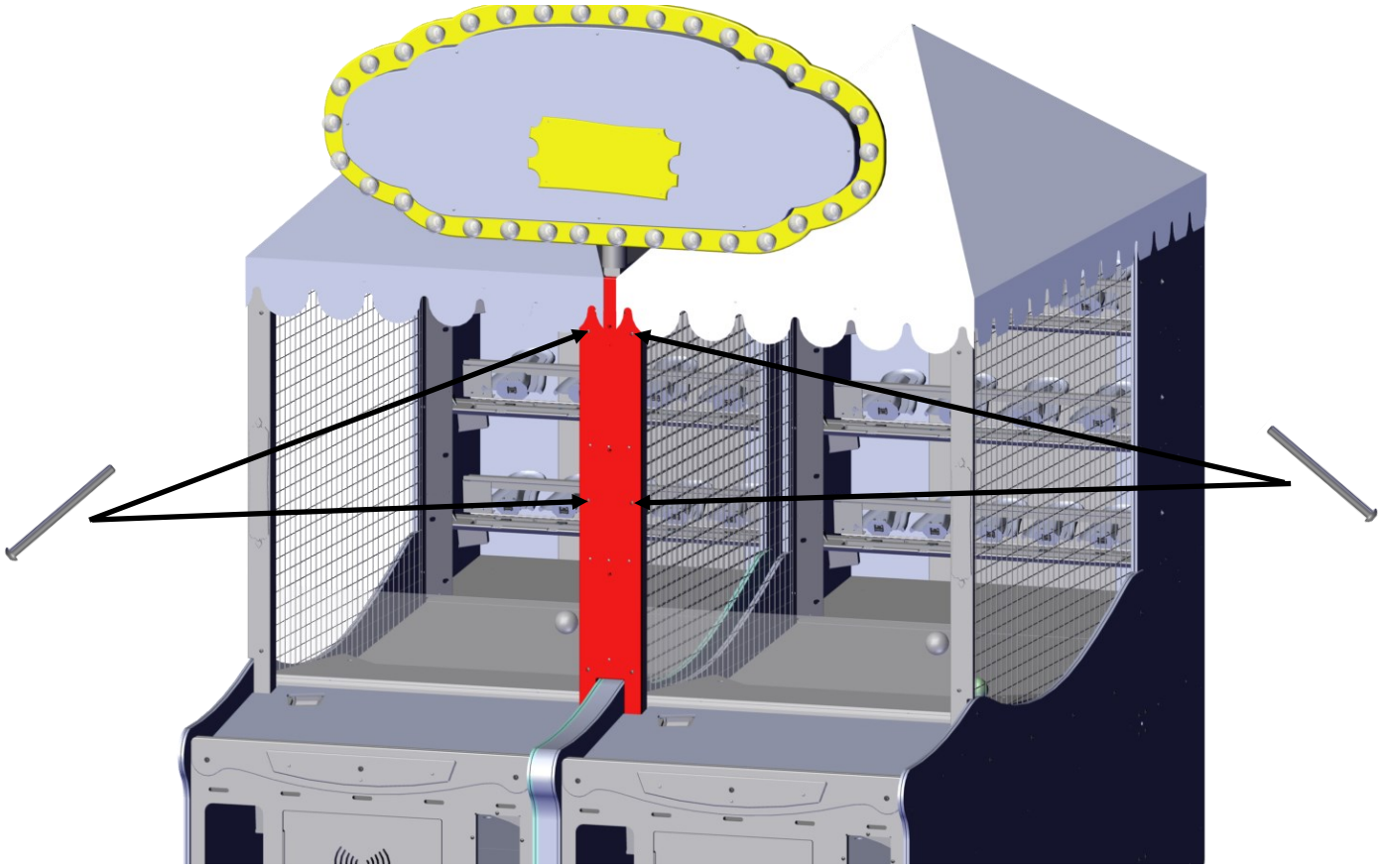
Slide the two cabinets together, tilt the Mega Marquee back a little, and insert the bottom of the Mega Marquee into the cabinet slots as shown.





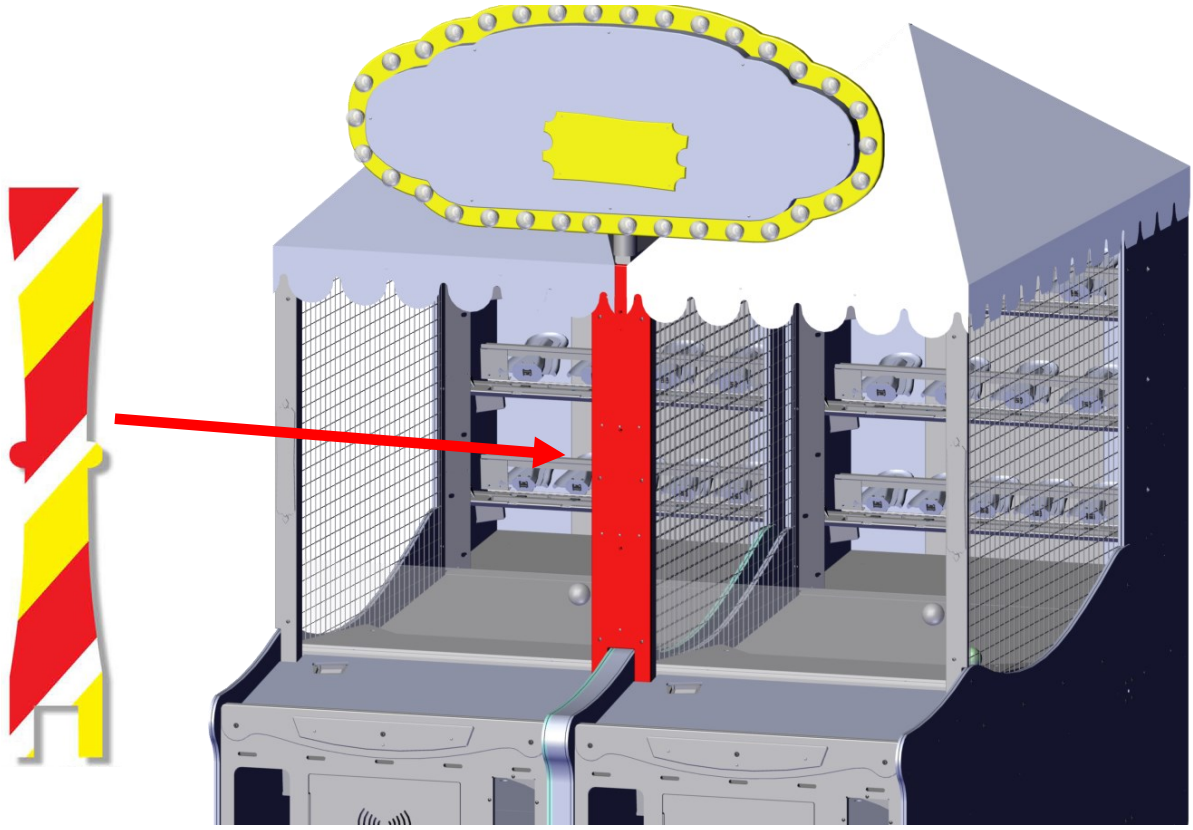
Step 24:

Insert the canopy flaps into the top slots of the marquee. Attach the marquee to the cabinet cages using ¼-20x2¾" bolts. Attach the rebound guards at this time. See step 11 for instructions.



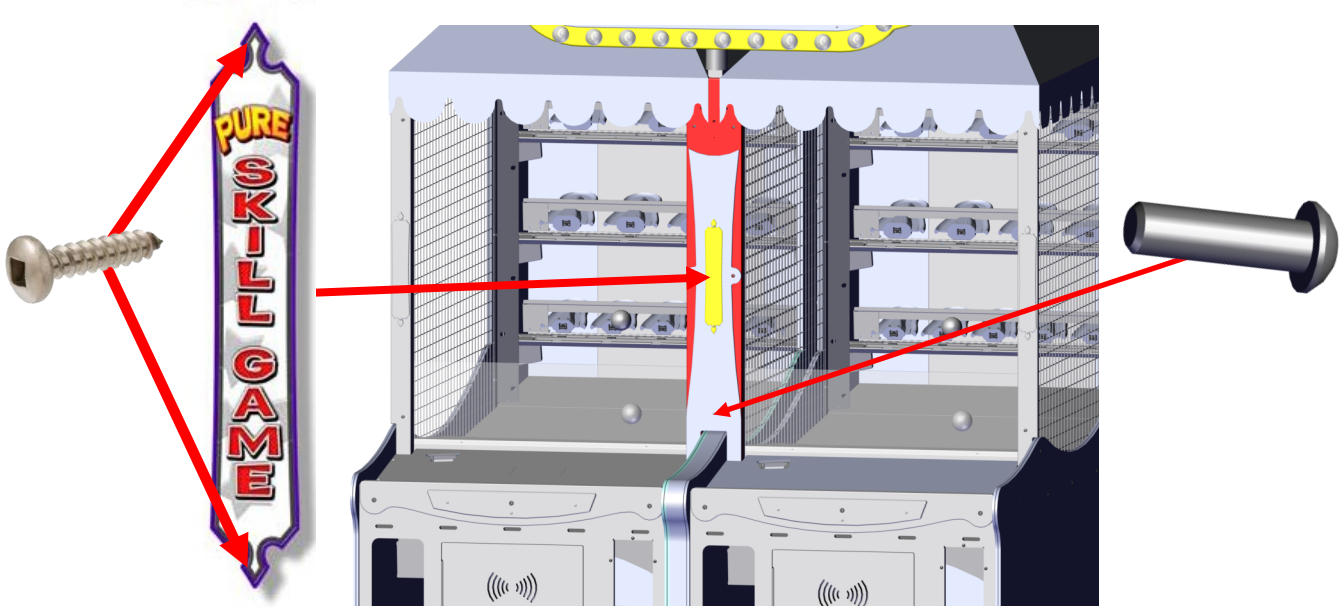
Step 25:

Attach the center graphic using 655 screws.



Step 26:

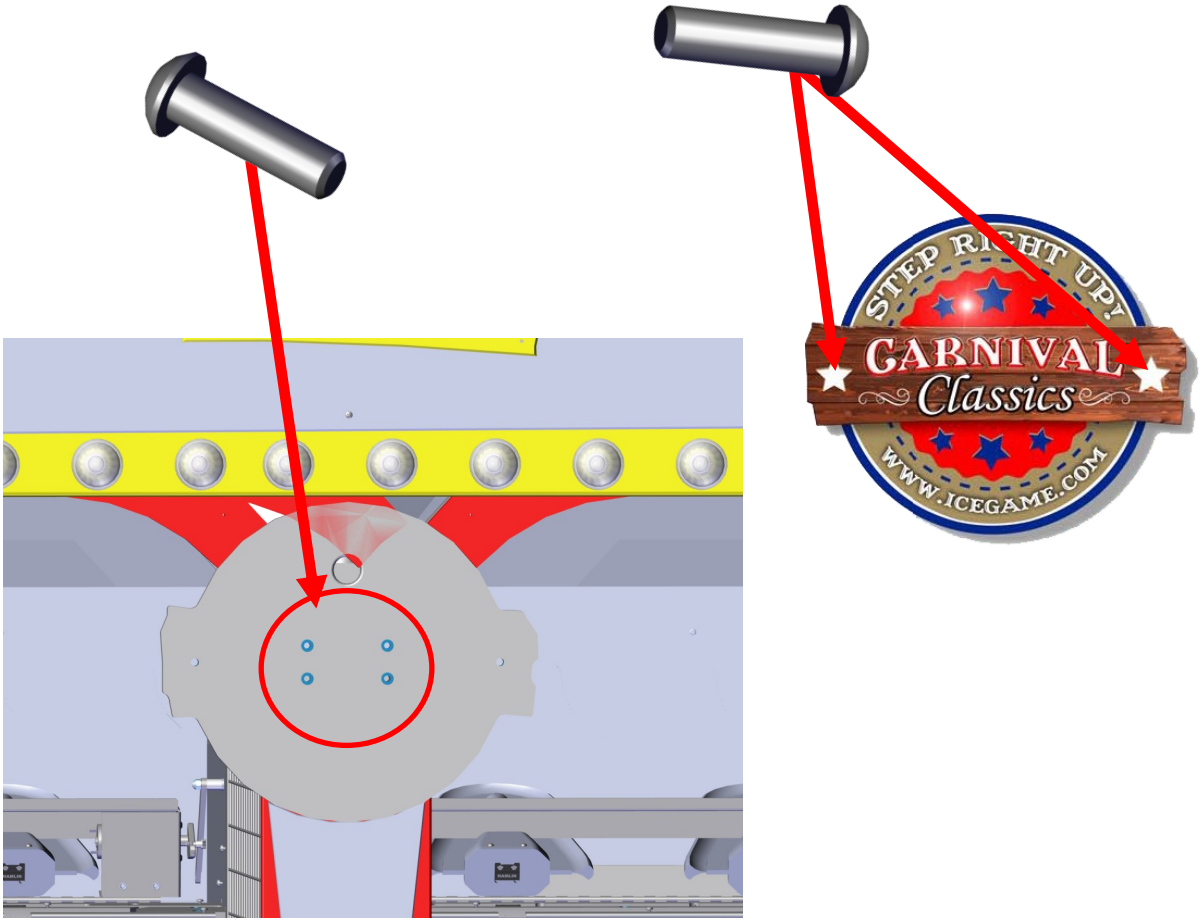
Attach the Front trim and “Pure Skill Plaque” using provided square screws.



Step 27:

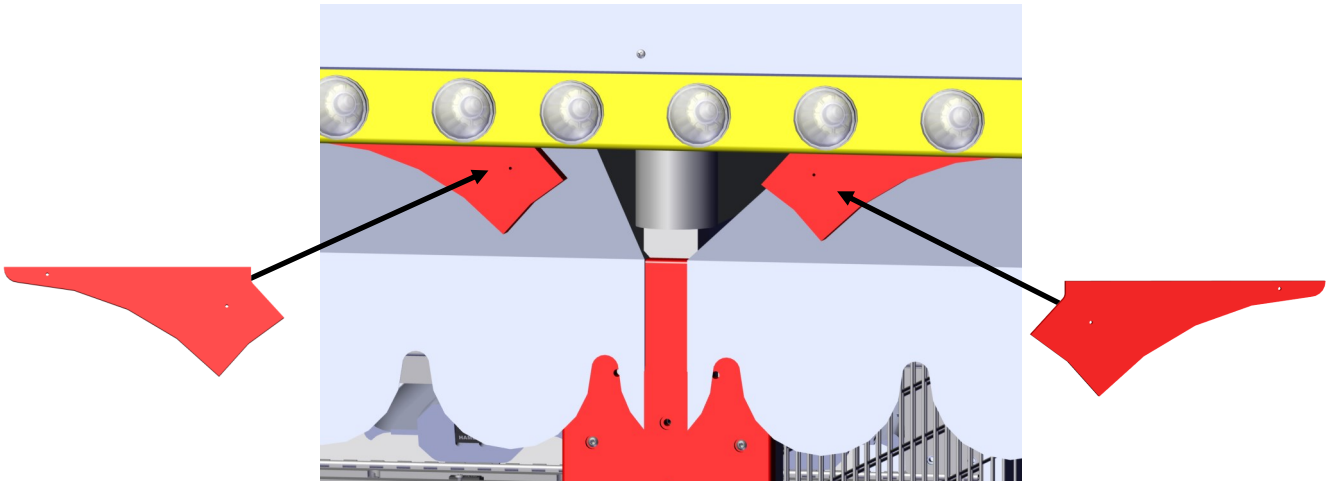
Remove the graphic front by first removing the two ¼-20 1¼" (6211) bolts on either side of the stars. The LED strip is attached to the back plastic. When removing the front plastic be careful not to tear the LED strip.

Attach the sign using 4 ¼-20x1¼" kep nuts. Red Trim is installed in the next step.



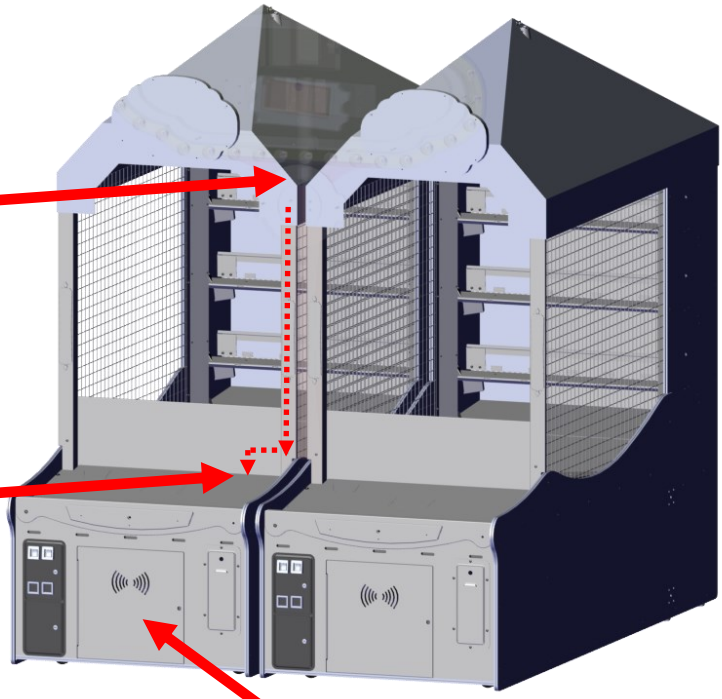
Step 28:

Attach the small red plastic trim pieces with one 1¼" screw through the front. The carnival sign is not shown.



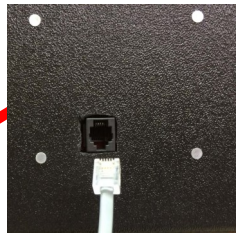
Final Step:

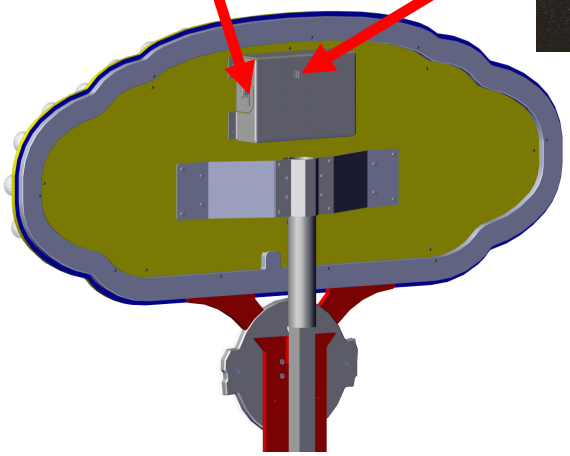
Attach the data cable at the back of the Marquee. Tuck the cable under the canopy on the left side of the game and down the front side of the cage. Do not run it down on the right cabinet. There is no wire access hole. It will be necessary to remove the front screw if attached. It will be easier to slide the control panel out of the way by removing the mounting bolts. This will allow easier access to the wire access hole. See Step 9b. On the main board are two phone style connectors. You can plug in either of them. Now run the AC cord from the back of the marquee to a wall outlet.



A/C Cord

Data





Final Setup

Make sure the AC cord is plugged in at the back before placing game into place.

Power on the game. The game will display the software version on the “Your Score” display. Any knocked down clowns will be raised. The game will cycle through the basic LED colors. If no errors are detected it will change the your score display to 200 and begin the attract mode.

If the MEGA sign shows 111, the phone cord is not plugged in or no communication is seen from the main board. Check the cord for damage or if missing.

If there is no display at the top of the cannon marquee, check the harness connections.

Quick Trouble Shooting Suggestions

Canopy peak doesn't line up

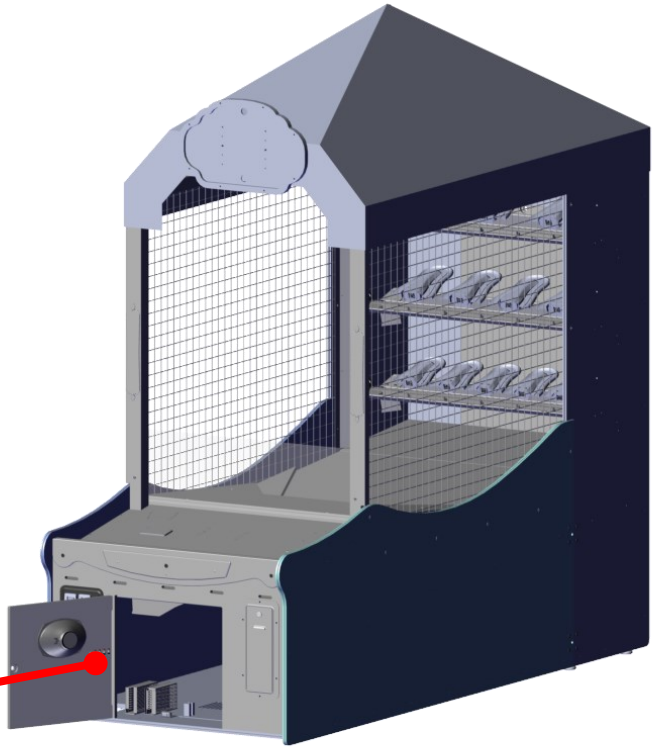
Long canopy support bars are installed in the front. Reverse support bars (short to the front).

Game controls and Meters

Located on the center door is the operators control panel. There you can quickly adjust the volume of the game by pressing the “UP” and “DOWN” push buttons. You can view how many coin pulses the has seen and how many tickets it had paid out.

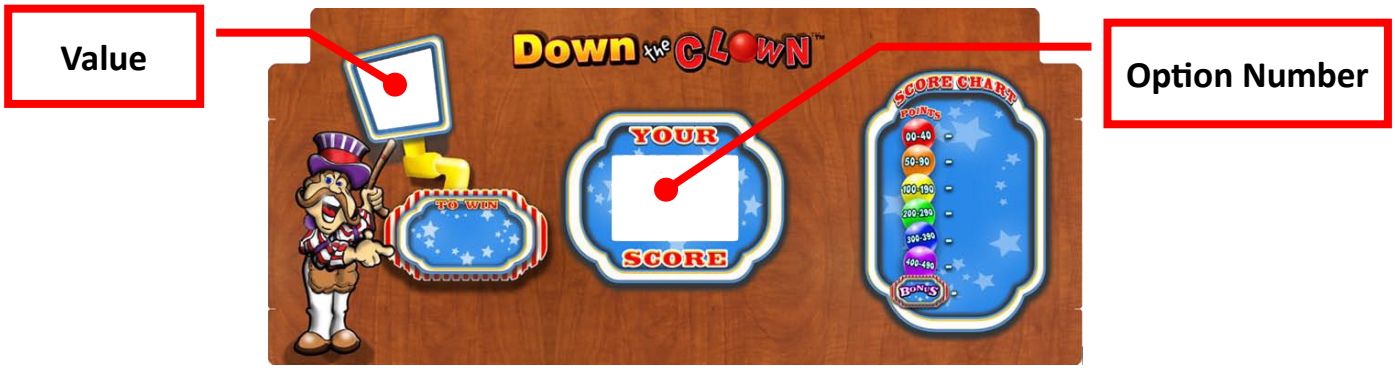
To adjust the game’s programming, press the “PROG” button to enter programming. The “SELECT” push button will cycle through the different options. Pushing the “UP” push button will increase the options’ value while pressing the “DOWN” push button will decrease the options’ value.

It is recommended to use our suggestive settings when configuring your game. Please review the next few pages before determining your settings.



OPTIONS THAT NEED TO BE SET:
COIN 1, Bonus Score, Bonus Tickets, and RED / ORANGE / YELLOW / GREEN / BLUE / INDIGO / Tickets.

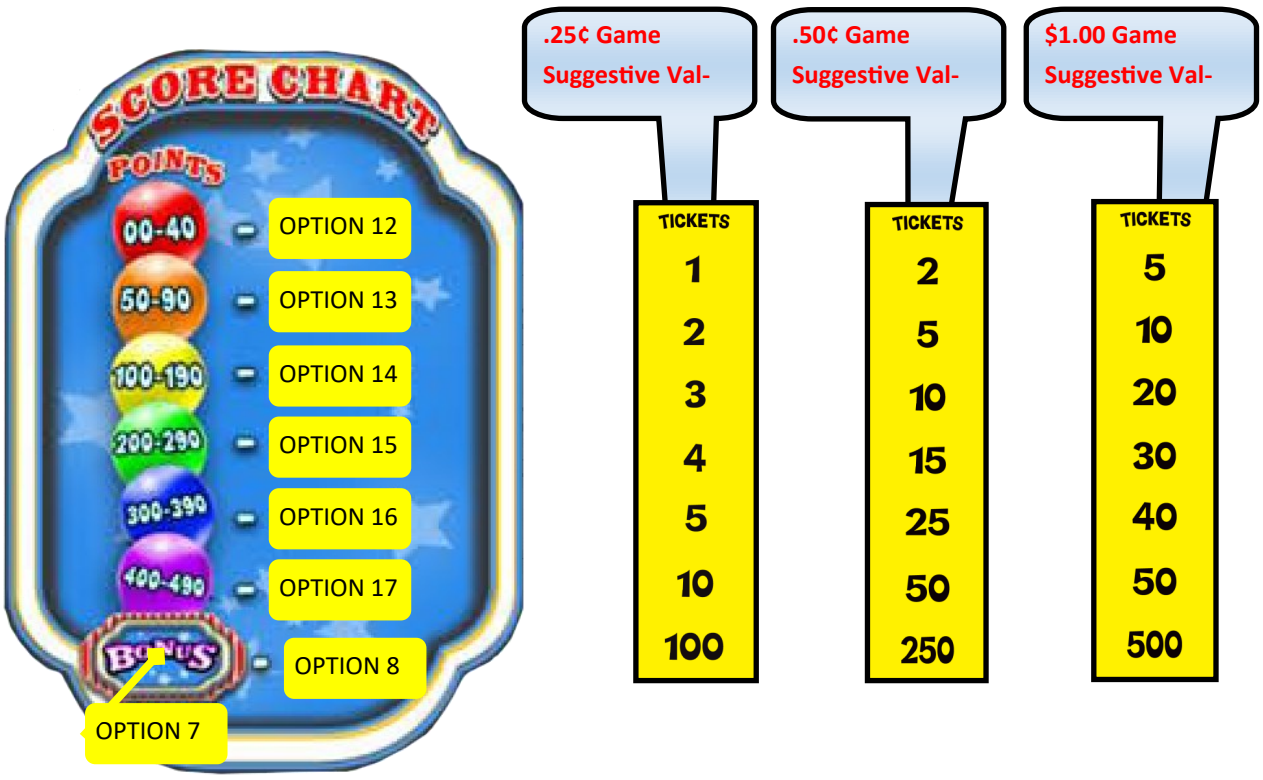
Programming Options for Down the Clown REV 205 Seconds Display Blank



Option		*Default*	*Min*	*Max*	*Inc*	*Short Description*
0	Game Volume	2	0	5	1	Game Volume
	This option adjusts the general game sounds.					
1	Music Volume	1	0	5	1	Music Volume
	This option adjusts the music in the game and attract mode.					
2	Coin 1	1	0	20	1	Cost of Game
	How many pulses to start your game.					
3	Coin 2	1	0	20	1	# of Coin 1's
	This pulse is equal to the value of coin 1. Use as a multiplier for credits.					
4	DBV	4	0	20	1	# of Coin 1's
	This option should be set to the same value the DBV is programmed per dollar.					
5	Attract Time	0	0	90	1	Attract time
	This options determines how much time to be idle between its attract time.					
6	Red Seconds	3	1	10	1	Seconds between Red lite Attempts
	During the game you can determine how much time to wait before lighting a clown red for the double point feature.					
7	Bonus Score	500	10	1000	10	Bonus Target Score
	How much a player must score before achieving the bonus cloud.					
8	Bonus Tickets	100	0	1000	25	Bonus Ticket Value
	How many tickets you win when you win the bonus cloud.					
9	Game Time	20	10	30	1	Time for Game Play
	How long the game lasts.					
10	Score to Increment	50	0	500	10	Score Increase if Bonus Achieved
	Once a bonus is achieved you can use this option to increment the bonus by this options' value.					
11	Games to Dec	1	0	50	10	Games Lost before Bonus Score - 1
	This value determines how many games played without a bonus win before decreasing the points needed to win.					

Options continued on next page…..

12	Red Zone Tickets	1	0	20	1	Tickets for Zone
	Sets the amount of tickets to win when 0 to 40 points are scored. See Score chart below. Also is used for giving tickets just for playing.					
13	Orange Tickets	2	1	250	1	Tickets for Zone
	Sets the amount of tickets to win when 50-90 points are scored. See Score chart below.					
14	Yellow Tickets	3	1	250	1	Tickets for Zone
	Sets the amount of tickets to win when 100-190 points are scored. See Score chart below.					
15	Green Tickets	4	1	250	1	Tickets for Zone
	Sets the amount of tickets to win when 200-290 points are scored. See Score chart below.					
16	Blue Tickets	5	1	250	1	Tickets for Zone
	Sets the amount of tickets to win when 300-390 points are scored. See Score chart below.					
17	Indigo Tickets	10	1	250	1	Tickets for Zone
	Sets the amount of tickets to win when 400-490 points are scored. See Score chart below.					
18	Ticket Multiplier	1	0	2	1	0 = Just for Fun 1 = 1 ticket = 1 ticket 2 = 2 tickets = 1 ticket
	This allows you to either turn off tickets and play for a score, pay out normal, or pay 1/2 the amount of tickets owed.					
19	Lockup	0	0	1	1	0 = Normal Tilt 1 = Lock the game up
20	Fixed Ticket Override	0	0	100	1	0 = Normal
	Setting a value will result in the game only paying that amount when played.					
21	Cheat Sensitivity	0	0	40	1	1=sensitive, 40 not so much, 0 = off
22	Discount	0	0	100	1	0 = disable
	How many coin pulses inserted before the end of a game to award another game. End of game clears counter.					
23	Factory Reset	0	0	1	1	Factory Reset
	Resets your values back to their lower settings. You will then need to reconfigure to your settings.					
24	Clear Tickets/Credits	0	0	1	1	0=save, 1 = clear
25	REV of BOARD	205	N/A	N/A	N/A	Current software REV

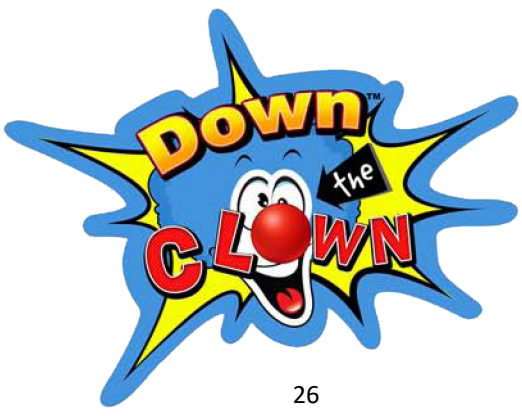


Recommended Bonus Values

.25¢ Game Bonus

.50¢ Game Bonus

$1.00 Game Bonus



Error Codes for Down Da Clown - TOP ROW TURNS RED IF ERROR

Error 1 Ticket Error DISPLAY SHOWS TIC.

Solution: **Refill Tickets! See section "When "Tic" appears in the display"**

Error 2 CF Error ; Compact flash error

Solution: **Reseat Flash card or replace.**

Error 3 Ball Gate Closed Error; Game didn't see the sensor for closed.

Solution: ***Check for proper ball gate operation. See section "Ball Gate Assembly"***

Error 4 Top Motor/Switch Error; Top Row switch not seen.

Solution: ***Check Clown Reset Bracket sensor. See section "Clown Reset Bracket Sensor"***

Error 5 Middle Motor/Switch Error; Middle Row switch not seen.

Solution: ***Check Clown Reset Bracket sensor. See section "Clown Reset Bracket Sensor"***

Error 6 Bottom Motor/Switch Error; Bottom Row switch not seen.

Solution: ***Check Clown Reset Bracket sensor. See section "Clown Reset Bracket Sensor"***

Error 7 Motor Home Error; Upper marquee Cannon.

Solution: ***Check Cannon home switch at top of cabinet. See section "Game takes forever to power on or start a new game! " and "Clown doesn't travel..."***

Error 8 Ball Gate Closed Error; Game didn't see the sensor for open.

Solution: ***Check for proper ball gate operation. See section "Ball Gate Assembly"***

To enter Error display mode, please press the UP push button located on the lower center door when in attract. To exit this mode, repress the UP push button .

The Ball Gate Assembly: Technical Information

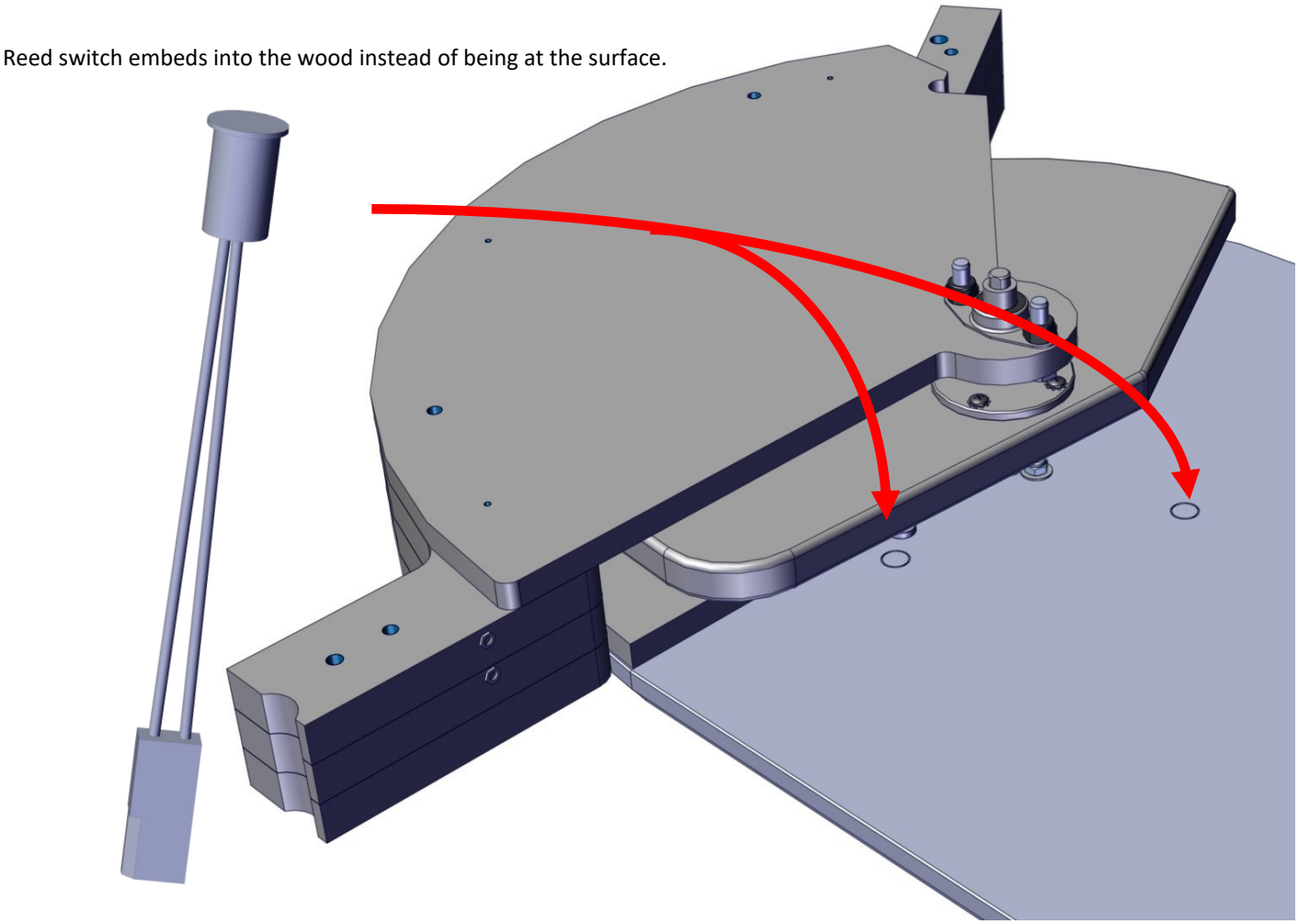
Two half-moons attached together and connected to a single motor. The position of the left half-moon is sensed by two reed switches. A small magnet is located under the left moon. When the reed switch is activated, it will be at 0 VDC, the other will be opposite, +5 VDC.

On the main board at J14, pins 1 and 2 supply the voltage to the ball gate motor. Pins 3 and 4 are the sense lines used to determine the position of the ball gate. Located underneath the left side of the ball gate is a magnet. When the gate is closed this magnet activates the sensor attached to pin 3 taking the signal to ground. Pin 4 will be at +5 VDC. When the gate opens, pin 4 will go to ground and pin 3 will have +5 VDC on it.

If the magnet sensors are not flush to the wood surface, the magnet will not activate the sensor causing the ball gate to move pass the closed or open position. When this occurs, the ball gate will shut down and only a power cycle will allow the ball gate to work again.

If after checking that the ball gate is not having a sensor problem, look at the linkage for any of the Grubb screws that might have gotten loose. Also look at the connector rod and make sure it is slotted and not rounded out.

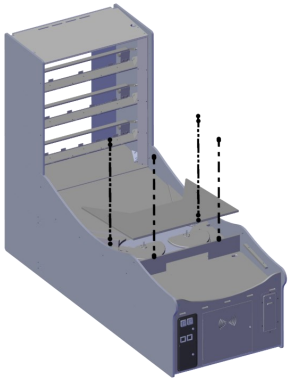
**** Note **** If the game doesn't see the open or close reed switches it will open the ball gate and not attempt to run the ball gate motor again until you power cycle the game.



Ball-gate Assembly

Step 1: Ball-gate Removal

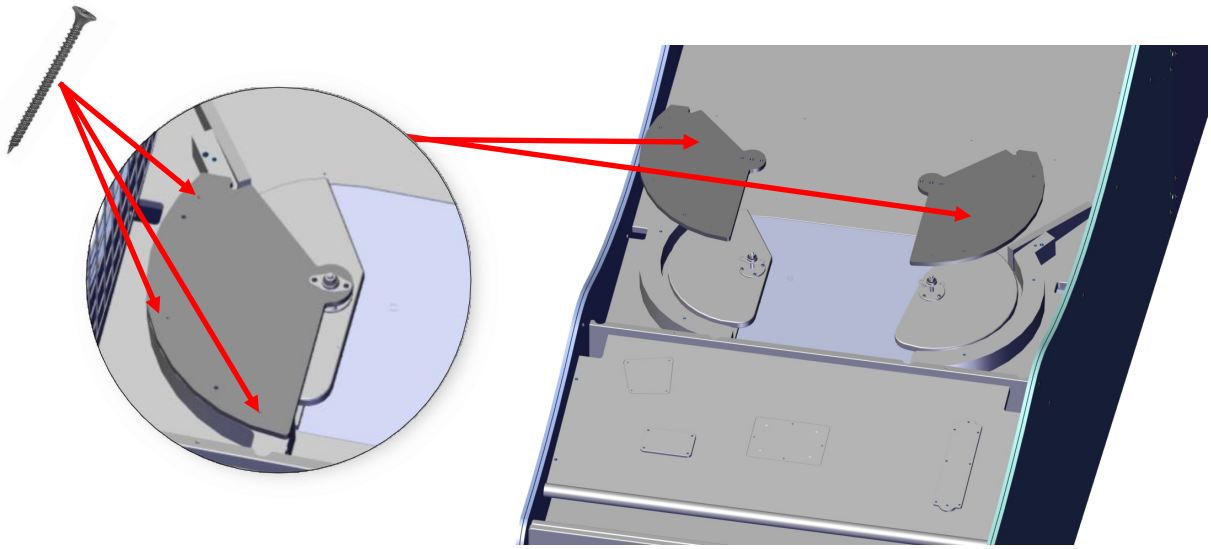
Remove the wood panel ball gate cover as shown.



The cages, canopy, support bars, and rebound have been removed for clarity.

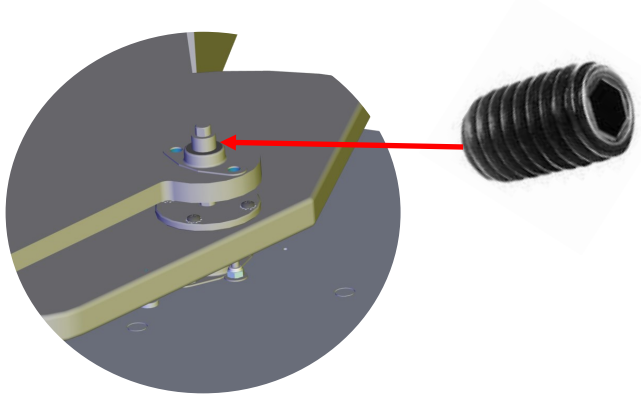
Step 2: Ball-gate Removal

Remove three woodscrews on each side as shown below. Remove these screws on both sides.



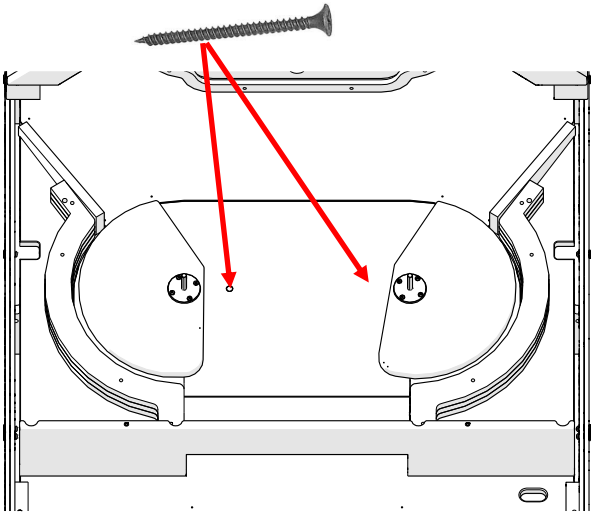
Step 3: Ball-gate Removal

Loosen the 5/64 Allen set screw. Lift the ball defectors



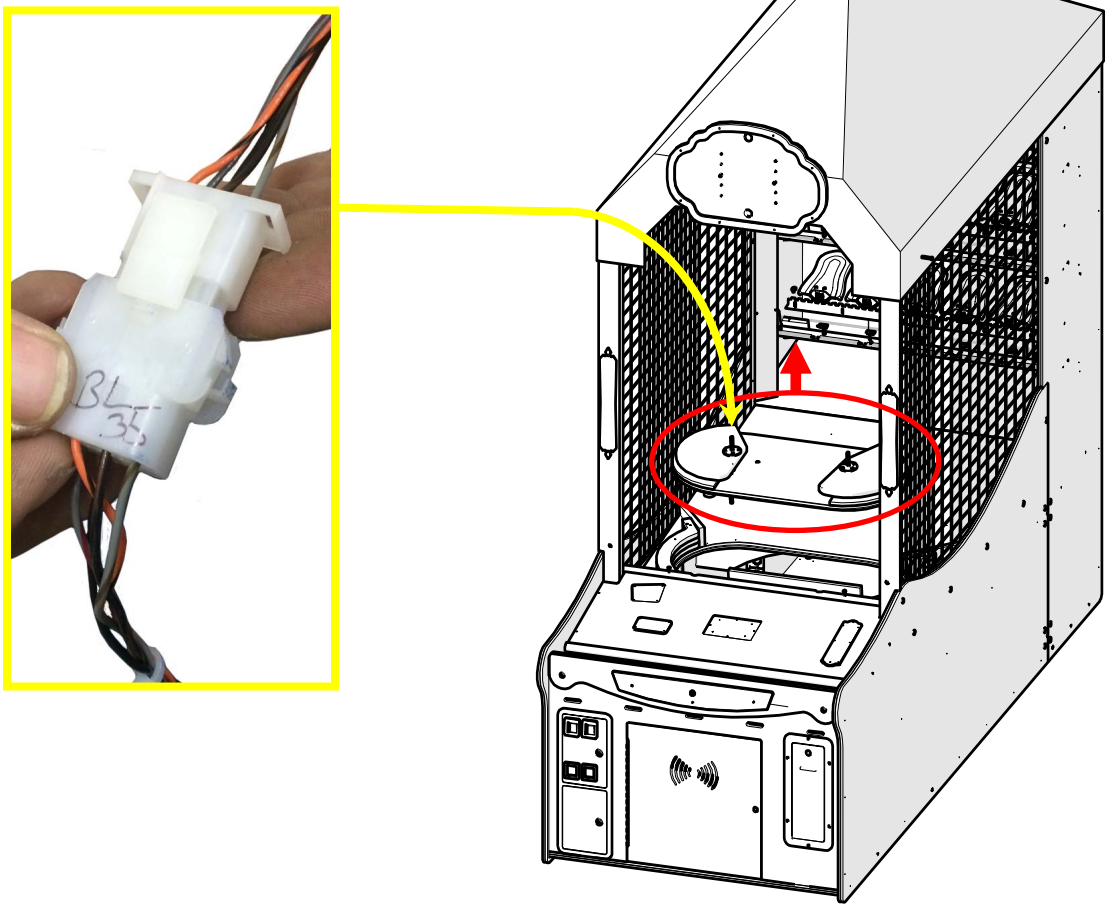
Step 4: Ball-gate Removal

There are two black wood screws that hold the ball gate assembly to the cabinet. They are shown below. Remove them.



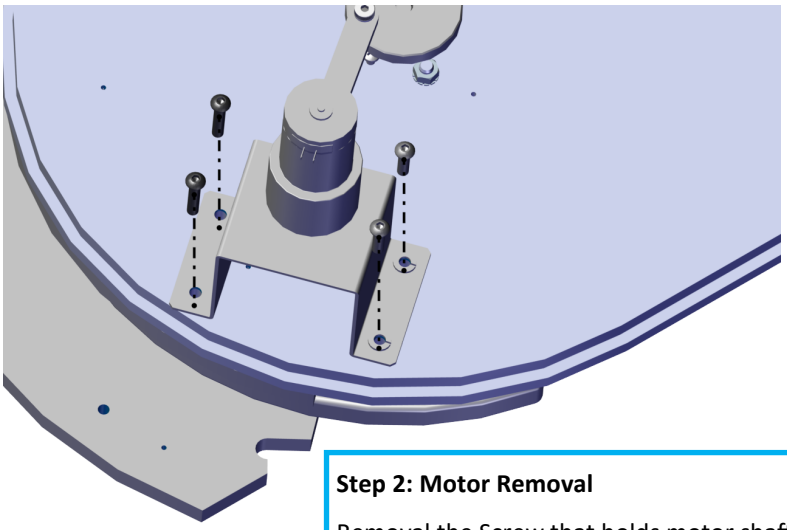
Step 5: Ball-gate Removal

Lift the ball gate straight up and unplug the wire harness before lifting the ball gate assembly out.



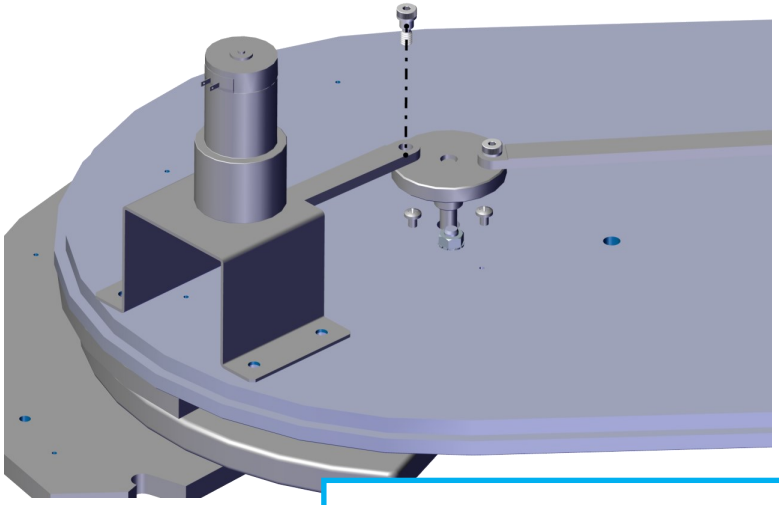
Step 1: Motor Removal (REMOVE BALLGATE ASSEMBLY BEFORE PROCEEDING)

Flip the ballgate assembly over and remove the four Allen screws and lock washers shown.



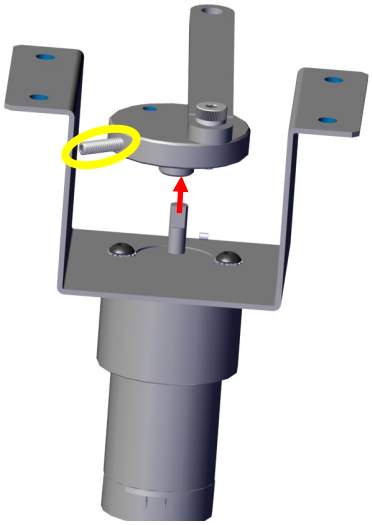
Step 2: Motor Removal

Removal the Screw that holds motor shaft to the ball deflector shaft. This screw has Loctite applied to it and could be difficult to remove.



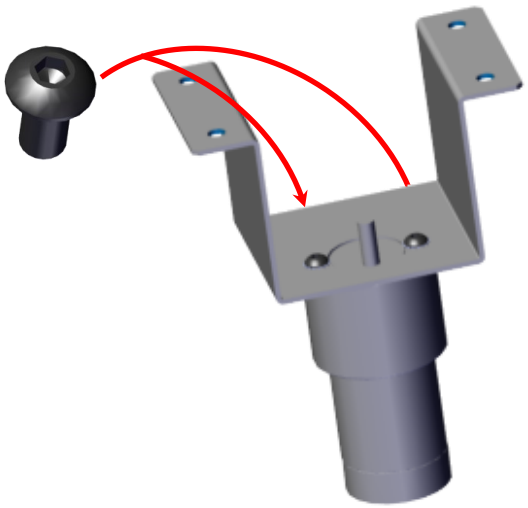
Step 3: Motor Removal

Loosen the grub screw that holds the motor cam shaft to the motor. This grub screw also has Loctite applied to it and could be difficult to loosen. Lift the cam shaft off.



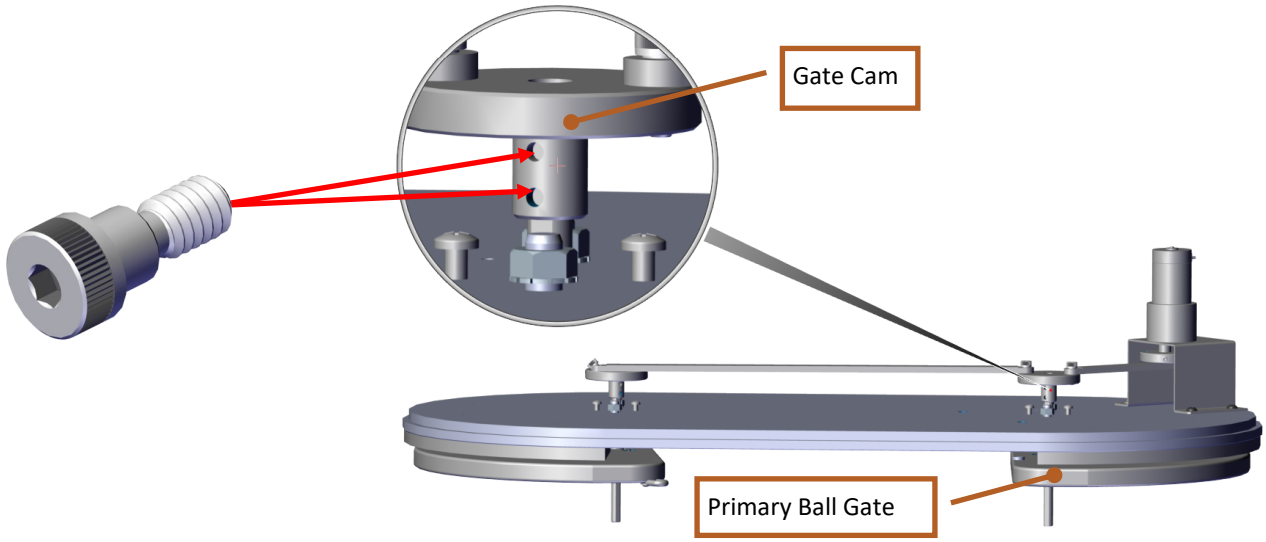
Step 4: Motor Removal

Remove the two screws that hold the motor to the motor mount.



Ball-gate sensors Access

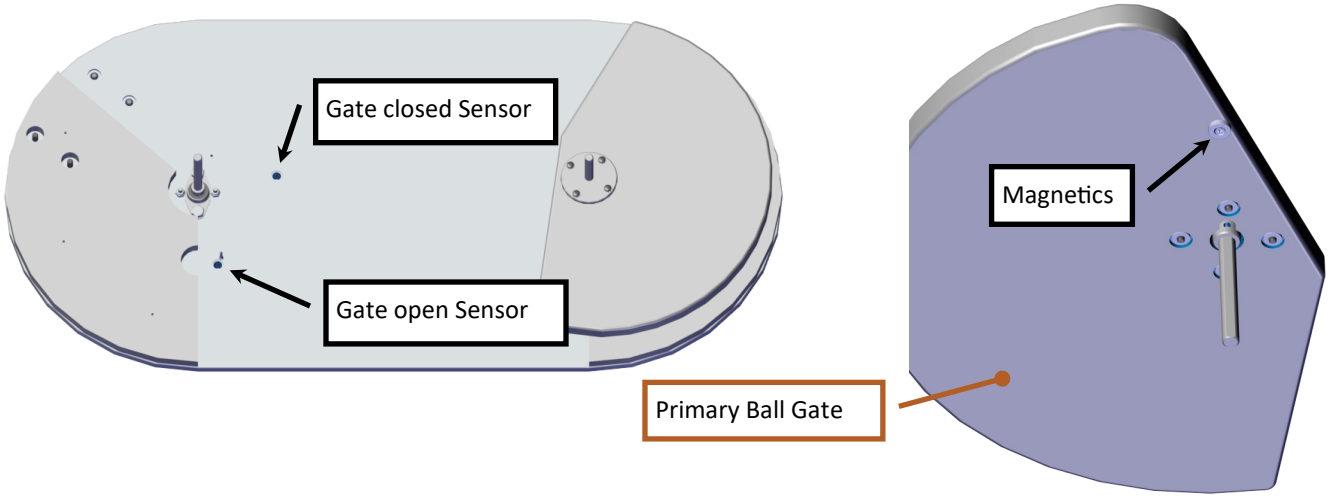
Remove the two screws that hold the gate cam to the Primary Ball gate assembly. Slide the Primary Ball gate assembly out.



Ball-gate sensors Operation

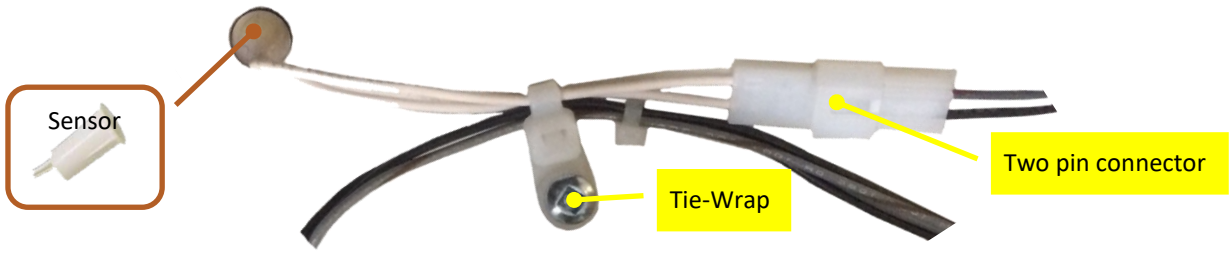
There are two magnetic sensors located under the primary ball gate assembly. The primary ball gate assembly has a magnetic attached underneath so that when the assembly rotates it will pass over one of the two sensors. When the ball gate assembly moves counter clock-wise, it will pass over the sensor for the closed position and stop the assembly. When the ball gate assembly rotates clock-wise, it will pass over the sensor for the open position and stop the assembly. Using a volt meter, when the magnet passes over either of the sensors, that sensor will have no voltage present. When the magnet is not over the sensor it should read +5 volt of DC power. With the power off on the game, the sensor is normally open.

** WARNING ** Never manually move the Primary Ball Gate assembly as damage will occur to the motor gearbox assembly below.



Ball-gate sensors Removal

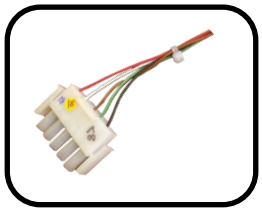
To remove a sensor, disconnect the two pin connector. Then unscrew the tie-wrap and push the sensor out. To install a replacement sensor, insert the connector from the top through the hole and push firmly down. Attach the wire harness and re-install the wire tie.

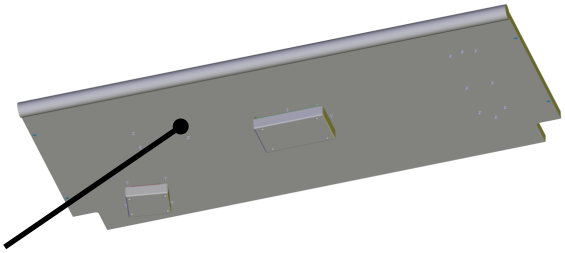


Control Panel: Small and Large Display Removal

To access the two display boards remove the bolts marked with the x. Lift the control panel and unplug the 5 pin Molex plug.

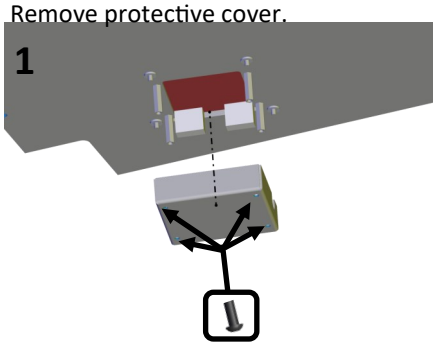
Remove the control panel and flip over.



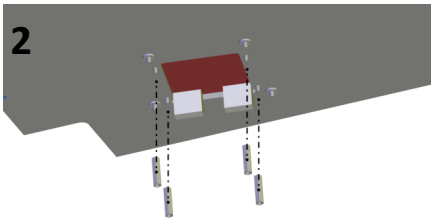


Small Display:

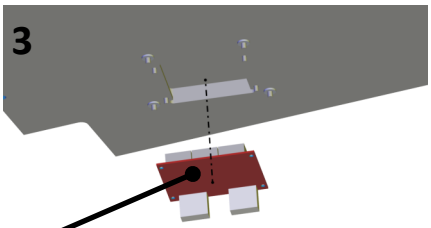
Remove protective cover.

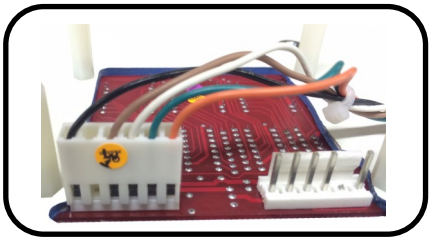


Remove plastic standoffs



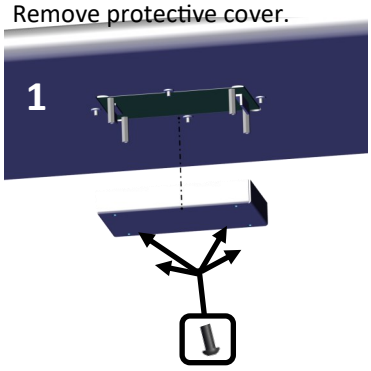
Disconnect Wire harness and remove.



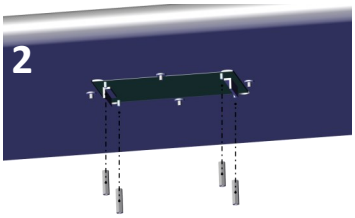


Large Display:

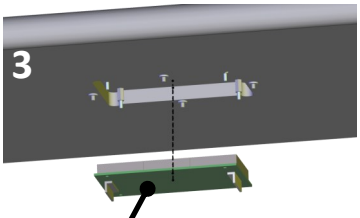
Remove protective cover.

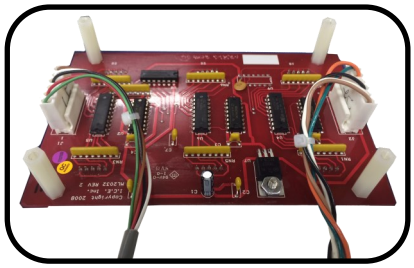


Remove plastic standoffs.



Disconnect harnesses and remove.

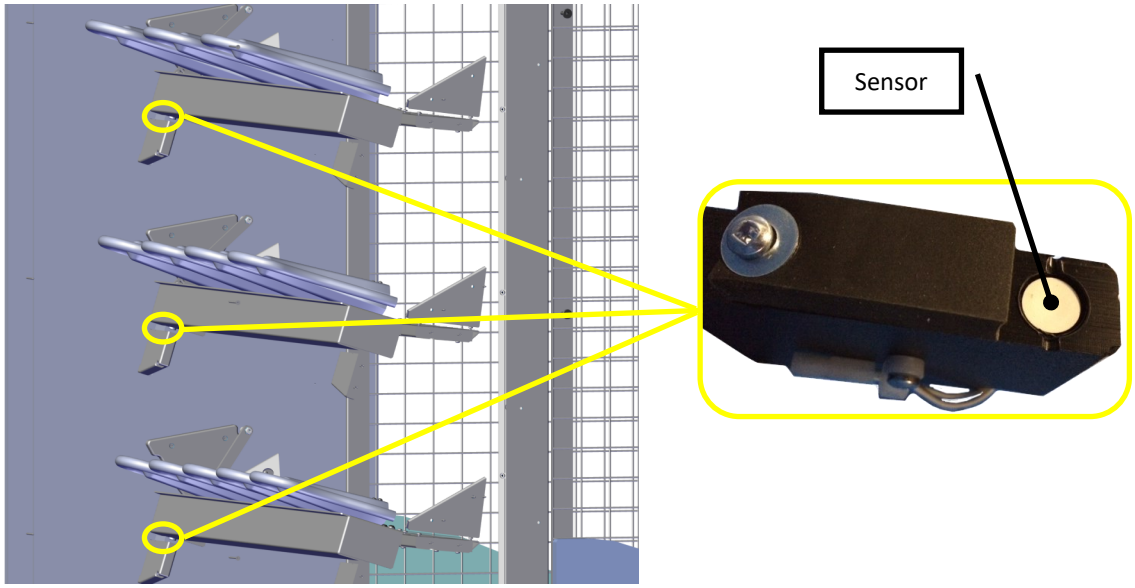




Clown Reset Bracket Sensor

The Clown reset bracket assembly will stand clowns back up after being knocked down. During game play and when the entire row is knocked down, the reset bracket assembly's motor will activate causing the bracket to push the clowns up. Upon one complete turn the bracket will return to its starting position. A magnet sensor is used to tell the game where the bracket is. If the sensor is not working the bracket assembly will run one more time and time out.

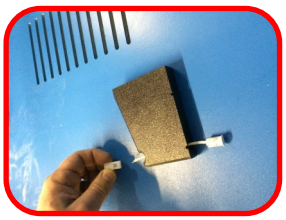
If the sensor that detects that the clown has been knocked down fails then the Reset Bracket will run on that row every 30 seconds during its attract mode.

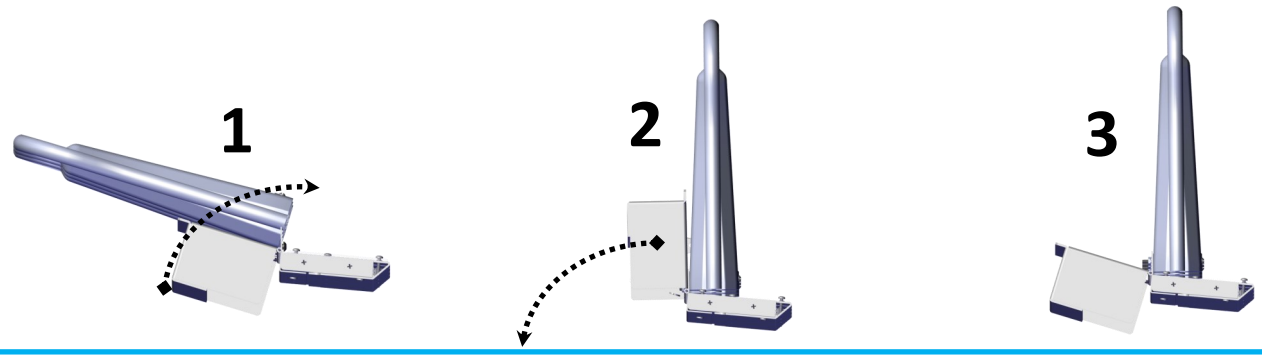


Home Position Sensor Replacement

Unplug the two pin sensor harness attached to the bracket. Cut the connector off. Push old sensor out of plastic. Insert new sensor into plastic bracket. Attach connector and plug in. Order part E02907BLX.



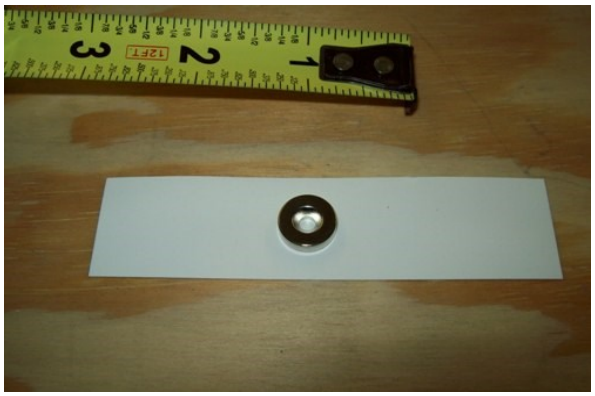


RESET SHELF TECH TIPS

The main board controls the three shelf motors. Each shelf sensor has its own output back to the main board. When a sensor is not seen by the game, the game will continue to run the motor until it times out, making the shelf reset multiple times.

There is a small round metal magnet on the bottom left corner of the shelf.



This magnet must be aligned with the sensor in the shelf rest.

We can verify with an ohm meter that the sensors are working at the main board. Each sensor will read open or "OL" on your meter when the shelf is up. When the shelf is down the signal will be than an ohm of resistance.

TOP: Measure at pins 3 and 4 on the J11 connector between the BLUE wire and the BLACK wire.

MIDDLE: Measure at pins 3 and 4 on the J12 connector between the BLUE/BLACK wire and the open pin. (NOTE- pin 4 is open at this connector as it shares a common ground at the interconnection of the harness).

BOTTOM: Measure at pins 3 and 4 on the J13 connector between the BLUE/WHITE wire and the BLACK/WHITE wire.

**** NOTE **** ***Balls can unplug sensor wiring if not properly secured.***

MOTOR/GEARBOX FAILURES

The reset arms and ball gate moons both use motors with gearboxes. They might appear the same, but they are different. Using the wrong motor/gearboxes will cause timing issues with the game software and is not recommended.

Possible causes that can lead to Gearbox failures:

- Slider wear causes motor binding or gearbox damage in the reset arms and ball gate.
- Force movement damages gearbox
- Balls can get jammed when ball gate cover is over tightened.

Down the clown shelf motor trouble shooting:

Main board failure identification:

When power is applied the game will attempt to lift the clown shelves if it senses any of the clowns have been knocked down. You can use this function to aid in your trouble shooting. The motors are constantly supplied +12vdc on the orange wire. Ground is applied through a transistor (IRL540N) located on the main board which completes the circuit to make the motor run. To determine where the fault is, swap the station connections on the main board.

The main board connections are as follows:

Connector J11 - top shelf - drive transistor Q17

Connector J12 - middle shelf - drive transistor Q18

Connector J13 - bottom shelf - drive transistor Q19

Apply power after swapping the connectors. If the problem remains then your issue is in the wiring or the motor itself. The problem is the main boar if the problem moves to another shelf.

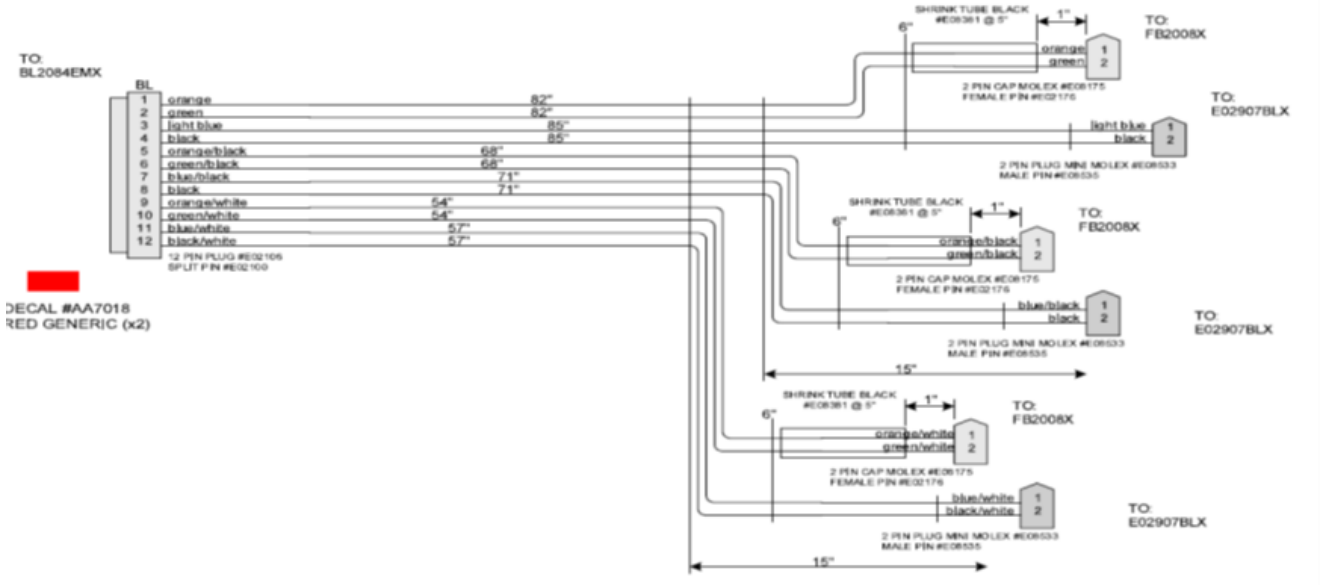
Shelf motor wiring troubleshooting:

The down the Clown game shelf reset motors are rated for 24vdc but are driven by 12vdc from the game. This motor's part number is FB2008. The ball gate motor is different and is rated for 12vvdc. This motor's part number is BL2008. Both motor have the identical foot print but a different gear ratio. Installing the ball gate motor in the shelf position will cause the motor to fail.

To determine if the failure is the wiring or a motor failure connect your meter leads between the 2 wires at the motor. Knock down some clowns on the shelf you wish to test and turn the game on. If you have voltage at the motor make sure the set screw on the motor cam is present and tight otherwise replace the motor.

If no voltage is present at the connector, place the negative probe of your voltage meter on the black wire on the shelf sensor located on the left hand side as viewed from the back of the game. if the 12v is present then the signal wire has failed. Track the wire back to the appropriate connector on the main board and repair the damage or replace the harness,.

The ICE part number for the rear harness is BL2084HX.



Oh no! What does 7L17 displayed mean? TILT!!

The game has a passive infrared sensor (PIR sensor) located in the top of the canopy to detect people trying to climb in the game to cheat. When the sensor senses a change in an object's temperature (a person), the game will display "TLT" on your score display. There are two ways the game will behave when this condition occurs depending on what you have set option 19 to. A setting of 0 will end the current game and allow the player to reinsert money to play again. A setting of 1 will lock the game in 7L17 mode until the operator cycles power to the game.

Here are some steps to troubleshoot this issue:

1) Unplug cheat sensor at connector J26 on the main board and coin the game up.
    A. If you can play the game, then the fault is likely the cheat sensor or a short in the harnessing. Replacement ICE part number BL1332X.
    B. If you cannot play the game, then contact ICE tech support to have your board sent in for repair or request an advance replacement.
2) The pinout for connector J26 are:
    A. Pin 1 is 12-volt DC positive power.
    B. Pin 2 is the cheat signal. 0 volts DC not activated, 12 volts DC activated.
    C. Pin 3 DC ground.

Game takes up to 30 seconds to start a new game!

During normal game play the clown on the marquee moves to the appropriate balloon level position based on the end of game score. If during power on cycle or at the end of a game the clown in the balloon marquee does not return to the home position and hit the home switch, the game will be delayed for up to one minute.

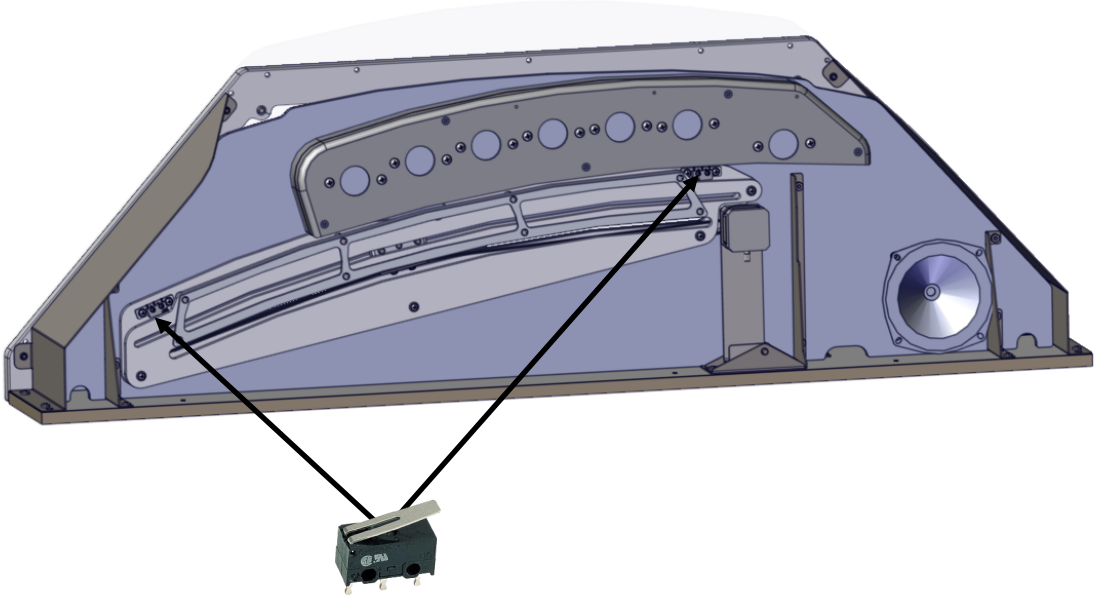
Here are some steps to trouble shoot this issue:

1) Check the connections on the back of the marquee assembly. The switch should be wired normally open.
   A. The voltage can be read between the black wire and the grey with a black trace you should see +5 volts DC going to 0 volts DC when the switch is activated.
   B. You can check for the voltage back to the main board at connector J16 pin 2 (yellow wire) a pin 8 (brown wire) if no voltage is found at the switch.

2) If no marquee is used, you will need to use a special version of software that will ignore this switch or jumper out the home switch connector at the back of the game. Contact ICE tech support for more information.

Clown doesn't travel out of the cannon.

If during power on if the home switch is not made, the clown will not exit the cannon. Ensure both the home switch and end of travel switch are functioning properly.



Quick Check list:

1) Check home switch has no voltage on it when homes (clown inside the cannon). Use J16, pin 2 on the main board. Use pin 8 for ground.

2) Check for +5 on End of travel switch when in home position. Use J16, pin 7.

When “Tic” appears in the display:

The game will display “TIC” on your score display when the game has tried to pay tickets but has not seen the sense signal from the ticket dispenser change state. Here are some steps to trouble shoot this condition:

1) Swap the ticket dispenser with a known good dispenser.

2) Check the harnessing and connections to the main board at connector J4.

3) Check for +12vdc between the orange and the black wire at the ticket dispenser. If no voltage, then check for voltage at the J4 pins 2 and 4.

4) Check for ticket notch signal (+5vdc going low when optic is blocked) at the ticket dispenser between the violet with a blue trace and black. If not found, then check for the notch signal at the main board connector J4 pins 1 and 5.

5) Check for the ticket run signal (+3vdc - +5vdc) between the violet with white trace and black at the ticket mech.

    A. If no voltage, then check at J4 pins 3 and 5
    B. If there is no signal from the main board then replace U6 on main board or send the main board in for repair and return or advance replacement

Audio Missing or garbled

- Missing +12-voltage supply (two supplies used, one is for Audio!)
- Bad CF card – Use any CF carny version that is the same or newer version to swap and test.

Clown access

Through back of cabinet, secured to the hinges with two KEPT nuts (6004). Clowns are filled with plastic pellets. Magnets are mounted under the clowns and can become dislodged over time.

Main board Repairs failures and possible fixes:

No display on control panel (missing data) or no tickets.
- Replace U6.

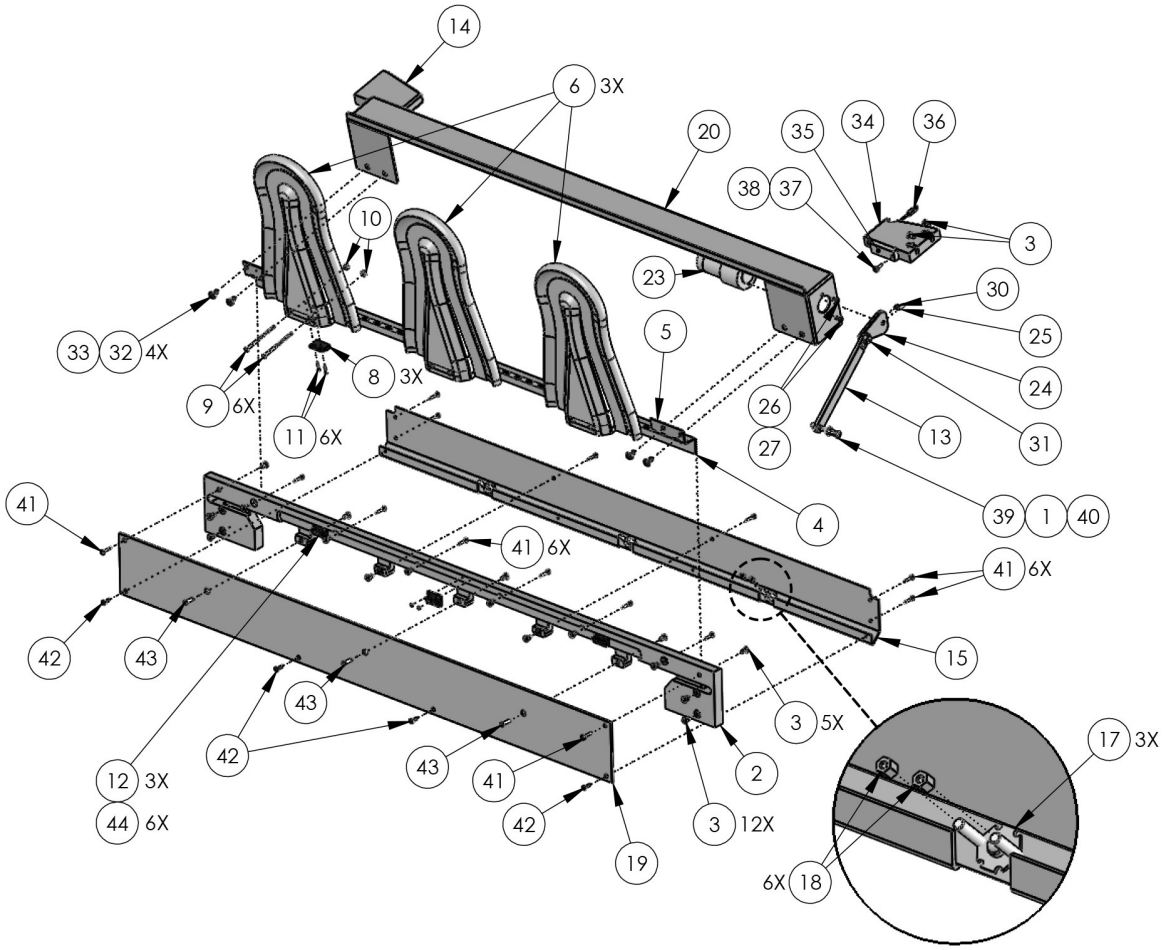
No Audio
- Replace U4 audio amp; check +12 supply first though.

Reset shelf doesn't turn motor on.
- Replace Q17, Q18, and Q19 depending on which shelf motor is missing ground.

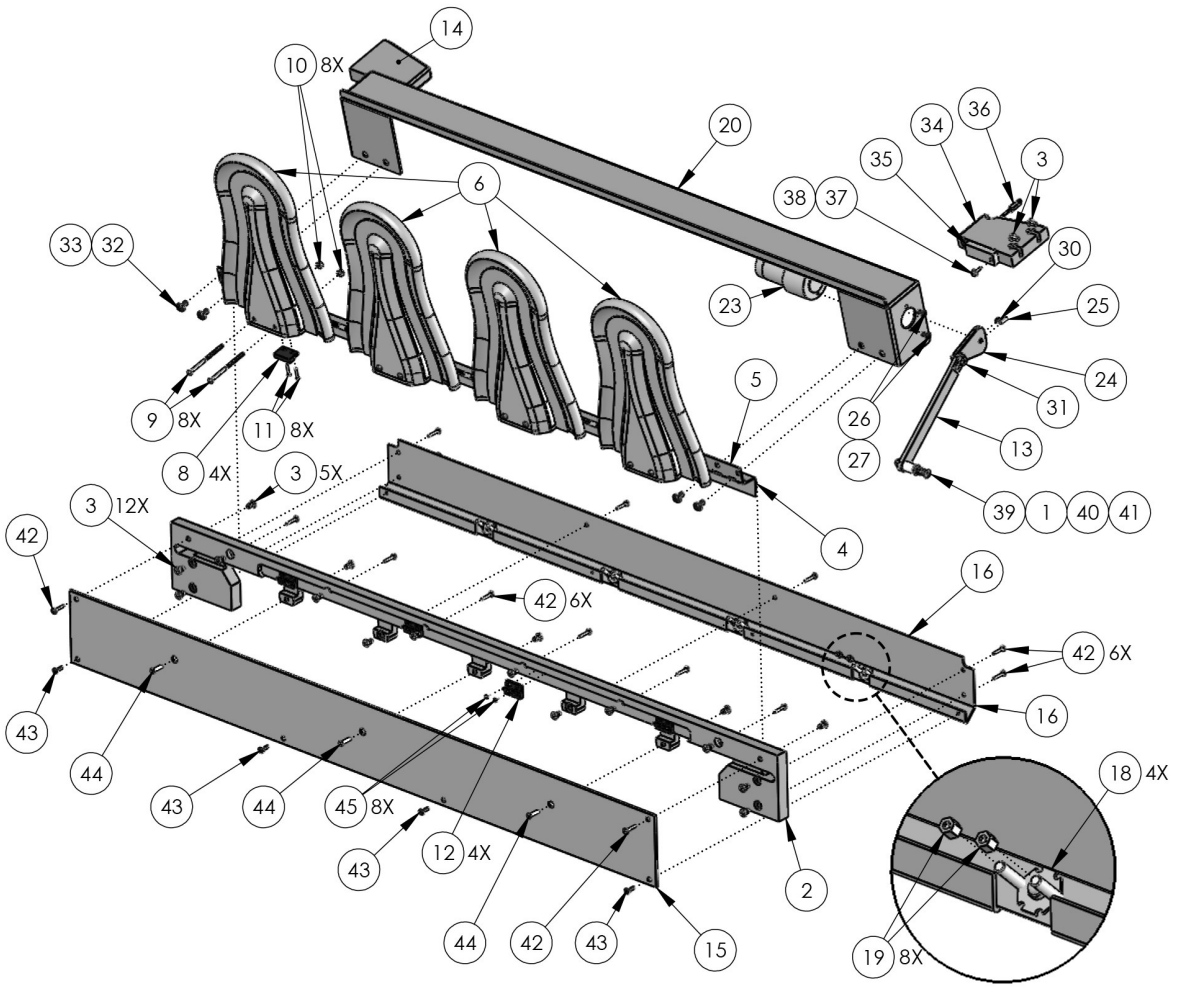
No Music but has game sound effects.
- Change Q57 and/or Q56. Both are the linking transistors. They are out of sync.

Plugged in RGB harness wrong
- Check and replace Q23, Q37, Q11, Q1, Q52, Q13 if bad.

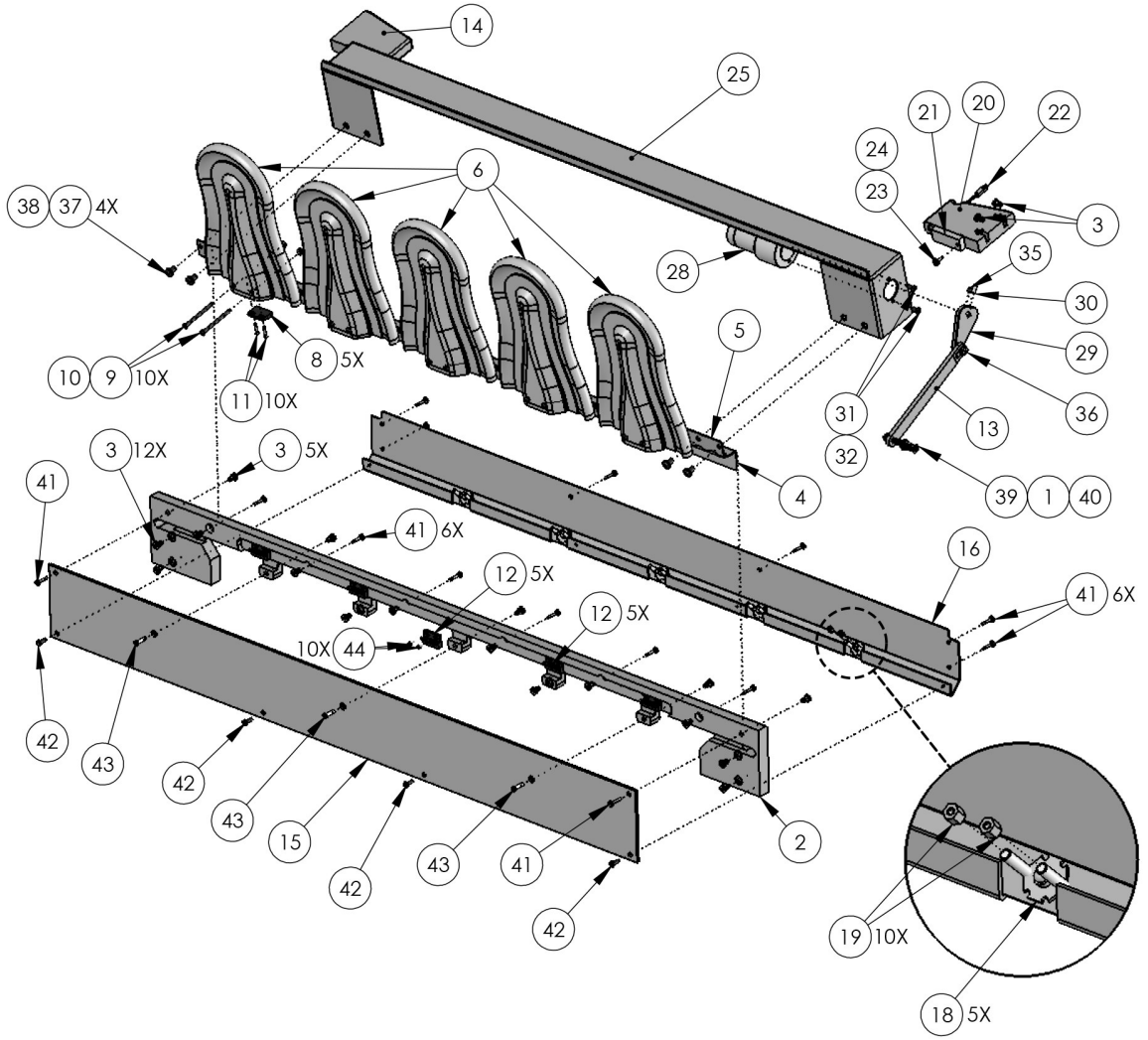
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	PC60631	025-20 CABINET INSERT (J50115)	1
2	BL3069	TARGET SHELF	1
3	6061	8-32 CAB INSERT (J-50111)	20
4	BL1006-1	HINGE	1
5	BL1006-2	TOP TARGET HINGE	1
6	BL4010	TARGET (LARGE) ASSEMBLED	3
7	BL3020	CATPUNK BASE LARGE	3
8	CG2010	ACTUATOR	3
9	6770	8-32 x 2-3/4" PRHMS	6
10	6004a	8-32 KEP NUT	6
11	6634	#4 X 3/4 PFH WOOD SCREW BLACK	8
12	CG2012	SENSOR	3
13	BL1056	TARGET LINKAGE	1
14	BL3033	RESET STOP RIGHT	1
15	BL1059	TOP SHELF LED HOLDER	1
17	E00838BLX	ASY (5V RGB LED)	3
18	6554	4-40 x 1/4 HH SPACER	6
19	BL7023	LED COVER	1
20	BL1042	TARGET RESET BRACKET	1
23	FB2008X	ASY (TARGET MOTOR)	1
24	BL1048	TARGET CAM	1
25	6384	SET SCREW CUP SKT 0.19-32x0.5	1
26	6476	#10-32 x .375" BHSC	2
27	6734	#10 STAR WASHER	2
28	IA1053	MAGNET R822CS-N	1
29	AA6819	#4-40 X .25" PFHMS	1
30	6344	SET SCREW CUP SKT 0.19-32x0.25-HX-N	1
31	6876	5/16 X 1/4 SHOULDER BOLT	1
32	6800	1/4-20 X .5 BHCS (BLACK)	4
33	6053	1/4 SPLIT LOCKWASHER	4
34	BL3033	RESET STOP RIGHT	1
35	BL4009	RESET BUMPER	1
36	E02907BLX	ASY (LIMIT SWITCH)	1
37	655S	#8 x 5/8 SQ. DRIVE (SILVER)	1
38	6158	#6 FLAT WASHER	1
39	AA6915	1/4-20 X 2-1/4 PFHMS FULL THREAD ZINC	1
40	PC60604	025-20 NYLOCK JAM NUT	1
41	AA6831	8-32 X 3/4 PPHMS	14
42	6004	8-32 x 1/2 PRHMS (BLACK)	4
43	AA6676	8-32 X 3/4 PFHMS	3
44	6380	#4 x 3/8" PH PAN TY AB SCREW	6

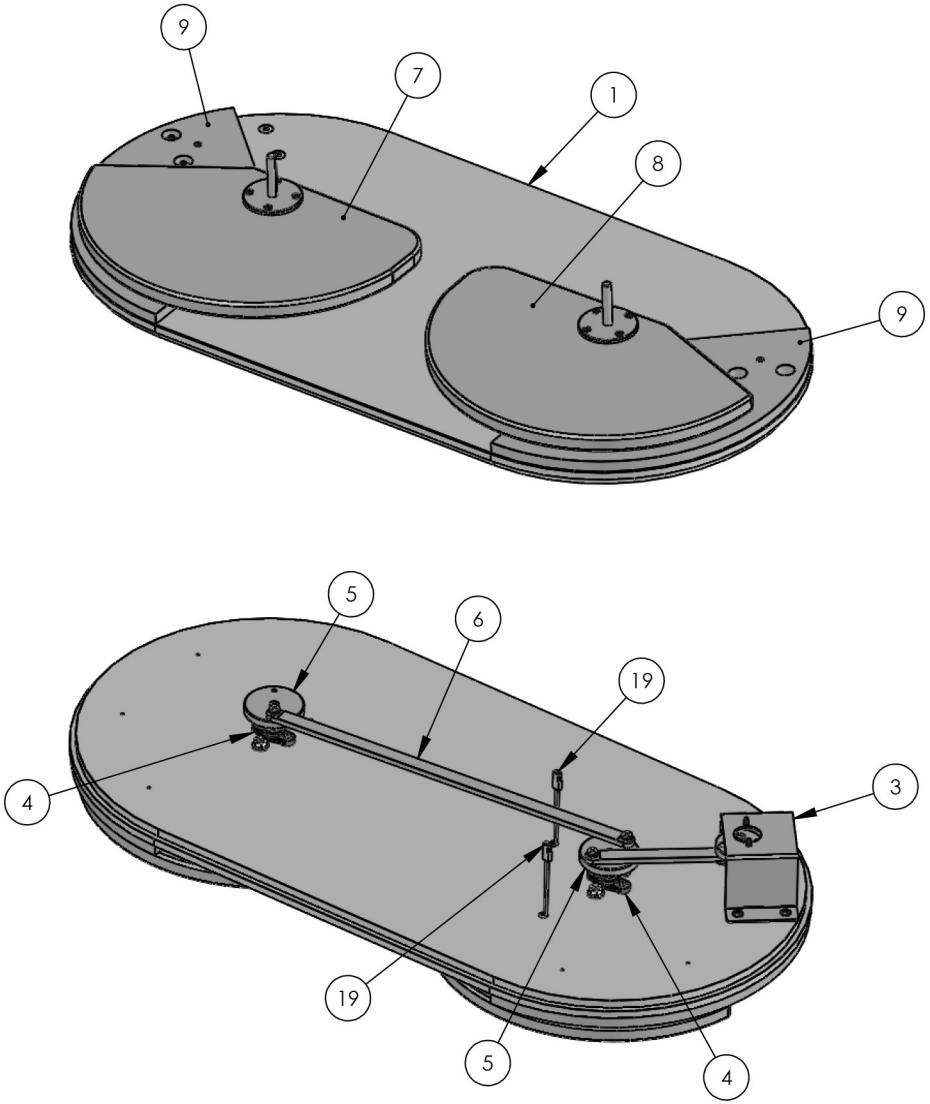


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	PC60631	025-20 CABINET INSERT (J50115)	1
2	BL3069	TARGET SHELF	1
3	6061	8-32 CAB INSERT (J-50111)	19
4	BL1006-1	HINGE	1
5	BL1007-2	MIDDLE TARGET HINGE	1
6	BL4011	TARGET (MEDIUM) ASSEMBLED	4
7	BL3019	CATPUNK MEDIUM BASE	4
8	CG2010	ACTUATOR	4
9	6770	8-32 x 2-3/4" PRHMS	8
10	6004a	8-32 KEP NUT	8
11	6634	#4 X 3/4 PFH WOOD SCREW BLACK	10
12	CG2012	SENSOR	4
13	BL1056	TARGET LINKAGE	1
14	BL3033	RESET STOP RIGHT	1
15	BL7023	LED COVER	1
16	BL1062	MIDDLE SHELF LED HOLDER	1
18	E00838BLX	ASY (5V RGB LED)	4
19	6554	4-40 x 1/4 HH SPACER	8
20	BL1042	TARGET RESET BRACKET	1
23	FB2008X	ASY (TARGET MOTOR)	1
24	BL1048	TARGET CAM	1
25	6384	SET SCREW CUP SKT 0.19-32x0.5	1
26	6476	#10-32 x .375" BHSC	2
27	6734	#10 STAR WASHER	2
28	IA1053	MAGNET R822CS-N	1
29	AA6819	#4-40 X .25" PFHMS	1
30	6344	SET SCREW CUP SKT 0.19-32x0.25-HX-N	1
31	6876	5/16 X 1/4 SHOULDER BOLT	1
32	6800	1/4-20 X .5 BHCS (BLACK)	4
33	6053	1/4 SPLIT LOCKWASHER	4
34	BL3033	RESET STOP RIGHT	1
35	BL4009	RESET BUMPER	1
36	E02907BLX	ASY (LIMIT SWITCH)	1
37	655S	#8 x 5/8 SQ. DRIVE (SILVER)	1
38	6158	#6 FLAT WASHER	1
39	AA6915	1/4-20 X 2-1/4 PFHMS FULL THREAD ZINC	1
40	6498	SPACER TUBE 1/4x1/2x11/16 L	1
41	PC60604	025-20 NYLOCK JAM NUT	1
42	AA6831	8-32 X 3/4 PPHMS	14
43	6004	8-32 x 1/2 PRHMS (BLACK)	4
44	AA6676	8-32 X 3/4 PFHMS	3
45	6380	#4 x 3/8" PH PAN TY AB SCREW	8

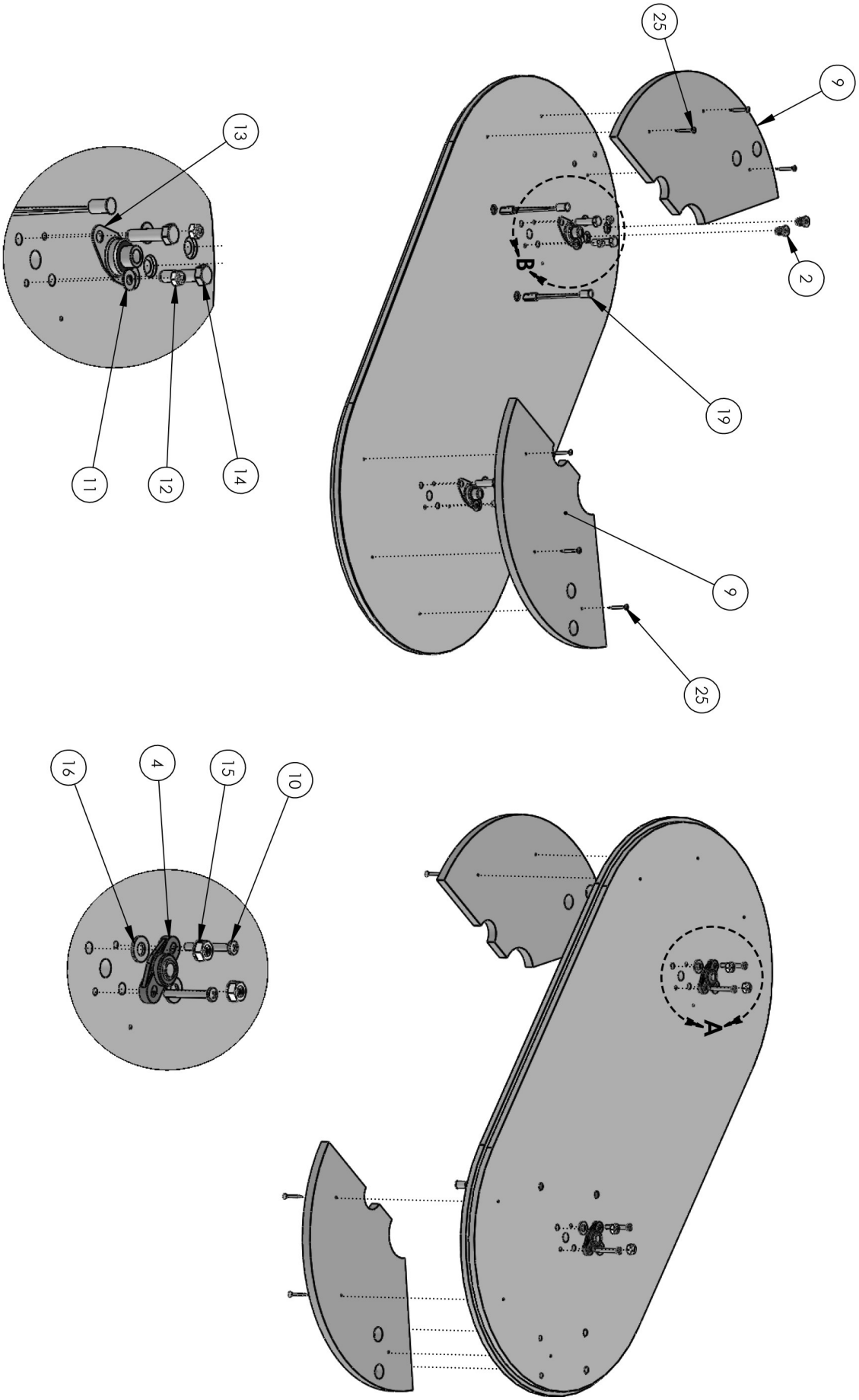


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	PC60631	025-20 CABINET INSERT (J50115)	1
2	BL3069	TARGET SHELF	1
3	6061	8-32 CAB INSERT (J-50111)	19
4	BL1006-1	HINGE	1
5	BL1008-2	BOTTOM TARGET HINGE	1
6	BL4012	TARGET (SMALL) ASSEMBLED	5
7	BL3018	CATPUNK SMALL BASE	5
8	CG2010	ACTUATOR	5
9	6703	#8-32 x 2-1/4" LG PPHMS (18-8SS)	10
10	6004a	8-32 KEP NUT	10
11	6634	#4 X 3/4 PFH WOOD SCREW BLACK	10
12	CG2012	SENSOR	5
13	BL1056	TARGET LINKAGE	1
14	BL3033	RESET STOP RIGHT	1
15	BL7023	LED COVER	1
16	BL1063	LOWER SHELF LED HOLDER	1
18	E00838BLX	ASY (5V RGB LED)	5
19	6554	4-40 x 1/4 HH SPACER	10
20	BL3033	RESET STOP RIGHT	1
21	BL4009	RESET BUMPER	1
22	E02907BLX	ASY (LIMIT SWITCH)	1
23	655S	#8 x 5/8 SQ. DRIVE (SILVER)	1
24	6158	#6 FLAT WASHER	1
25	BL1042	TARGET RESET BRACKET	1
28	FB2008X	ASY (TARGET MOTOR)	1
29	BL1048	TARGET CAM	1
30	6384	SET SCREW CUP SKT 0.19-32x0.5	1
31	6476	#10-32 x .375" BHSC	2
32	6734	#10 STAR WASHER	2
33	IA1053	MAGNET R822CS-N	1
34	AA6819	#4-40 X .25" PFHMS	1
35	6344	SET SCREW CUP SKT 0.19-32x0.25-HX-N	1
36	6876	5/16 X 1/4 SHOULDER BOLT	1
37	6800	1/4-20 X .5 BHCS (BLACK)	4
38	6053	1/4 SPLIT LOCKWASHER	4
39	AA6915	1/4-20 X 2-1/4 PFHMS FULL THREAD ZINC	1
40	PC60604	025-20 NYLOCK JAM NUT	1
41	AA6831	8-32 X 3/4 PPHMS	14
42	6004	8-32 x 1/2 PRHMS (BLACK)	4
43	AA6676	8-32 X 3/4 PFHMS	3
44	6380	#4 x 3/8" PH PAN TY AB SCREW	10





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	BL3097	BALL GATE BASE	1
2	PC60631	025-20 CABINET INSERT (J50115)	2
3	BL1054X	BALL GATE MOTOR ASSEMBLY	1
4	BL3005	igubal®, EFOI-06	2
5	BL1060	GATE CAM	2
6	BL1058	CONNECTING LINKAGE	1
7	BL3028X	PRIMARY BALL GATE ASSEMBLY	1
8	BL3021X	SECONDARY BALL GATE ASSEMBLY	1
9	BL3088	BOTTOM SPACER	2
10	6148	10-24 x 1-1/2" LG. PHMS	4
11	6020	#10 FLAT WASHER USS (#12 SAE)	4
12	6086	NYLOCK JAM NUT 10-24	4
13	WK1050	BEARING (CONVEYOR ROLLER)	2
14	6409	5/16-18 x 1-1/4 HHMB G8	4
15	PC60638	5/16-18 KEPNUT	4
16	6823	5/16" FLAT WASHER	4
17	6879	10-32 x 3/16" SHCS	4
18	6876	5/16 X 1/4 SHOULDER BOLT	3
19	E02907BLX	ASY (LIMIT SWITCH)	2
20	6799	1/4-20 X 7/8 BHCS (BLACK)	2
21	6053	1/4 SPLIT LOCKWASHER	2
22	6211	1/4-20 x 1-1/4" LG. BSHCS	2
23	6075	1/4 x 3/4 FLAT WASHER ZINC (USS)	2
24	PC60614	025-20 KEP NUT	2
25	6030	DRYWALL SCREW 1.25	6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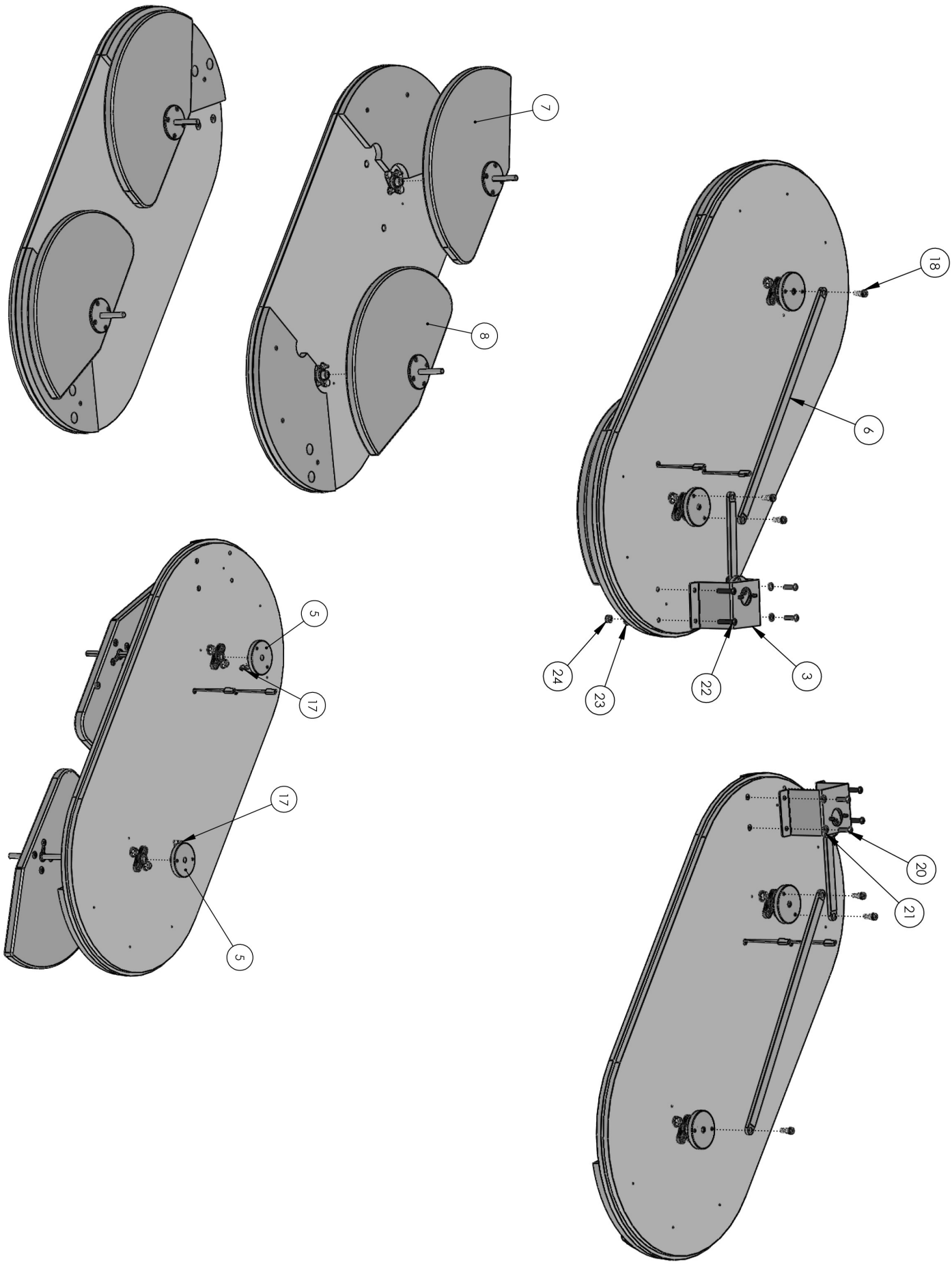
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Parts List

AA5001A8X	ASY COIN DOOR O/U BLACK W/ DUAL
AA5008	TICKET DOOR
AA5014	LOCK (7/8 CAMLOCK) ,45
AA7137	DECAL (COIN)
AA7138	DECAL (TICKET)
AR2007	SPEAKER (ROHS) (6X9) U694 W/ .
BL1006	HINGE (TARGET TOP)
BL1007	HINGE (TARGET MIDDLE)
BL1008	HINGE (TARGET BOTTOM)
BL1010-P300	CAGE SIDE (LEFT)
BL1011-P300	CAGE SIDE (RIGHT)
BL1013-P300	CAGE CONNECTOR
BL1019-P300	DEFLECTOR (LED / BALL)
BL1030-P300	TENT POLE (REAR)
BL1033-P300	TENT POLE (FRONT)
BL1042-P802	BRACKET (TARGET RESET)
BL1045-300	BRACKET (FRONT SHELF SUPPORT)
BL1048	CAM (TARGET)
BL1053	BRASS GROMMET
BL1056	LINKAGE (TARGET)
BL1059-P802	BRACKET (LED MOUNT SHELF TOP)
BL1062-P802	BRACKET (LED MOUNT SHELF MIDDLE)
BL1063-P802	BRACKET (LED MOUNT SHELF BOTTOM)
BL1075	MOTOR ARM
BL1078	CHARACTER MOUNT
BL1079-P700	FLYING CHARACTER
BL1080	CHARACTER MOVING BLOCK
BL1081	TRACK STANDOFF
BL1082	IDLER PULLY
BL1083	MOTOR ARM PIVOT
BL1085-P700	BRACKET (CANNON)
BL1086	SPRING
BL1332X	ASY, CHEAT SENSOR
BL2007X	ASY (POWER MOD 2.5 AMP)
BL2032X	PCBA (DISPLAY 2 DIGIT)
BL2034X	PCBA (I/O)
BL2036X	PCBA (RESISTOR BOARD)
BL2050HX	HARNESS (MAIN)
BL2060LX	HARNESS (DC POWER)
BL2080ELX	HARNESS (SCORE DISPLAY)
BL2080LX	HARNESS (BONUS SCORE DISPLAY)
BL2081EMX	HARNESS (CLOWN SENSOR EXTENSION)
BL2081HX	HARNESS (CLOWN SENSOR)
BL2082LX	HARNESS (BALL GATE/ZERO COUNT)
BL2083LX	HARNESS (BALL GATE MOTOR/SENSOR)
BL2084EMX	HARNESS (SHELF MOTORS EXTENSION)
BL2084HX	HARNESS (SHELF MOTORS)
BL2085HX	HARNESS (BONUS DISPLAY/LED)
BL2085ILX	HARNESS (BONUS DISPLAY/LED INTER
BL2087ELX	HARNESS (CLOWN RGB LED EXTENSION

BL2087HX	HARNESS (CLOWN RGB LEDS)
BL2088ILX	HARNESS (STEPPER MOTOR INTERFACE
BL2088LX	HARNESS (STEPPER MOTOR)
BL2089ELX	HARNESS (CHEAT EXTENSION)
BL2089ILX	HARNESS (CHEAT INTERFACE)
BL2091ELX	HARNESS (BONUS LED EXTENSION)
BL2091LX	HARNESS (BONUS LED)
BL3002	DISPLAY COVER (LARGE)
BL3006	BALL GATE FENCE (SECONDARY)
BL3007	BALL GATE FENCE (PRIMARY)
BL3010	CAGE FACE (LEFT)
BL3011	CAGE FACE (RIGHT)
BL3013	REBOUND GUARD
BL3018	TARGET BASE (BOTTOM)
BL3019	TARGET BASE (MIDDLE)
BL3020	TARGET BASE (TOP)
BL3023	VACUUM CAP
BL3025	VACUUM CAP
BL3040	BALL DIVERTER (LEFT)
BL3041	BALL DIVERTER (RIGHT)
BL3097X	ASY (BALL GATE)
BL4001	BELT MATERIAL
BL4010X	TARGET (LARGE) FULL ASY
BL4011X	TARGET (MEDIUM) FULL ASY
BL4012X	TARGET (SMALL) FULL ASY
BL4015	CARPET (DOOR FRAME)
BL4016	CARPET (REAR DOOR)
BL7009	DECAL (REBOUND GUARD)
BL7016	INSERT (1 DOLLAR)
BL7017	INSERT (2 DOLLAR)
BL7018	INSERT (2 TOKENS)
BL7020	PLAQUE (SKILL GAME)
BL7022	CLOWN SHELF (TOP)
BL7023	CLOWN SHELF MIDDLE
BL7024	CLOWN SHELF BOTTOM
BL7027	BONUS MARQUEE BACK
BL7028	DECAL (CARNIE MARQUEE)
BL7029	BONUS MARQUEE FRONT
BL7030	MARQUEE
BL7032	DECAL (CANNON MARQUEE)
BL7032M	CANNON GRAPHIC BACKING
BL7038	PLAQUE FRONT CABINET
BL7043	DECAL (MARQUEE TICKET 250)
BL7044	DECAL (MARQUEE TICKET 500)
BL7046	INSERT (SWIPE CARD)
BL7055	DECAL (FRONT CABINET CLOWN)
BL7056	DECAL (TICKET DOOR)
BL7057	DECAL (ICE LOGO)
BL7064	PLAQUE INSERT (CNTL PANEL 250)
BL7065	PLAQUE INSERT (CNTL PANEL 500)
BL7072	SCORE INSERT ($1)
BL7073	SCORE INSERT (50 CENTS)

BL7075	SCORE INSERT ($2.00)
BL7080	DECAL (PACKAGE LABEL)
BL7081	DECAL (PARTS BOX)
BL7082	DECAL (SMALL PARTS)
BL7083	DECAL (PLAQUE PACKAGE)
BL7084	DECAL (PARTS BOX COVER)
BL7086	DECAL (CONTROL PANEL)
BL7087	PLAQUE (CONTROL PANEL BONUS)
BL7088	PLAQUE (CONTROL PANEL SCORE CHAR
CB2232X	PCBA (DISPLAY)
CG2012BLX	ASY (SENSOR)
E00668	LED PCBA WHITE
E00672	LED PCBA GREEN
E00724BLX	ASY (144 RGB LED STRIP)
E00732	LED PCBA RED 500-00065-01
E00788BLAX	ASY (WHITE 87 LED TAPE STRIP)
E00788BLBX	ASY (WHITE 12 LED TAPE STRIP)
E00788BLX	ASY (WHITE 30 LED TAPE STRIP)
E00838BLX	ASY (5V RGB LED)
E00847	LED PCBA BLUE
E00848	LED PCBA YELLOW
E02907BLX	ASY (LIMIT SWITCH)
E08422BLX	ASY (MOTOR HOME SWITCH)
E2034X	PCBA (ARM 7 BRAIN BOARD)
FB2008X	ASY (TARGET MOTOR)
FP2007	SPEAKER (4/4 OHM ROUND) .18
HD1052	CASTER (3 SWIVEL) PSQ3001ZN-3
HH5005	TICKET DISPENSER (ENTROPY)
IA2010	POWER SUPPLY +12VDC 10A (ROHS)
MA3006	T MOLDING (25/32 YELLOW) 105-2
MJ2063LX	HARNESS (MAIN AC)
MJ2068LX	HARNESS (POWER SUPPLY AC)
MJ3335	FINGER GUARD
ML2032X	PCBA (DISPLAY) RED LED DIGITS
ML3024	BALL RED 2.8" (MEDIUM/SOFT)
RR2011X	ASY (STEPPER MOTOR)
UC2010	POWER SUPPLY (PS-1)

WARRANTY POLICY

I.C.E. Inc warrants all components in new machines to be free of defects in materials and workmanship for the period listed below:

- 180 days on Main PCB's, Computers & Motors
- 1 year on all LCD monitor panels
- 90 days on all other electronic and mechanical components
- 30 days on all I.C.E. repairs and parts purchases

I.C.E. Inc shall not be obligated to furnish a warranty request under the following conditions:

- Equipment or parts have failed through normal wear and tear
- Equipment has been subjected to unwarranted stress, abuse or neglect
- Equipment has been damaged as a result of arbitrary repair/modification

Products will only be covered under warranty by obtaining an I.C.E. authorized RMA #. To obtain an RMA # please provide I.C.E. tech support with the game serial # or original I.C.E. invoice # and a detailed description of the failure or fault symptoms.

I.C.E. Inc will assume no liability whatsoever for costs associated with labor or travel time to replace defective parts. All defective warranty covered components will be replaced with new or factory refurbished components equal to OEM specifications.

I.C.E. Inc will cover domestic UPS ground, or comparable shipping costs during the warranty period. International or expedited shipments are available for an additional charge. To obtain credit defective parts must be returned to I.C.E. Inc, at the customer's expense, within 30 days. After 30 days a 15% re-stocking fee will apply to all returns.

ICE distributors are independent, privately owned and operated. In their judgment, they may sell parts and/or accessories other than those manufactured by I.C.E. Inc. We cannot be responsible for the quality, suitability or safety of any non-I.C.E. part or modification (including labor) that is performed by such a distributor.

Innovative Concepts in Entertainment

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