OPERATOR MANUAL

Version 21

HYPERpitch

PLEASE NOTE

Read this manual before operating the machine.

Visit www.laigames.com for support.

Correspondence regarding this machine should be addressed to your closest LAI Games office, or LAI Games Distributor.
For contact details, refer to the back page of this manual.

Table of Contents

5

SAFETY PRECAUTIONS

The following safety precautions and advisories used throughout this manual are defined as follows.

WARNING: Disregarding this text could result in **serious injury**.

CAUTION: Disregarding this text could result in damage to the machine.

NOTE: An advisory text to help understand.

PLEASE READ THE FOLLOWING

WARNING: **Always** turn **OFF** Mains AC power and unplug the game before opening or replacing any parts.

Always grasp the plug, not the line cord, when unplugging the game from an electrical outlet.

Always connect the Game Cabinet to a grounded electrical outlet with a securely connected ground line.

Do Not install the Game Cabinet outdoors or in areas of high humidity, direct water contact, dust, high heat or extreme cold.

Do Not install the Game Cabinet in areas that would present an obstacle in case of an emergency, i.e. near fire equipment or emergency exits.

Do Not place containers of liquid on any surface of the machine, especially those near electrical components

CAUTION: **Always** use a Digital Multimeter, logic tester or oscilloscope for testing integrated circuit (IC) logic PC boards. The use of a continuity tester is not permitted.

Do Not connect or disconnect any of the integrated circuit (IC) logic PC boards while the power is **ON**.

Do Not use any fuse that does not meet the specified rating.

Do Not subject the game cabinet to extreme temperature variations. Reliability of electrical components deteriorates rapidly over 60 ºC.

INTERNAL WARNING LABELS AND NOTIFICATIONS

MAINS VOLTAGE WARNINGS

COIN DOOR WARNINGS

⚠️**WARNING**

Risk of Electric Shock.

Disconnect all power before servicing.

⚠️**WARNING**

Shock Hazard.
Do Not Open.

Refer servicing to service personnel.

⚠️**WARNING**⚠️

If operated with a coin mechanism, this appliance is not to be operated without a NRI G.13 (or equivalent) Coin Mechanism.

⚠️**WARNING**⚠️

If operated with a DBA, this appliance is not to be operated without a MARS AE2611 (or equivalent) Dollar Bill Acceptor (DBA).

⚠️**DANGER**

Risk of Electric Shock.

Disconnect all power before installing coin or credit mechanism.

⚠️**WARNING**

Shock Hazard.
Do Not Open.

Refer servicing to service personnel.

PINCH POINT WARNINGS

FUSE WARNINGS

These warnings are located near the fuses installed in the machine.

⚠ CAUTION

For continued protection against risk of fire, replace **only** with a fuse of the same type and having same electrical rating.

MAIN FUSE
F3A, 250V

MAIN FUSE
F6A, 125V
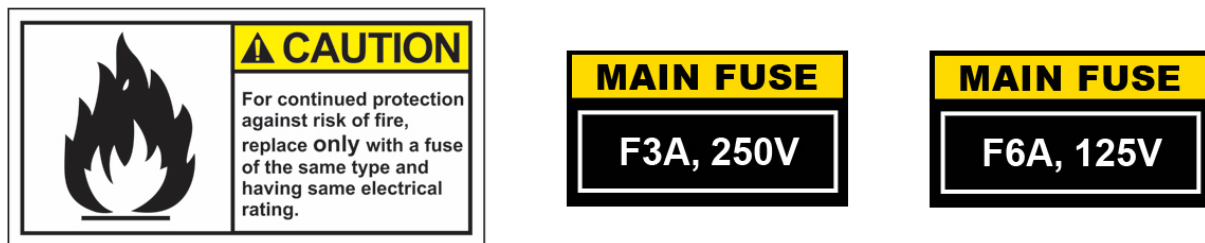
CARD READER INSTALLATION NOTIFICATIONS

⚠ CARD SYSTEM CONNECTION ⚠
(SEE ALSO TICKET DOOR HARNESS)

To ticket mech, Paper tickets

Intended for use with UCL compatible credit systems.

⚠ NOTES FOR OPERATION WITH A CARD SYSTEM ⚠

1. DISCONNECT THE TICKET MECHS IF OPERATING ELECTRONIC TICKETS ONLY.

2. IF THE CARD SYSTEM WILL DISPENSE PAPER TICKETS, THEN PERFORM THE FOLLOWING STEPS:

   • CONNECT THE CARD SYSTEM TICKET HARNESS (LOCATED IN THE MAIN CABINET INSIDE THE TICKET DOOR) INLINE WITH THE TICKET MECHS.

   • CONNECT "TKT GAME1" TO "TICKET 1"

   • CONNECT "TKT GAME2" TO "TICKET 2"

   • CONNECT "TKT MECH1" TO "TICKET DISPENSER 1"

   • CONNECT "TKT MECH2" TO "TICKET DISPENSER 2"

9

MACHINE INSTALLATION AND INSPECTION

When installing and inspecting *HYPERpitch*, be very careful of the following points and pay attention to ensure that the players can enjoy the game safely.

- Be sure to turn the power **OFF** before working on the machine.

> **WARNING:** <u>Always</u> turn **OFF** mains power before removing safety covers and refit all safety covers when work is completed.

- Make sure the power cord is not exposed on the surface (floor, ground, etc.) where people walk.

- Check that the rubber glide feet levellers are set correctly on the floor so that the game cabinet is level and stable.

- Always make complete connections for the integrated circuit (IC) logic PC Boards and other connectors. Insufficient insertion can damage the electrical components.

- Only qualified personnel should inspect or test the integrated circuit (IC) logic PC Boards.

- If any integrated circuit (IC) logic PC Boards should need servicing, please contact the nearest LAI Games Distributor (refer to the back page of this manual).

PARTS DETAILED

LONG CABINET

- ASSY-Hyper Pitch Header
- Chaser Intermid Connect-1- COATED
- ASSY-Front Chaser Mid
- ASSY-Front Rigid Frame
- ASSY-Header Display
- ASSY-ChaserLight_Front
- ASSY-Front Ball Protection
- Assy-Score Display RH
- ASSY-Display Arm RH
- ASSY Front Cabinet
- ASSY-Rear Rigid Frame
- Assy-Light Box
- ASSY-Rear Chaser
- ASSY-Ball direction 1
- ASSY-Side Cover 5
- ASSY-Rear MAIN Cabinet
- ASSY-External Rigid Support
- Assy-Score Display LH
- ASSY-Display Arm LH

SPLIT CABINET

- ASSY-Front Chaser Mid
- Chaser Intermid Connect-1- COATED
- Ball Direction 2 RH
- Ball Direction 2 LH
- ASSY-Hyper Pitch Header
- ASSY-Rear Chaser
- ASSY-Side Cover 5
- ASSY-Header Display
- ASSY-Front Rigid Frame
- ASSY-External Rigid Support
- ASSY-Front Ball Protection
- Assy-Score Display RH
- ASSY-Chaser Light_Front
- ASSY-Display Arm RH
- ASSY Front Cabinet
- ASSY-Display Arm LH
- Assy-Score Display LH
- Assy-Light Box
- ASSY-Ball direction 1
- ASSY-Rear Rigid Frame
- ASSY-Back Cabinet Frame
- ASSY-Side Cover 5
- ASSY-Track Frame Joiner LH
- ASSY-Mid Cabinet Frame
- ASSY-External Rigid Support

11

ASSEMBLY INSTRUCTIONS

TOOLS REQUIRED

- 1x Allen Key 2.5mm
- 1x Allen Key 3mm
- 1x Wrench 8mm
- 1x Wrench 10mm
- 1x Wrench 17mm
- 1x Phillip Screw Driver

STEPS

LONG CABINET

1. Unpack the game and dismount all of the parts from the rear cabinet.
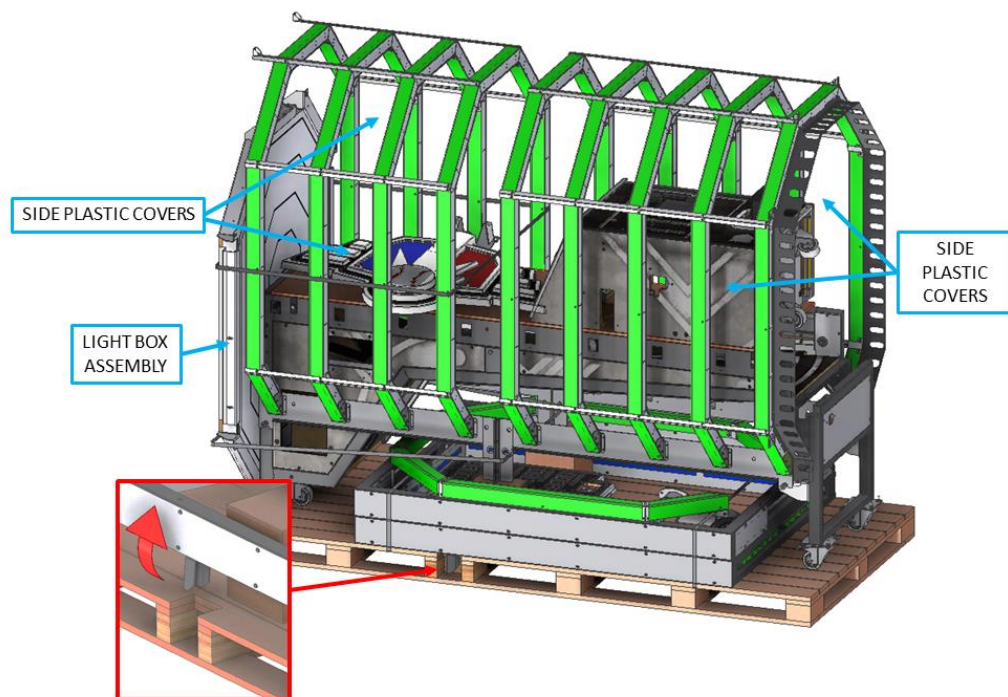
CAUTION:	The light box assembly should be supported before cutting the plastic straps to prevent it from falling backwards. During unpacking take care not to scratch or damage any parts during carrying and pulling of parts. Be careful not to scratch the chaser's internal side plastic cover when pulling parts from the wooden platform.
WARNING:	When removing the front cabinet (A) from the machine it is suggested to use 3 people. Weight is approx. 115lbs (53kg).
WARNING:	When placing the game into its permanent position, please ensure there is adequate space for players to safely pitch a ball.
NOTE:	Mounting screws and bolts have been pre-installed in their final positions. Be sure to remove mounting screws and bolts prior to lifting objects into place.

2. Remove the hex bolts as shown below. Do the same procedure at the opposite side of the frame.
3. Pull out and discard the wooden platform together with the brackets, and put aside the 4x hex bolt to use for the next assembly step.
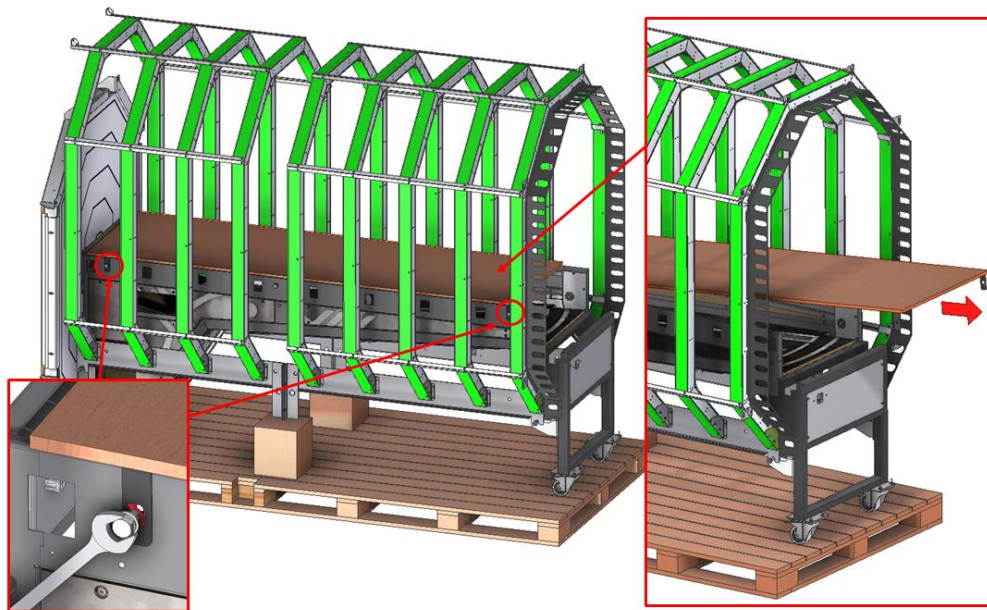
4. Take out the remaining hex bolt as shown below, do the same for the opposite side of the frame.
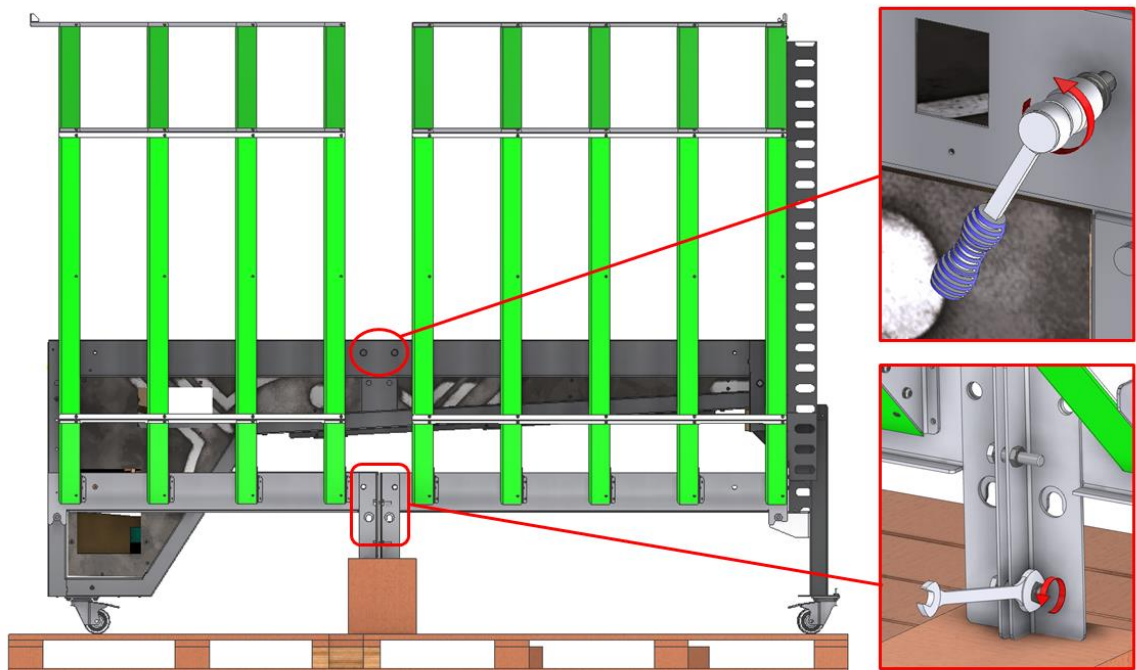
5. First, lift the rear chaser assembly and hook into place.
6. Use back the same hex bolts to secure the sides, do the same from the opposite side of the frame.
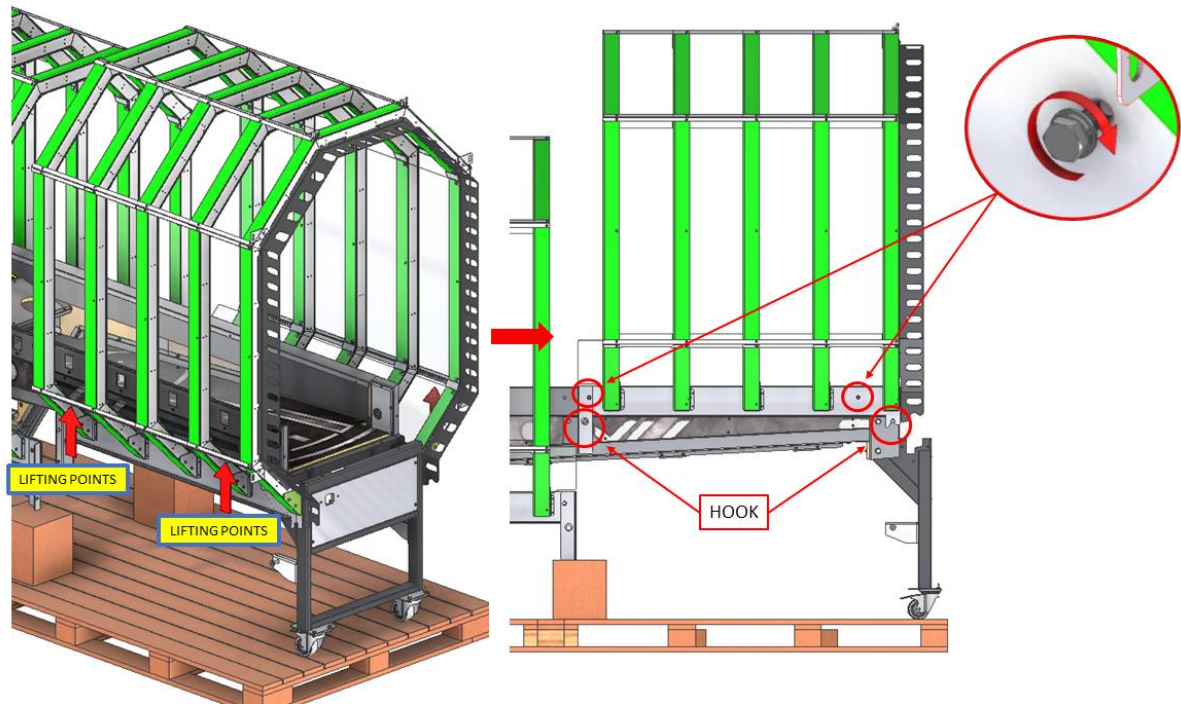
7. Next, lift the front chaser assembly and hook it into place.
8. Reuse the same hex bolts to secure the sides, do the same from the opposite side of the frame.
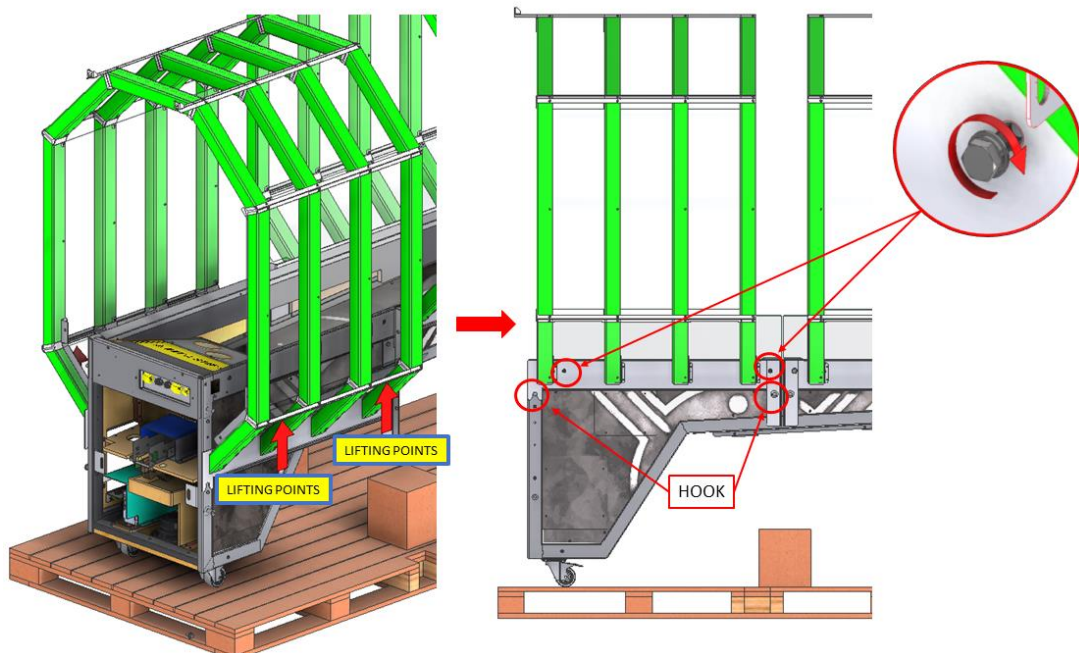
9. Unlock all four sets of caster wheel.
10. Dismount the games rear frame from the pallet to prepare for the next step.
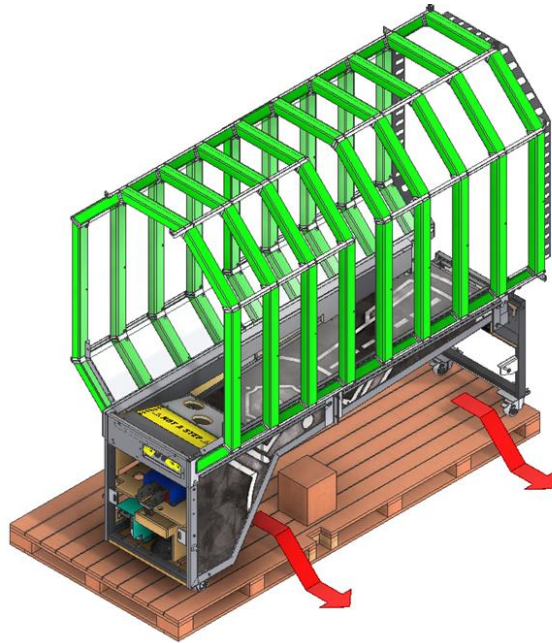
11. Before proceeding to the next assembly steps, lock the caster wheels.
12. Locate Plastic side cover 1 and Plastic side cover 3 take out the necessary Button pan head bolts, do the same at the opposite side.

NOTE: Refer to sequence A to C
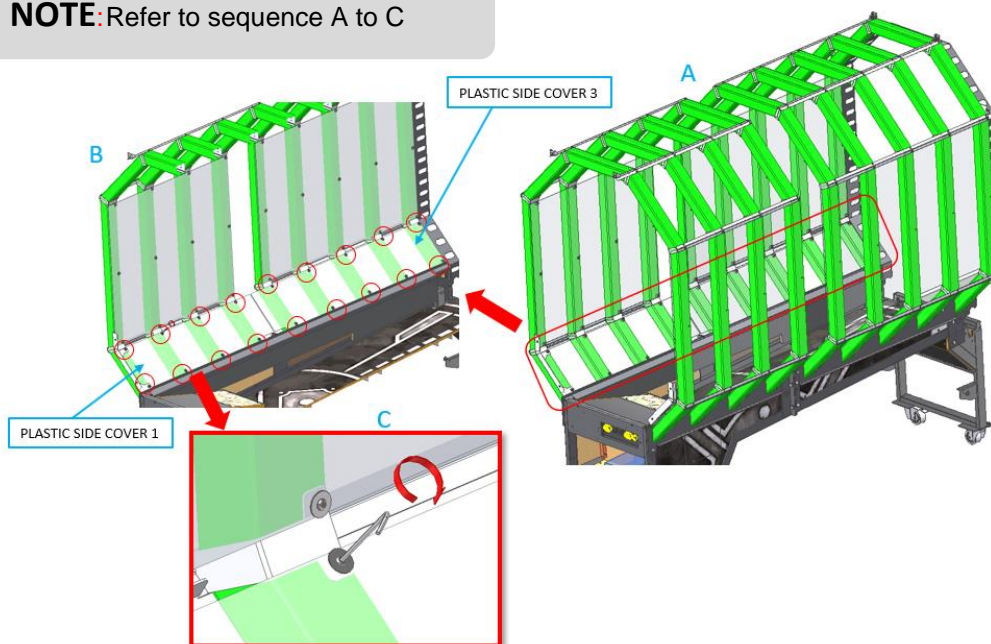
13. Locate the middle connector brackets to join the front and rear chasers, but only take out the necessary Phillip countersunk screws before placing the connector. Repeat the at the opposite side of the top chaser.
14. Locate the middle side covers and repeat the same process as with the mid connectors.

REAR CHASER ASSEMBLY

CHASER MIDDLE SIDE COVER

MIDDLE CONNECTOR

FRONT CHASER ASSEMBLY
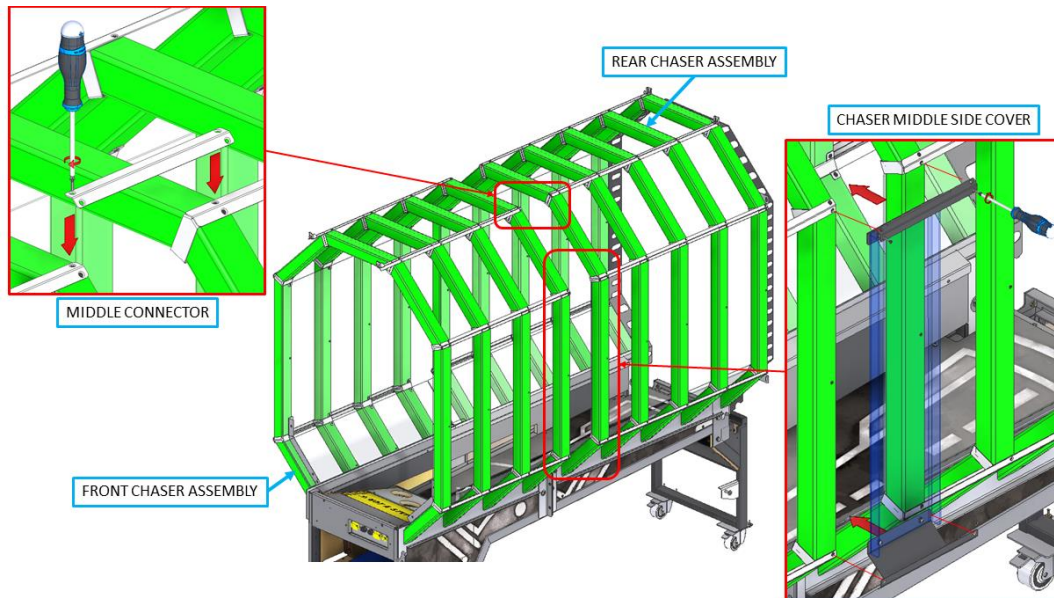
15. Take out the front ball guide cover as shown, and continue to take out the internal side cover to expose the chaser light connectors.
16. Plug in all chaser light connectors, and re-assemble the side cover and ball guide cover.

NOTE: Refer to sequence A to C

A

NOT A STEP

BALL GUIDE COVER

B

INTERNAL SIDE COVER

C
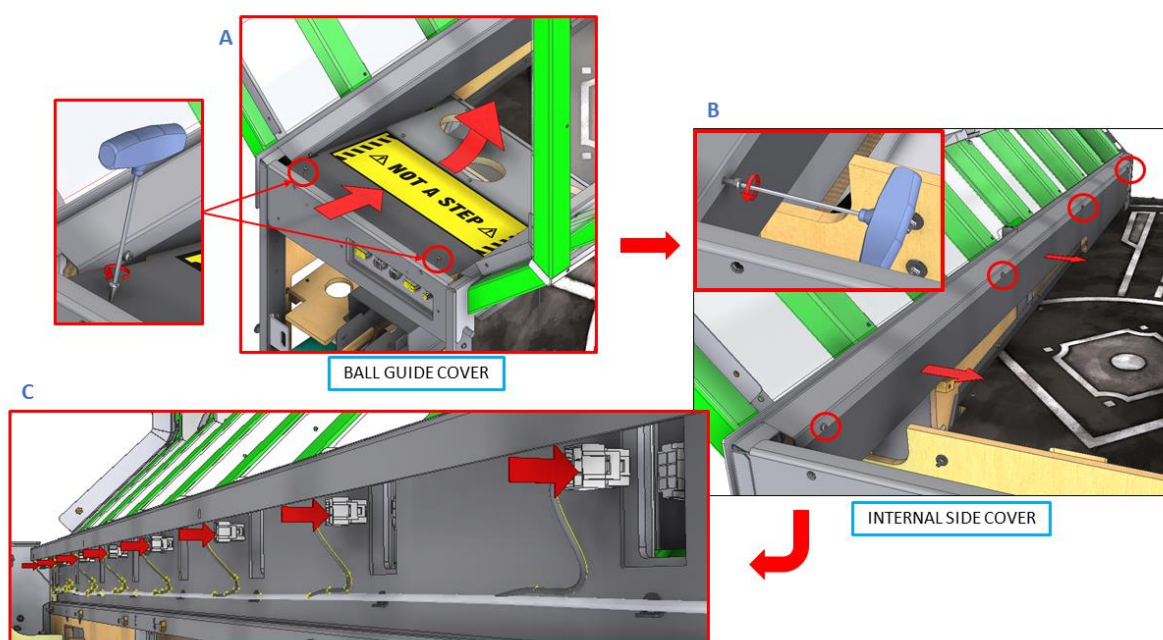
17. Take out the screws from the rear side of the frame as shown.
18. Locate and take out the screws from the ball direction guide.
19. Position and assemble the ball direction guide using the same screws from the previous step.
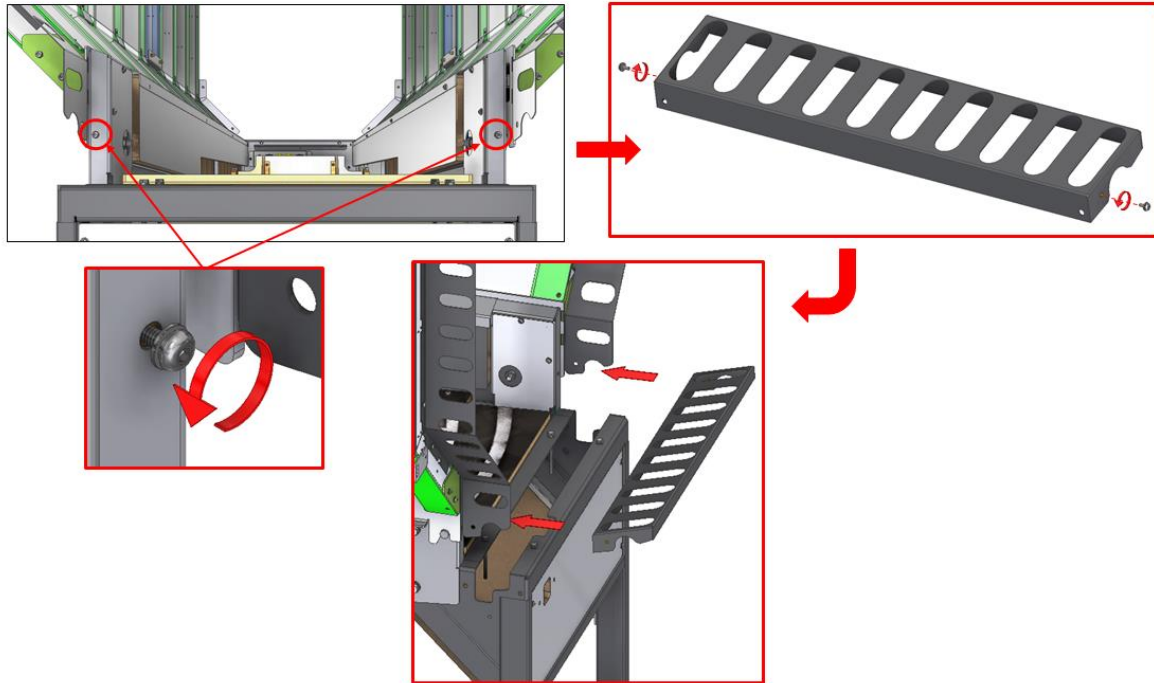
20. Locate the rear rigid frame, and take out all of the fasteners as shown below.

REAR RIGID FRAME ASSEMBLY
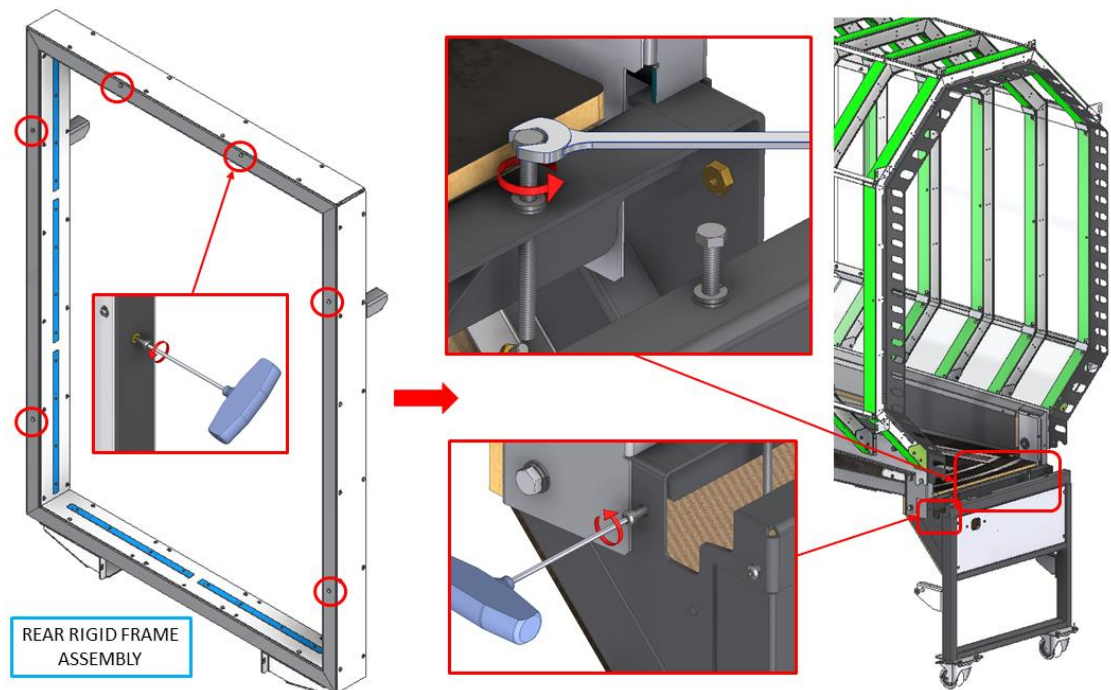
21. Insert the harness into place, making sure that it will not be jam or pinched when the rigid frame is rested into the frame.
22. Align the rear rigid frame and slide it into position, secure the frame using the same screws taken out from the previous steps.

NOTE: Refer to sequence A to C
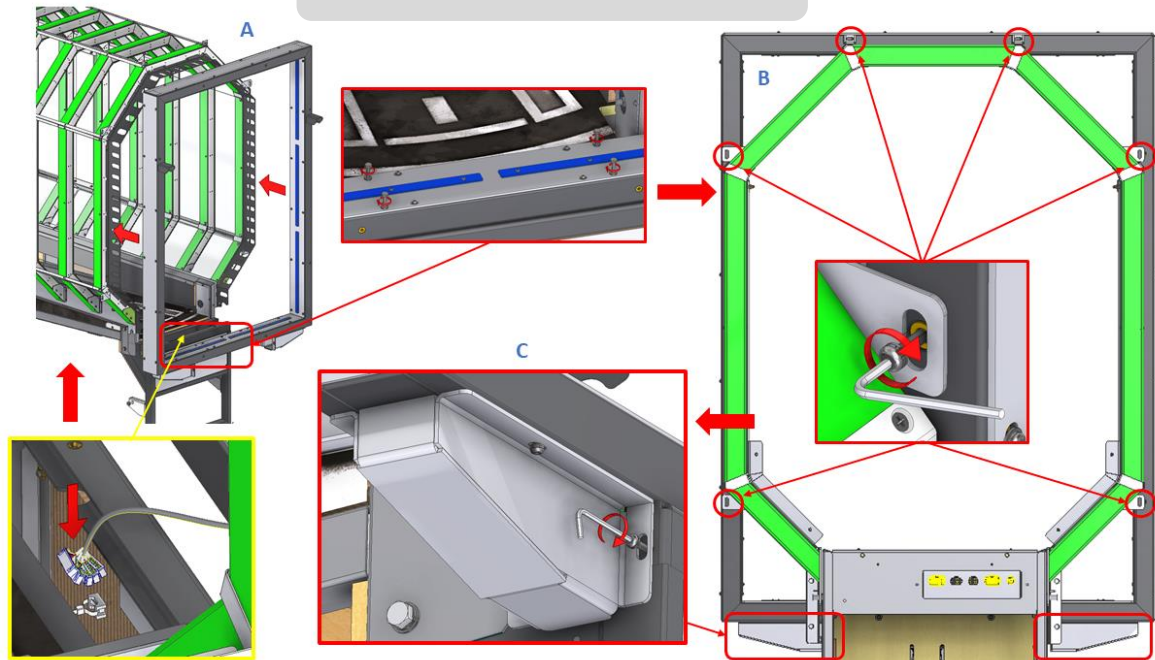
23. Prepare to install the rear target lightbox by taking out all the fasteners as shown below.
24. Position and slide in the lightbox assembly, resting it on the support brackets.
25. Secure the lightbox and reuse the same fasteners taken out from the previous step.

RESTING POINT

SCREW & WASHER MOUNTING SEQUENCE
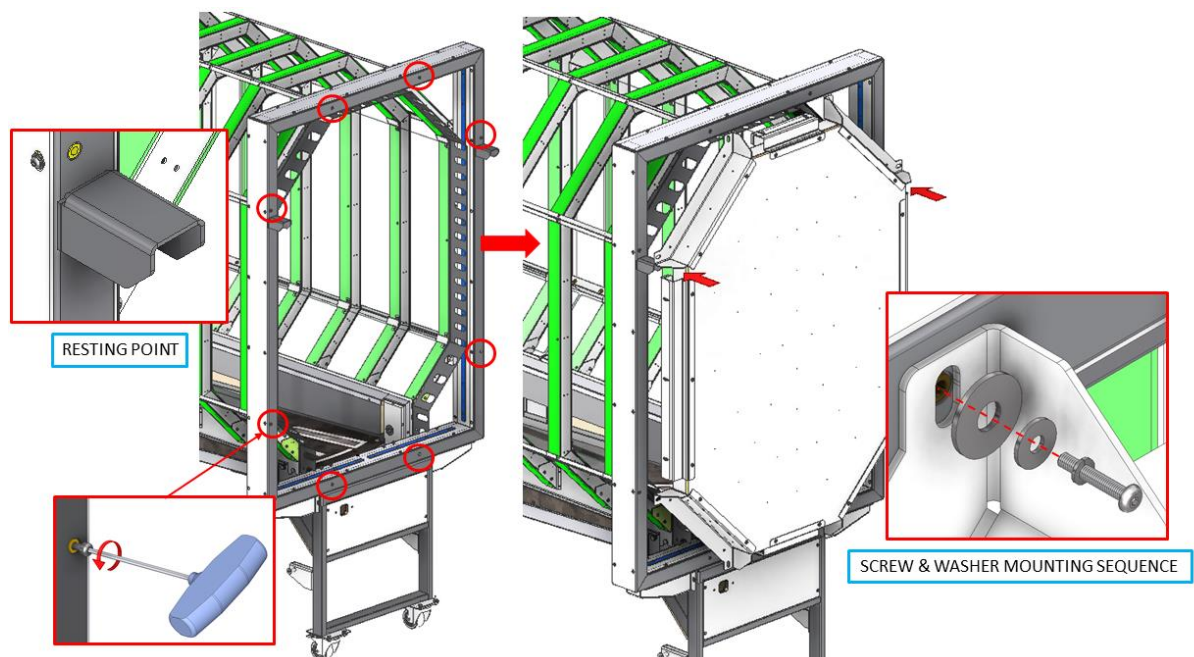
26. Insert lightbox harness into the lower rear access hole of the rear cabinet, and open the PCB bottom cover to access the internal PCB and connectors.
27. Plug all connectors in place by referring carefully to the harness labels and making sure they are in the proper location. Replace the bottom cover.
28. Locate target harness cover and assemble to secure the harness.

NOTE: Refer to sequence A to C
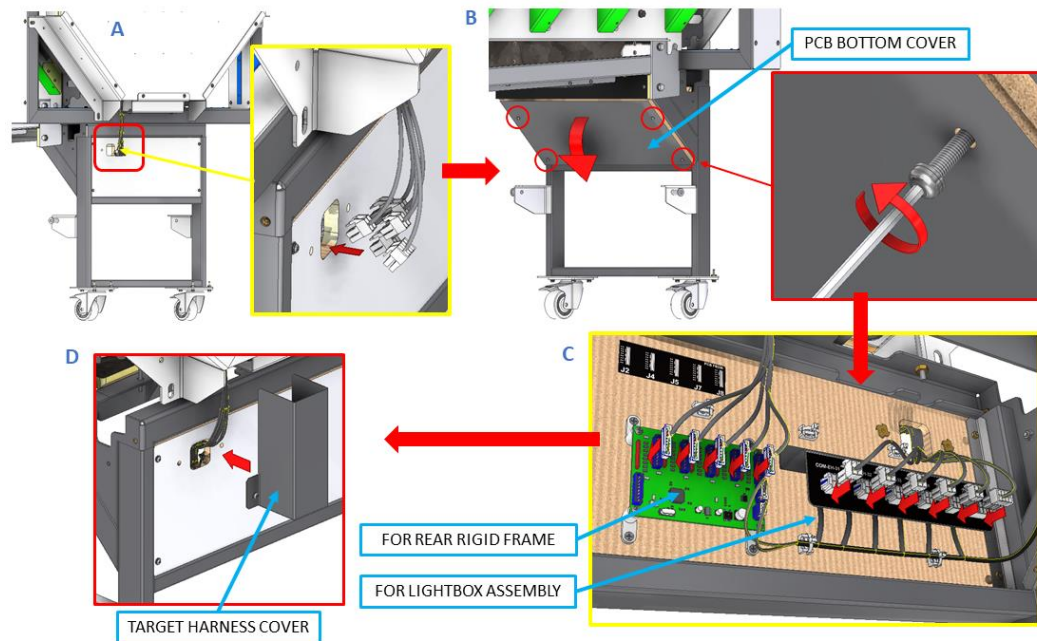
29. Locate the front rigid frame pipe support.
30. Take out all fasteners and assemble the support frame.
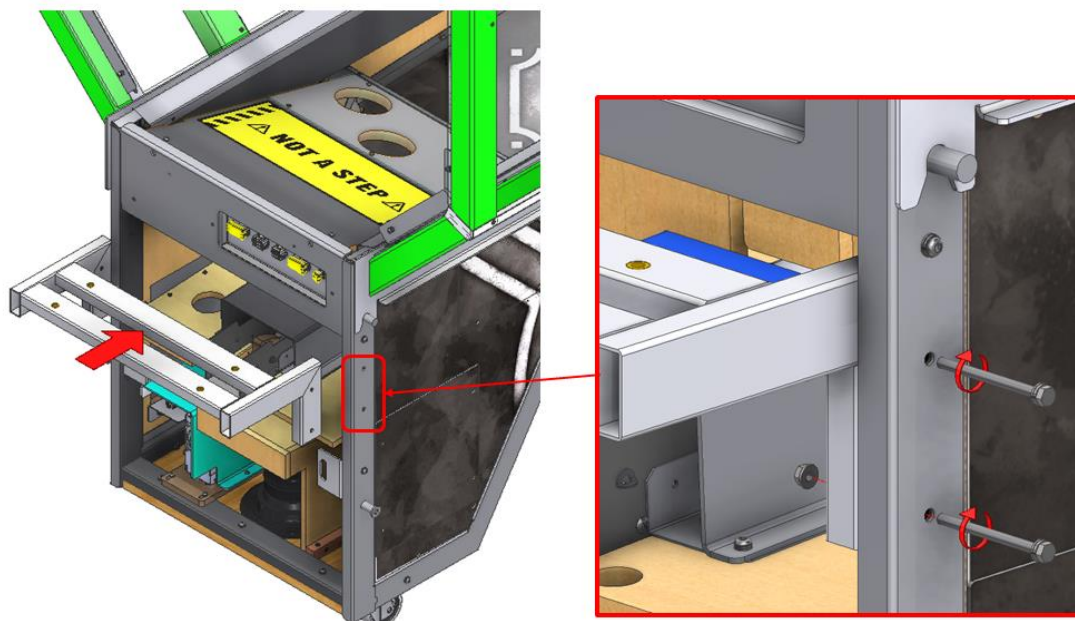
31. Prepare the front rigid frame by taking out all of the fasteners shown below.
32. Insert the harness into place, making sure that it will not jam or be pressed when the front rigid frame is rested on the pipe support.
33. Secure the rigid frame and reuse the same fasteners to assemble.

NOTE: Refer to sequence A to C

TOP REAR MOUNTING POINTS
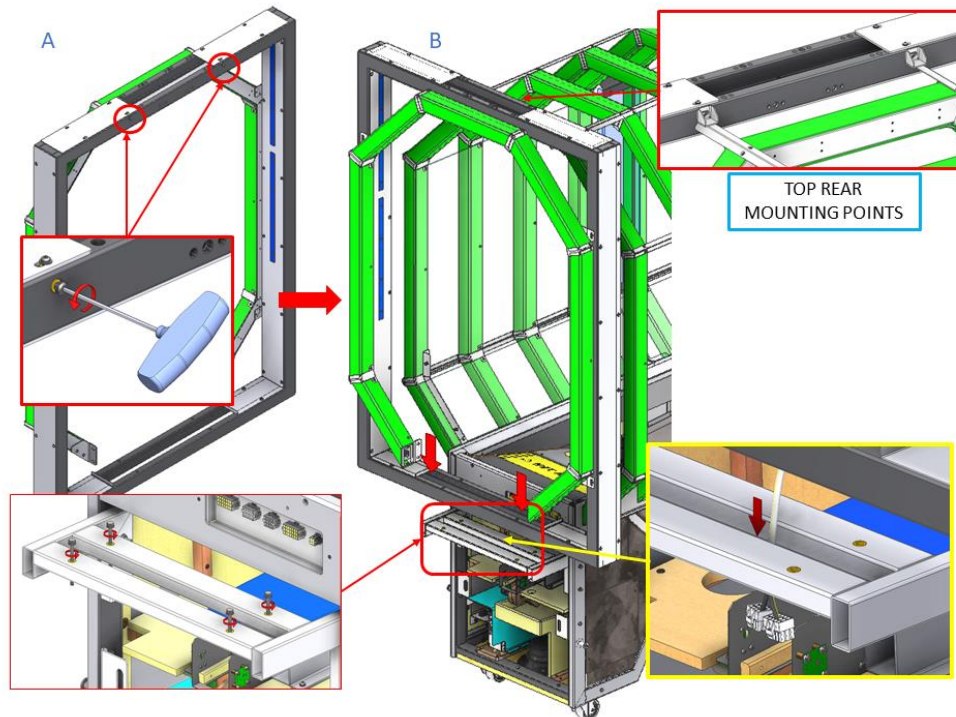
34. Take out the hex bolt fasteners from the front of the rear cabinet frame and the rear of the front cabinet as shown below.
35. Open side access covers and put all fasteners aside.

SIDE ACCESS COVER

SIDE ACCESS COVER
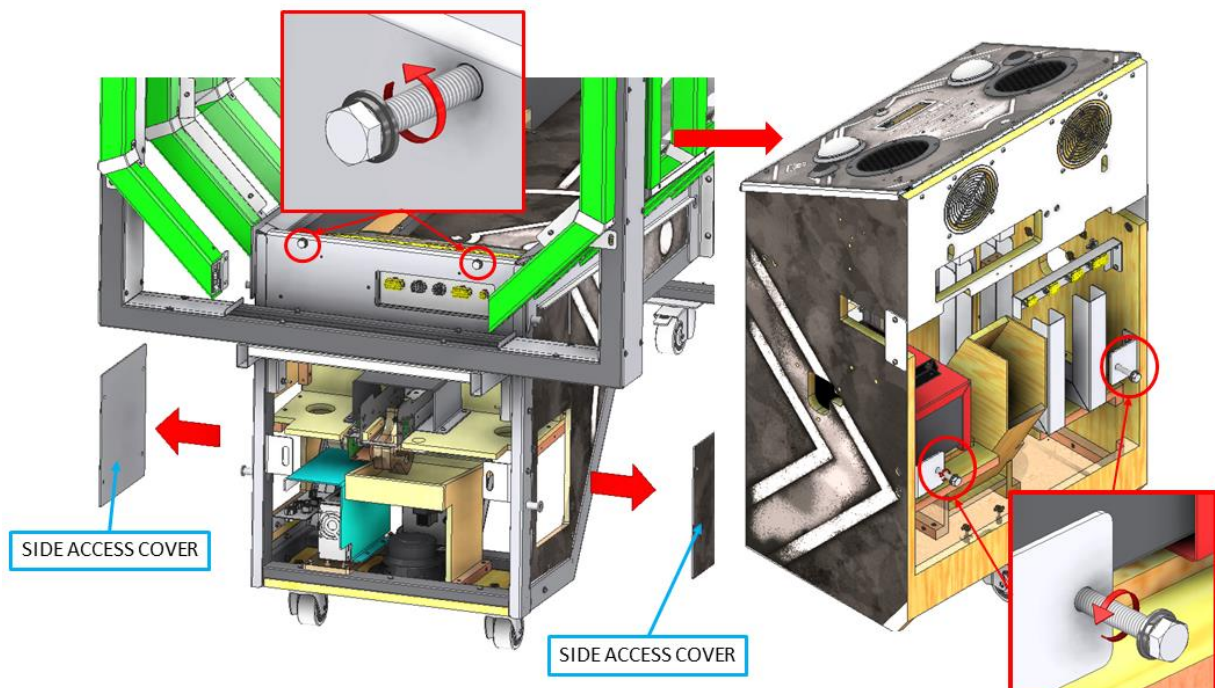
36. Take out the both of the small side covers and another set of screws on both sides of the cabinet.
37. Position, align and push the front cabinet into place untill it's in contact with the rear frame.
38. Secure it using the same hex bolt fasteners removed in the previous step.
39. Replace the two small side covers and secure the front chaser assembly.

SMALL SIDE COVER
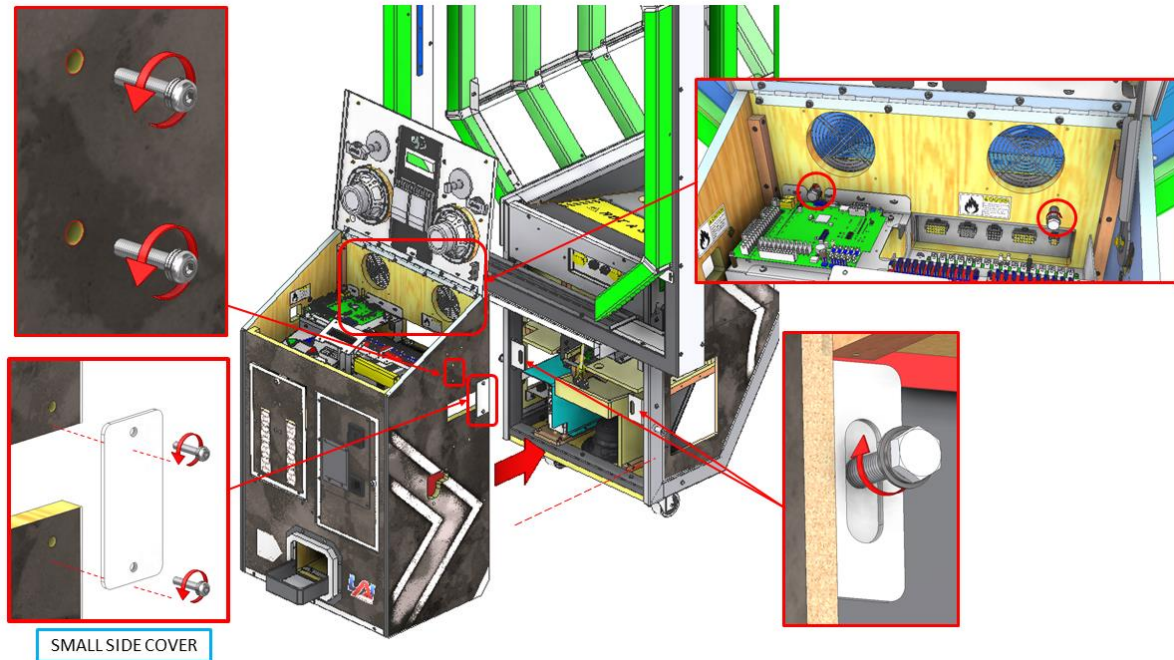
40. Locate the bottom rigid frame support brackets and assemble in place.
41. Take out hex bolt fasteners front the side of the cabinet, align, and assemble the display arm.
42. Repeat the same procedure on the opposite side of the cabinet.
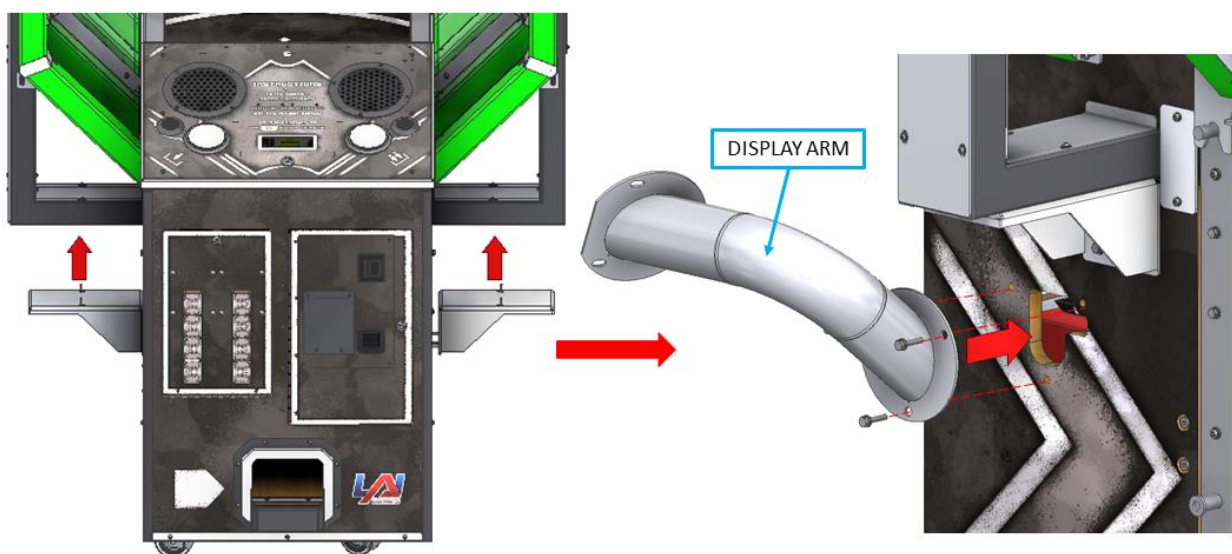
DISPLAY ARM

43. Prepare the side display assembly by taking out the hex nuts.
44. Insert the harness into the display arms and into the cabinet.
45. Secure it using the same hex nuts. Repeat the same procedure on the opposite side of the cabinet.
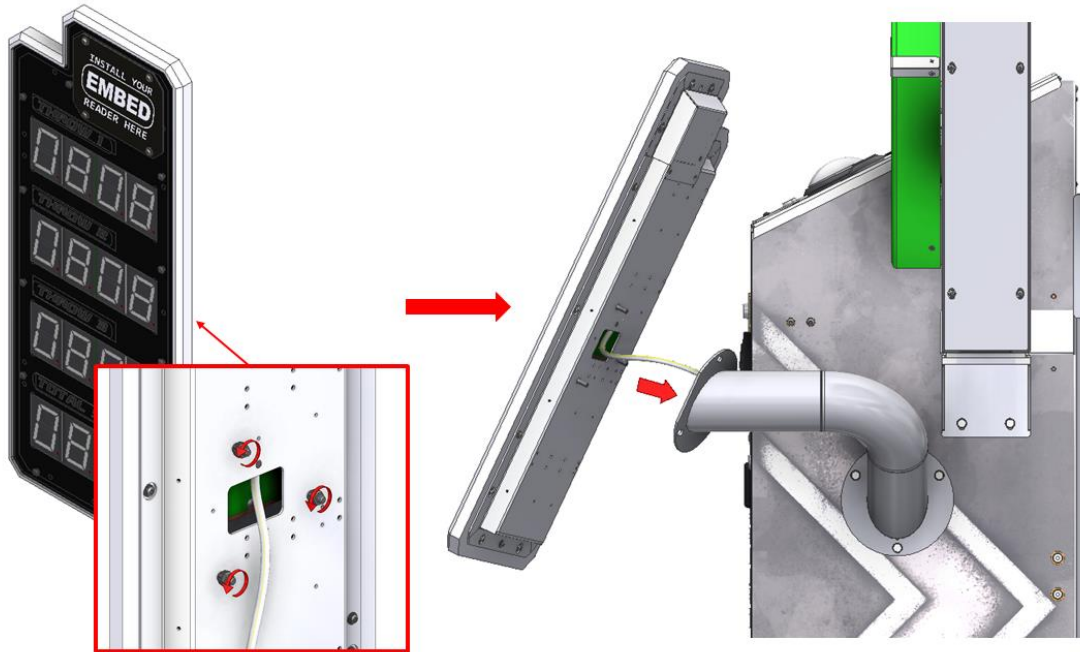
46. Take out all of the hex bolt fasteners at the area of assembly.
47. Locate the top marquee. Align and assemble it using the same fasteners removed in the previous step.
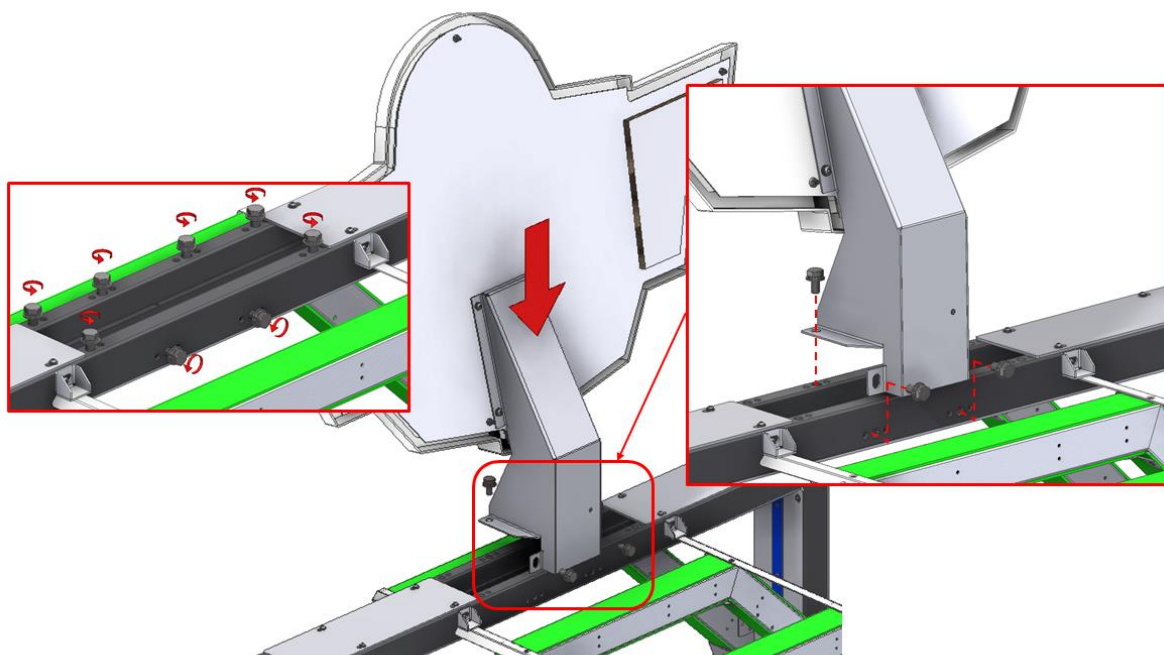
NOTE: Make sure that the harness for the Marquee is positioned in the correct place before assembly of the top header takes place. See next page for image.
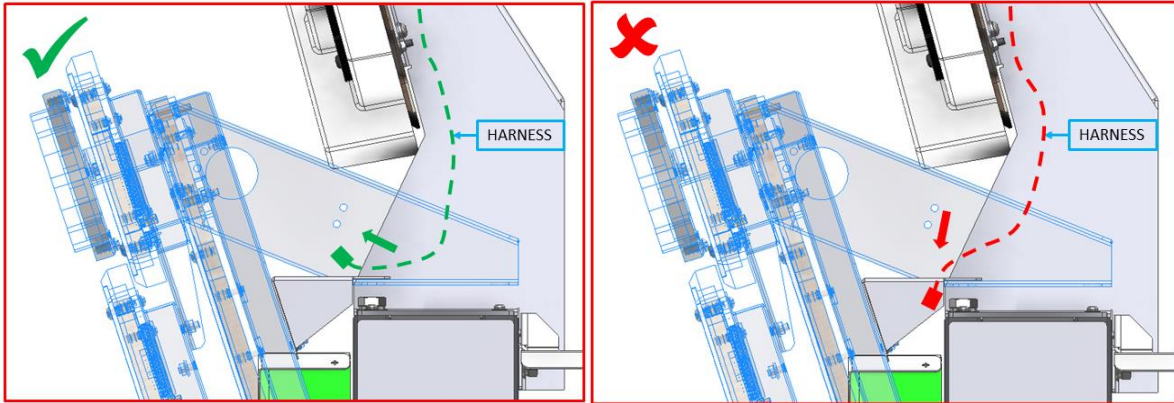
48. Locate the top header. Align and assemble using the same fasteners.
49. Secure in the side support bracket by taking out the existing screws on the cover and assemble it back into place.
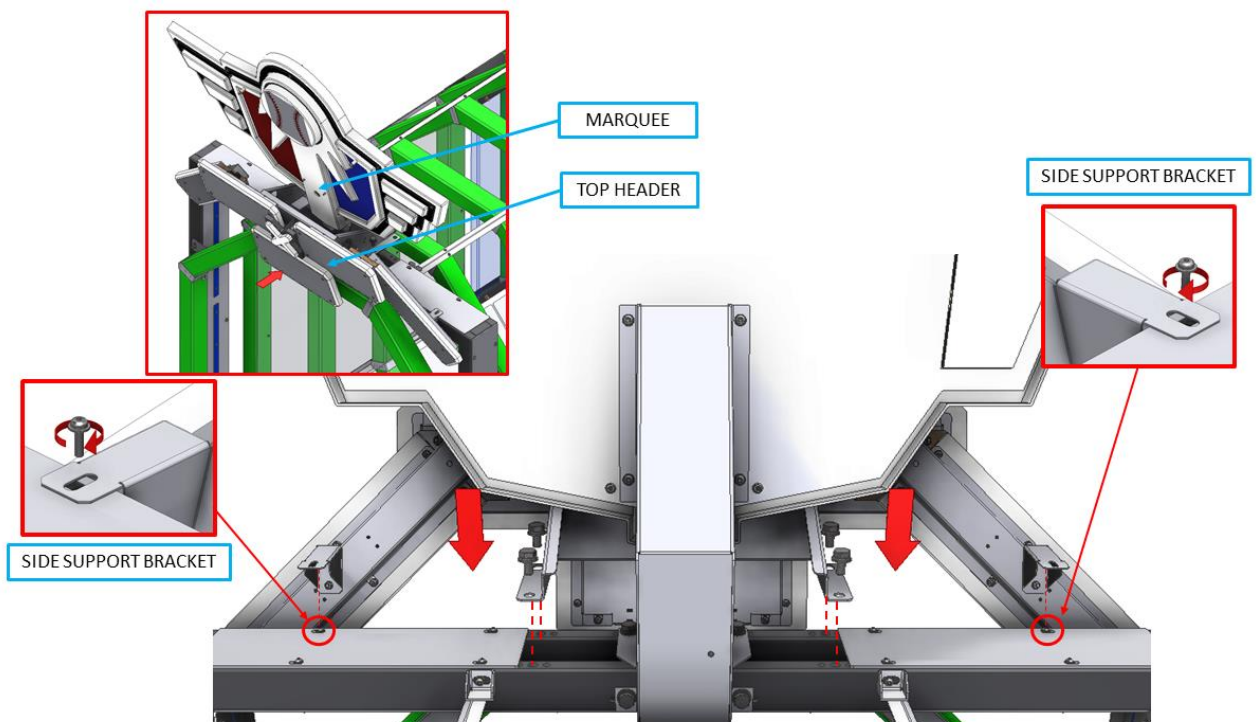
50. Plug in the connector for the marquee by referring to the matching connector.
51. Plug in the connectors for the top header by referring to the matching connector.
52. Locate grounding stud and connect the grounding cable for the the top header.
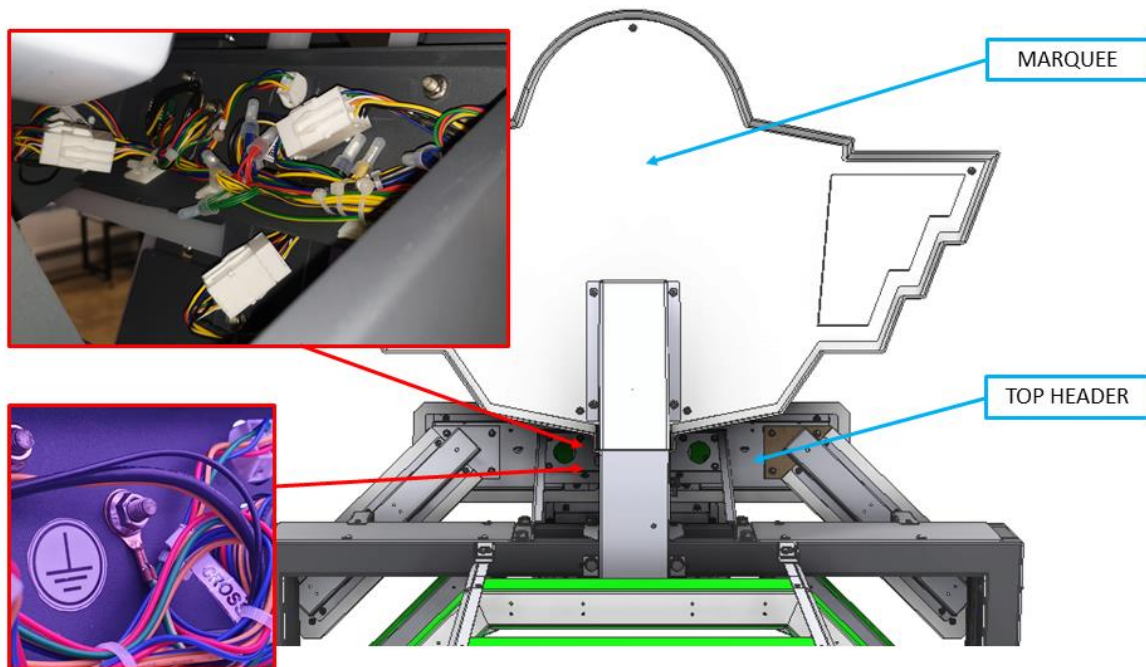
53. Open front cabinet top cover, ticket door, and coin door.
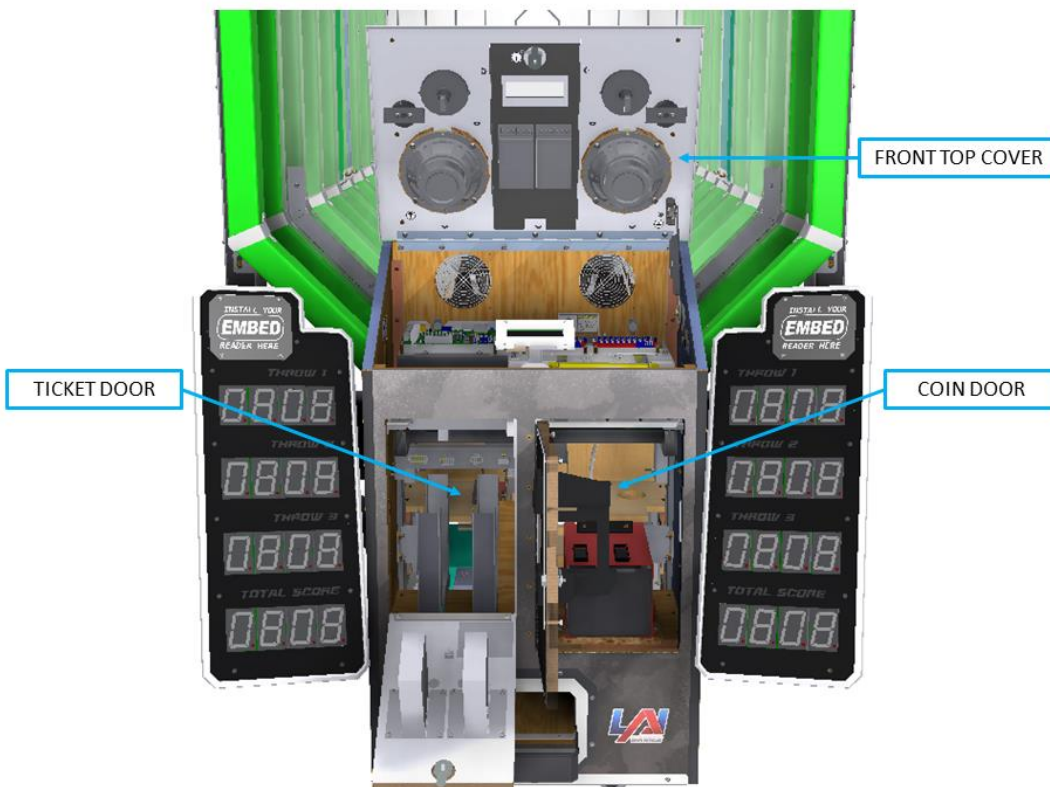
54. Plug in all connectors at the front top cover area for the following:
    A. Rear chaser lights assembly
    B. Front chaser light assembly
    C. Player panel

55. Plug in all connectors at the coin door area for the following:
    D. Front rigid frame and header
    E. Side display LH
56. Plug in all connectors at the ticket door area for the following:
    F. Side display RH
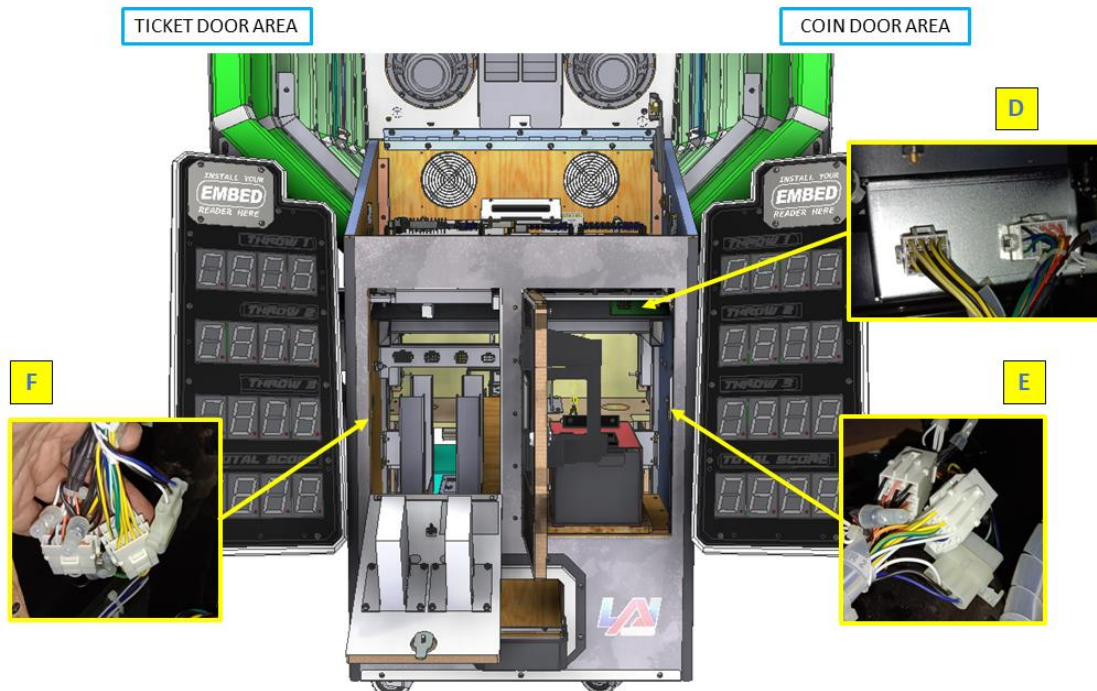
57. Plug in all connectors at the rear cabinet right hand access opening for the power connectors.
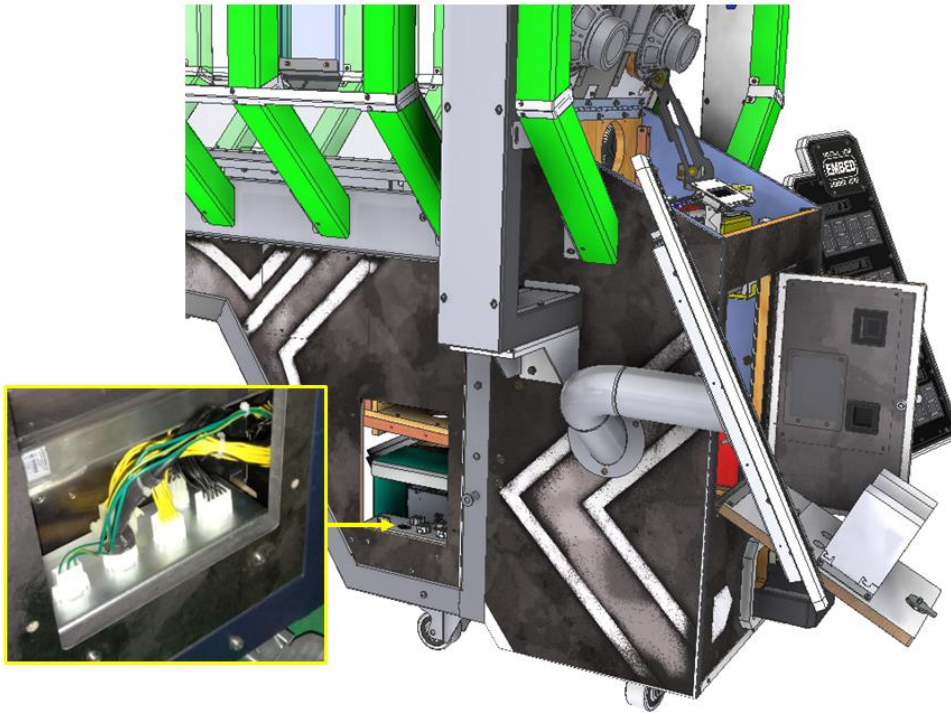
58. Close the cabinet front top cover.
59. Locate the front ball protection cover and take out all of the fasteners at the area of assembly.
60. Secure the cover and reuse the same fasteners to assemble.
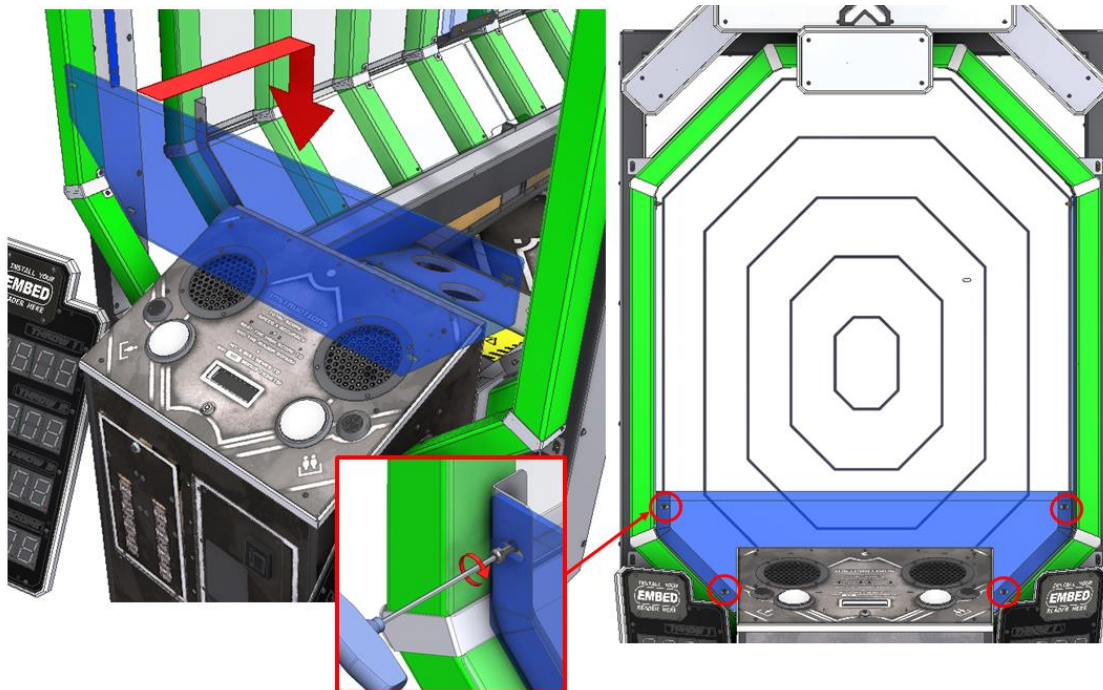
61. Power up and test the game.
62. Install both rear cabinet side access covers.

SPLIT CABINET

1. Unpack the game and unload the parts from each pallet
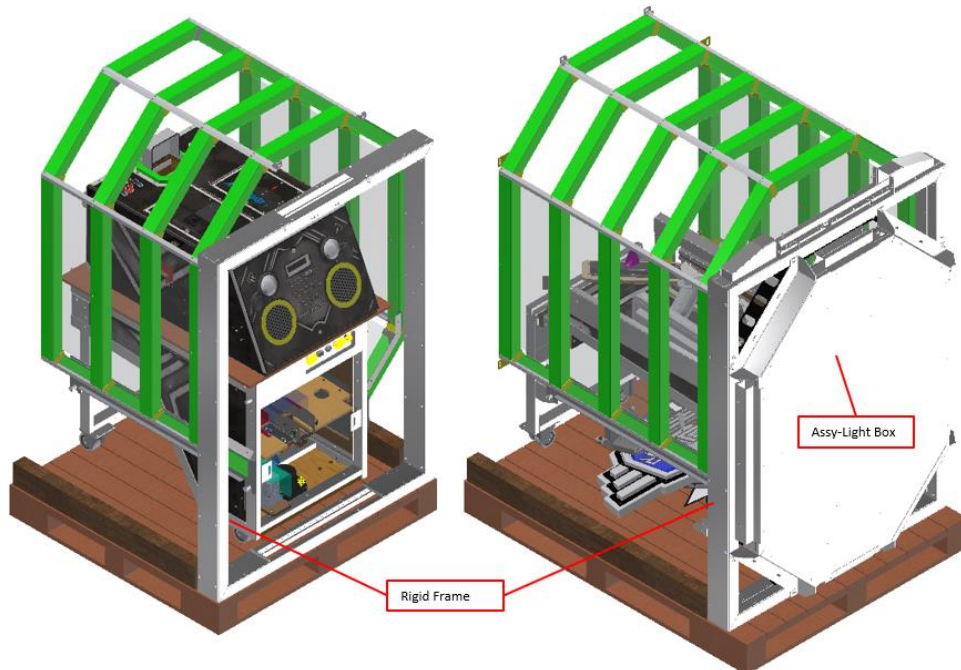
Assy-Light Box

Rigid Frame

WARNING: When removing the front cabinet (A) from the machine it is suggested to use 3 people. Weight is approx. 115lbs (53kg).

WARNING: When placing the game into its permanent position, please ensure there is adequate space for players to safely pitch a ball.

NOTE: Mounting screws and bolts have been pre-installed in their final positions. Be sure to remove mounting screws and bolts prior to lifting objects into place.

CAUTION: The light box assembly should be supported before cutting the plastic straps to prevent it from falling backwards.
During unpacking take care not to scratch or damage any parts during carrying and pulling of parts.
Be careful not to scratch the chaser's internal side plastic cover when pulling parts from the wooden platform.

2. Remove the hex bolts as shown below, repeat the same procedure at the opposite side of the frame.
3. Pull out and discard the wooden platform together with the brackets, and put aside the 4x hex bolt to use for the next assembly step.

Wooden platform to be discarded
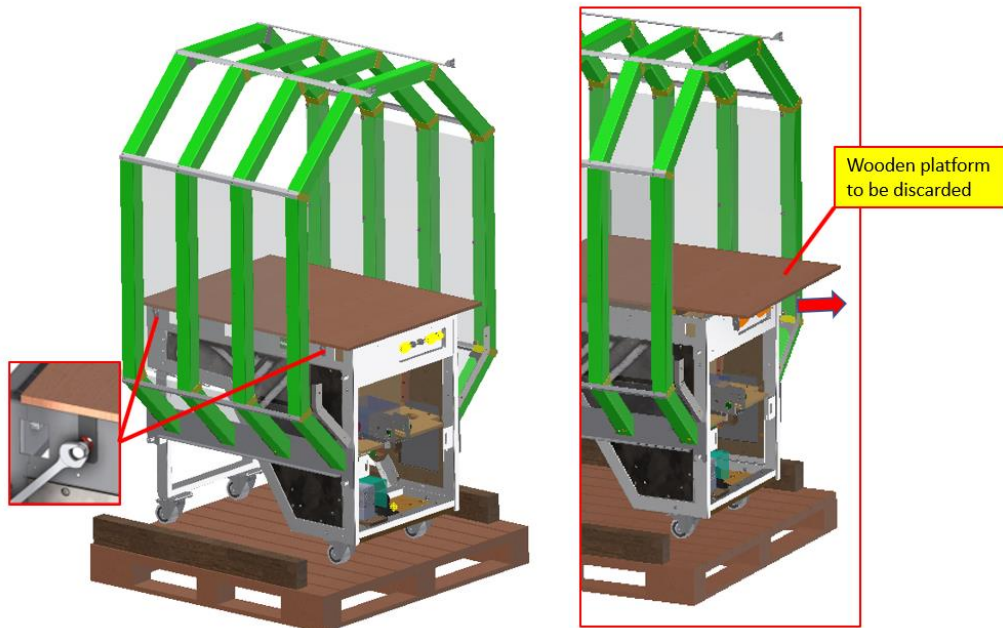
4. Unlock all sets of caster wheels and dismount the games rear frame from the pallet to prepare for the next step.

ASSY-Mid Cabinet

ASSY-Back Cabinet
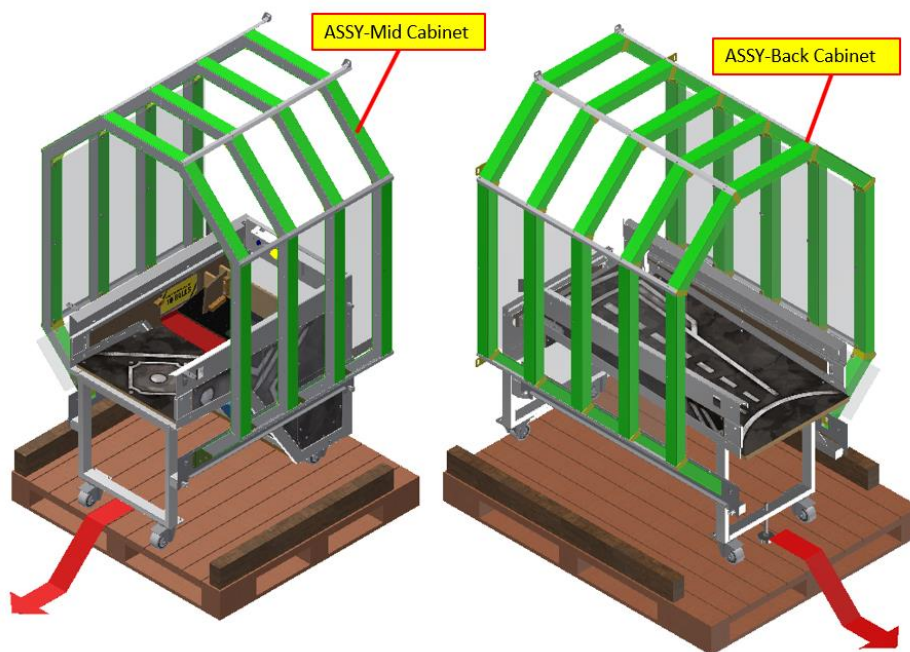
CAUTION: Due to the frames weight take care in dismounting the rear frame from the pallet to make sure that it will not fall on its side and cause serious injury.

5. Remove the 2 hex bolts per side (M10x20mm) and lift up the chaser assembly; hook into place for both cabinet assemblies.
6. Reuse the same hex bolts to secure the sides and repeat the procedure on the opposite side of the frame.
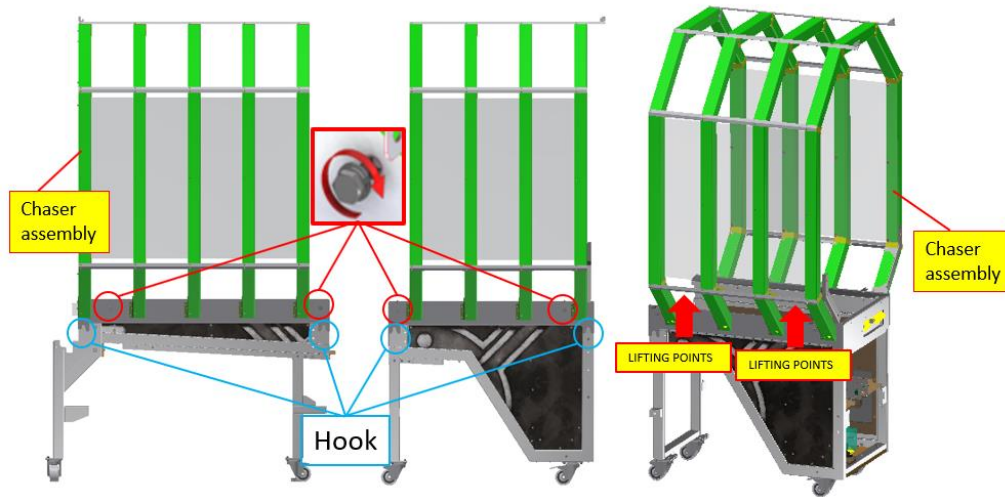
CAUTION: Due to the chaser weight, take care in mounting the chasers to the 2 cabinet structures shown, by making sure that it will not fall on its side and cause injury.

7. Unlock the caster wheels and move the two assemblies (mid and back cabinets) together. Set the height level using the leveling foot. Refer to the image below; the expected step height at the playfield area between the mid and back cabinets is 6 mm, with the back cabinet being the higher one. Mount the bracket track frame joiner plates (1 per side) using the 6 pcs M10 Hex bolts supplied per bracket.
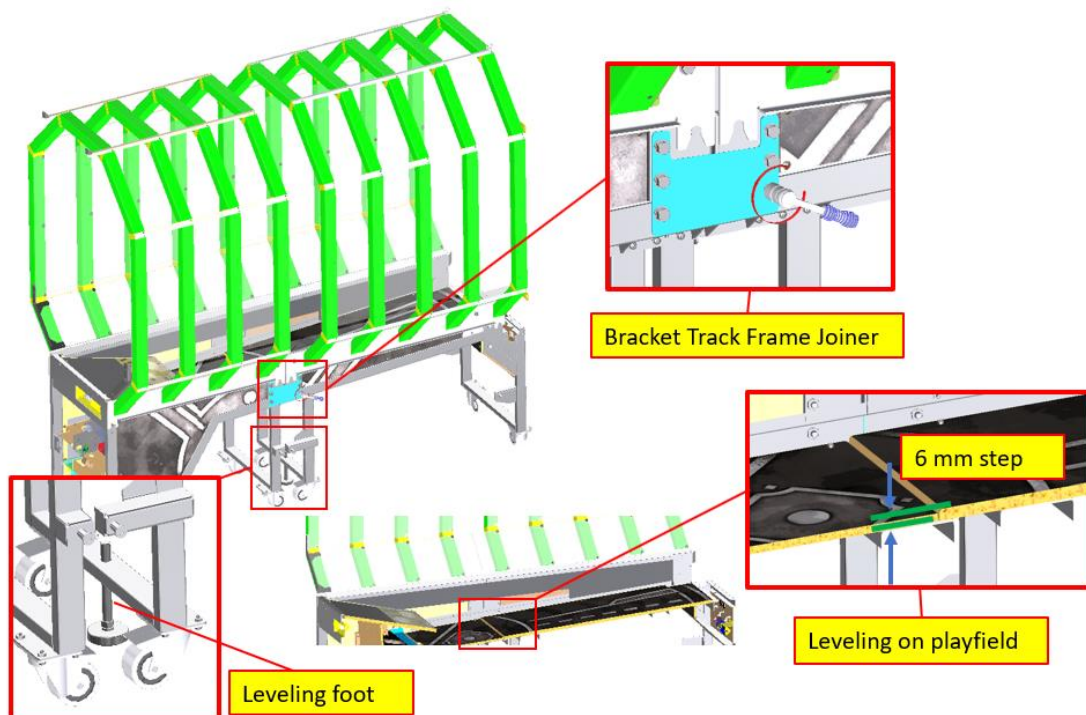
8. Before proceeding, lock the caster wheels.
9. Assemble both ball direction parts (left hand and right hand) to the rear chaser assembly using 6 pcs M4 per part.
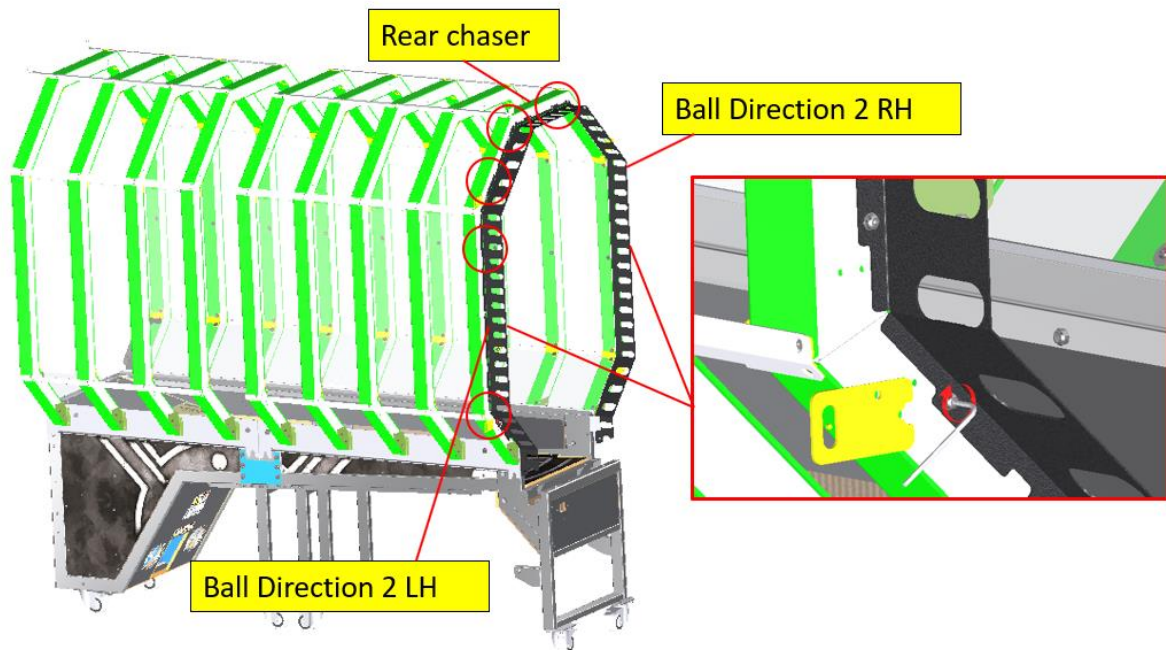
10. Assemble plastic side cover 1 and plastic side cover 3 using the M4x15mm (18 pcs) button pan head bolts supplied. Repeat the procedure on the opposite side.
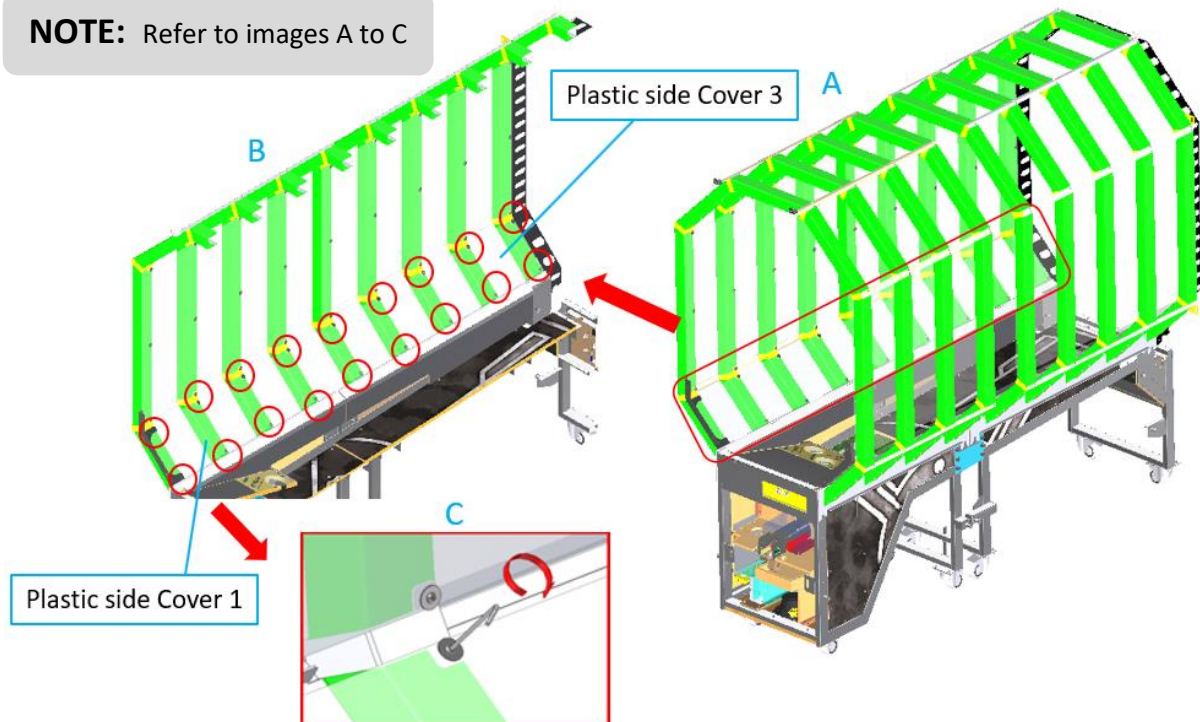
11. Locate the middle connector brackets to join the front and rear chasers, but only take out the necessary Phillip countersunk screws before placing the connector. Repeat the at the opposite side of the top chaser.
12. Locate the middle side covers and repeat the same process as with the mid connectors.

REAR CHASER ASSEMBLY

CHASER MIDDLE SIDE COVER

MIDDLE CONNECTOR

FRONT CHASER ASSEMBLY
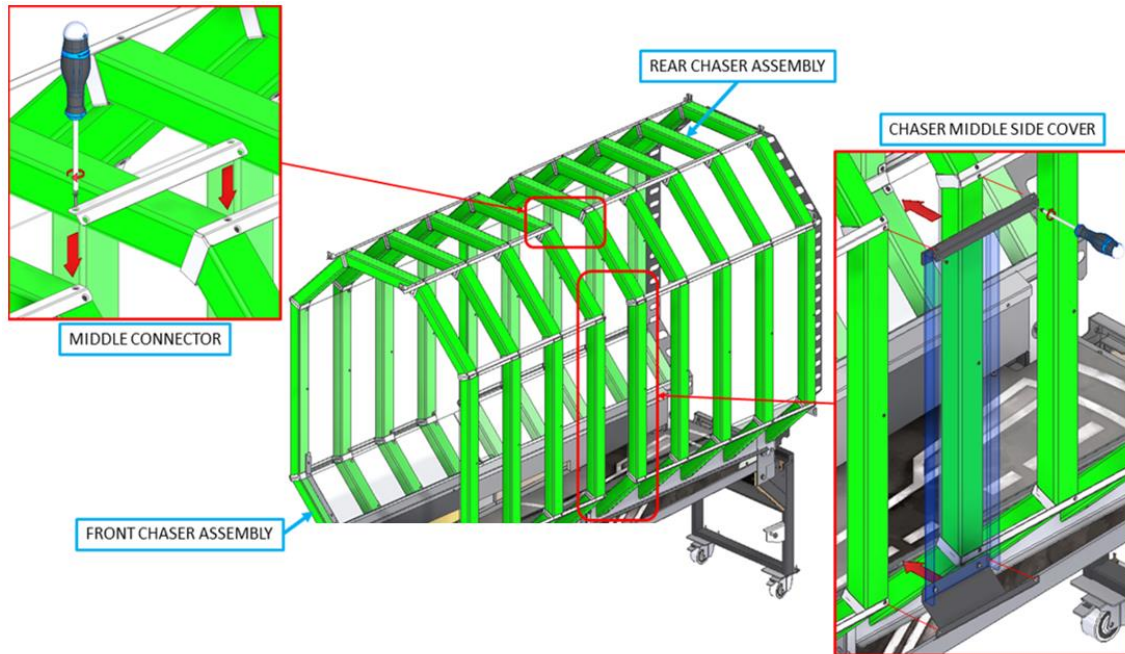
13. Take out the front ball guide cover as shown, and continue to take out the internal side covers (2 pcs per side) to expose the chaser light connectors.
14. Plug in all the chaser light connectors and the two connectors on each side of the cabinets and assemble back the side covers and ball guide cover.

NOTE:Refer to sequence A to C

A

NOT A STEP

Ball guide cover

B

C

Internal side cover 2 pcs/side

Chaser light connector

The 2 connectors

31
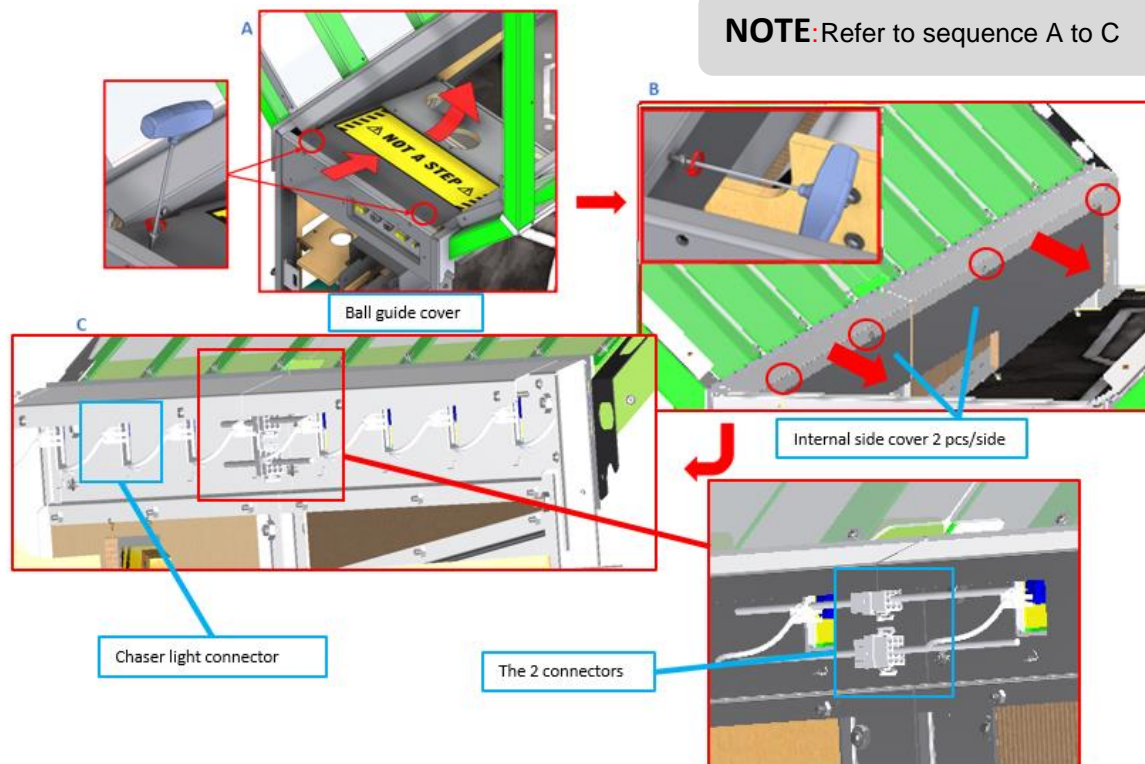
15. Remove the screws from the rear side of the frame as shown.
16. Locate and take out screws from the ball direction guide.
17. Position and assemble the ball direction using the same screws from the previous step.
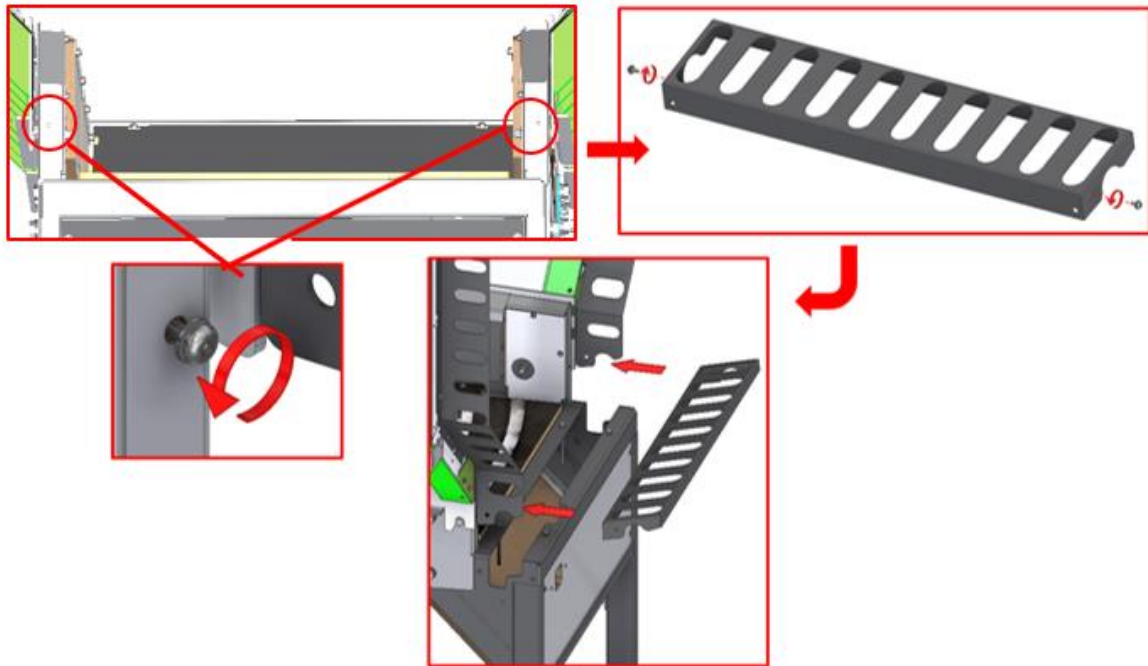
18. Locate rear rigid frame, and take out all of the fasteners as shown below.

REAR RIGID FRAME ASSEMBLY
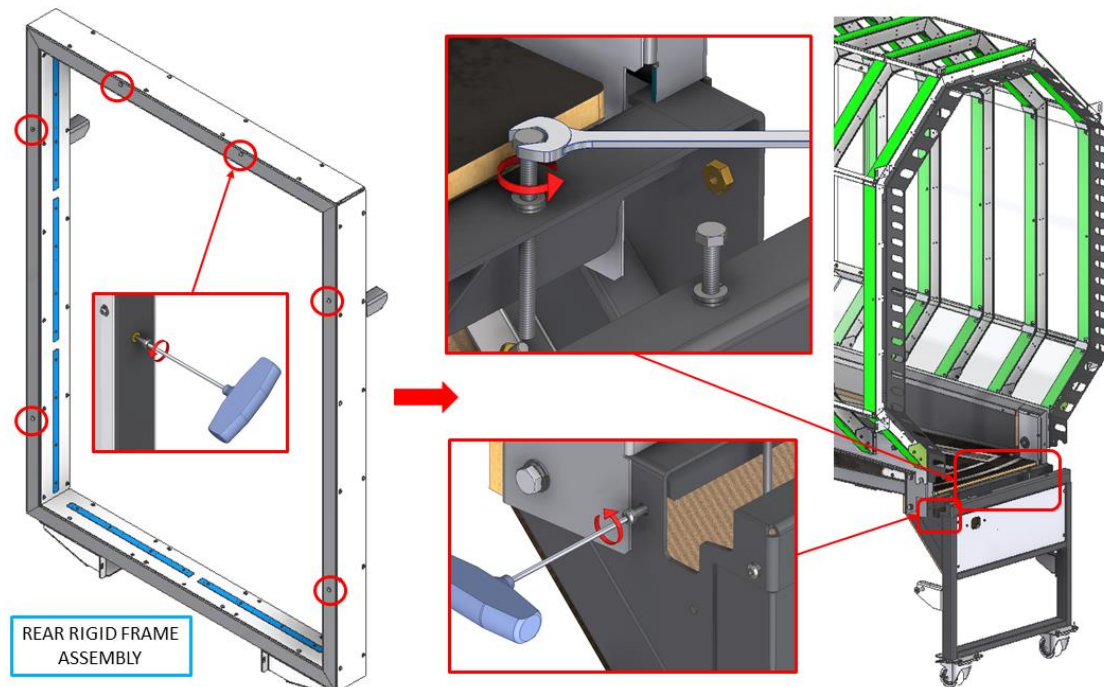
19. Insert the harness into place, making sure that it will not jam or be pinched when the rigid frame is rested into the frame.

20. Align the rear rigid frame and slide into position. Secure the frame using the same screws removed in the previous steps.

NOTE: Refer to sequence A to C
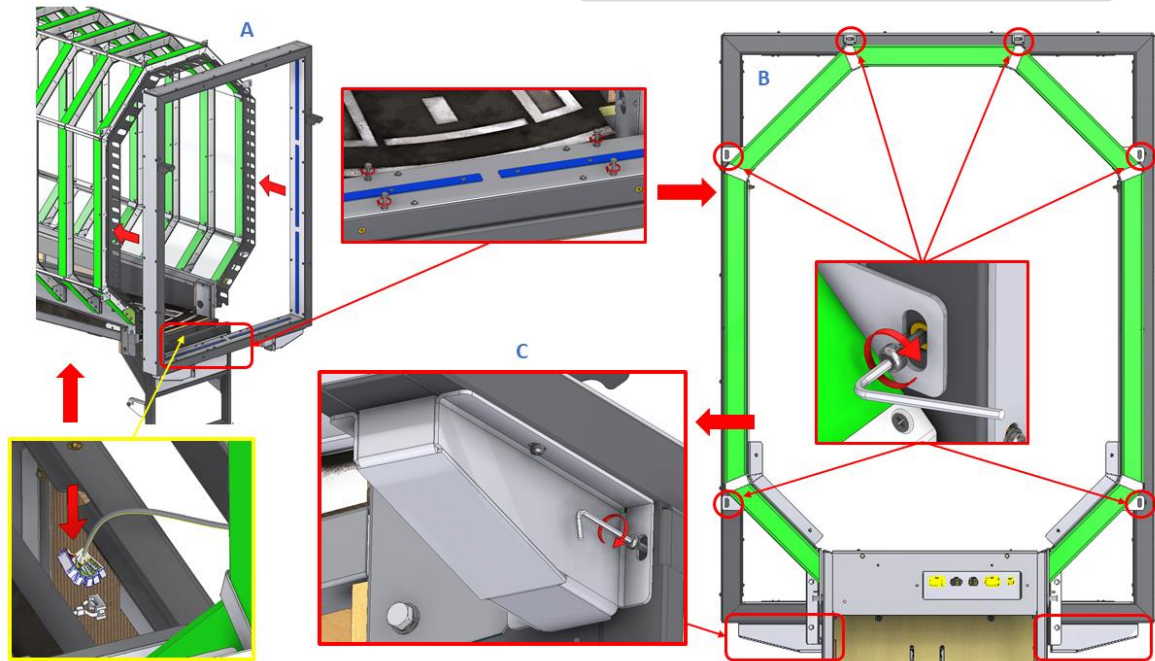
21. Prepare to install the rear target lightbox by taking out all the fasteners as shown below.
22. Position and slide in the lightbox assembly, resting it on the support brackets.
23. Secure the lightbox and reuse the same fasteners removed from the previous step.

RESTING POINT

SCREW & WASHER MOUNTING SEQUENCE
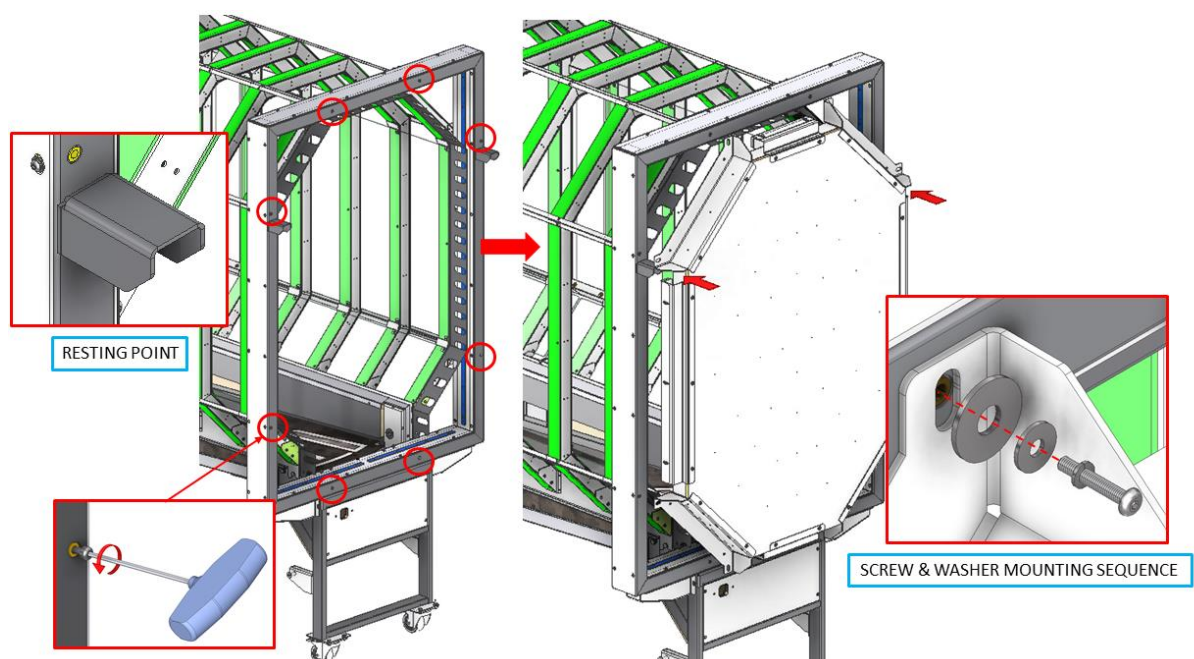
24. Insert lightbox harness into the lower rear access hole of the rear cabinet, and open the PCB bottom cover to access the internal PCB and connectors.
25. Plug in all connectors in place by referring carefully to the harness labels and making sure they are in the proper location. Replace the bottom cover.
26. Locate the target harness cover and assemble to secure the harness.

NOTE: Refer to sequence A to C

A

B

PCB BOTTOM COVER

D

C

J2 J4 J5 J7

FOR REAR RIGID FRAME

FOR LIGHTBOX ASSEMBLY

TARGET HARNESS COVER
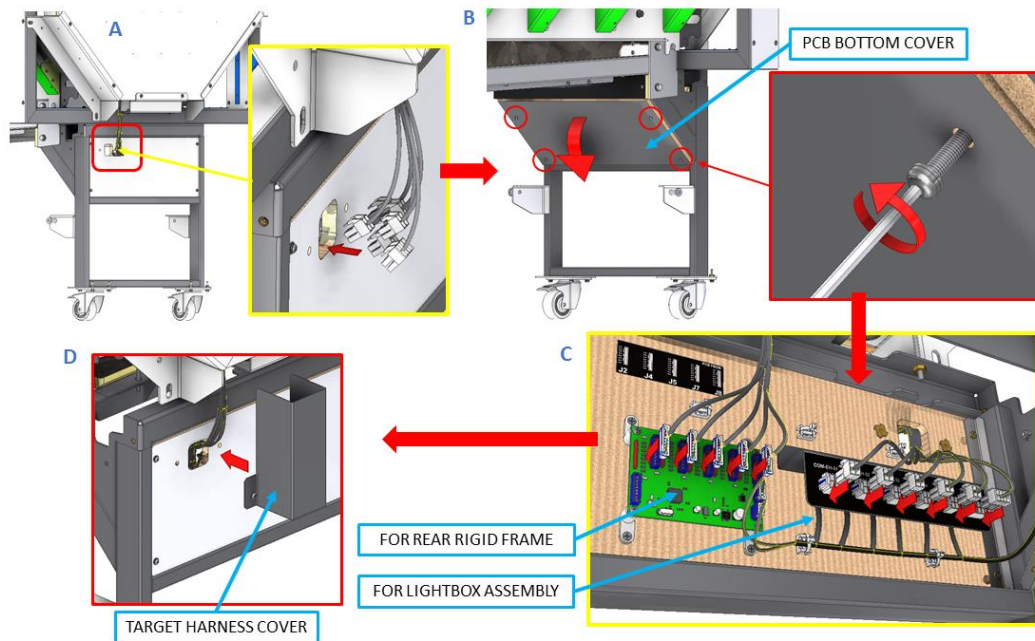
27. Locate the front rigid frame pipe support.
28. Take out all the fasteners and assemble the support frame.

NOT A STEP
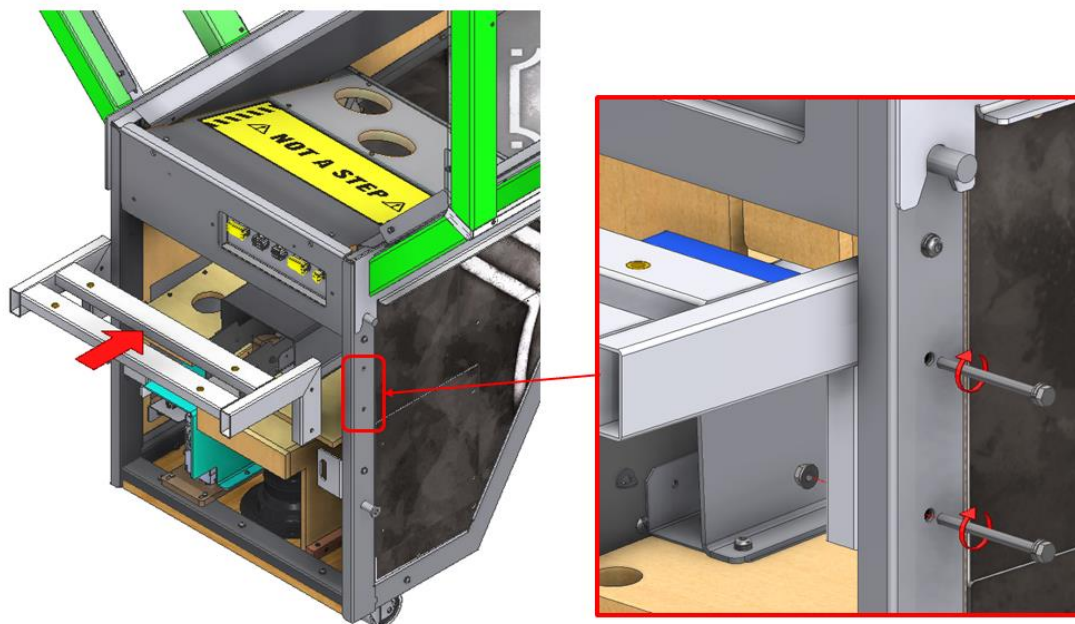
29. Assemble the front light chaser to the front rigid frame using the fasteners already prepared, as shown below
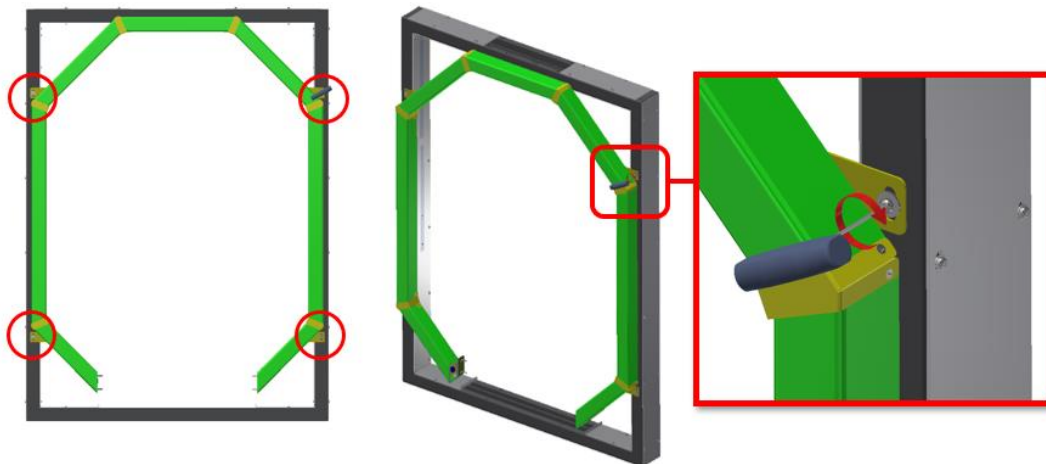
30. Prepare the front rigid frame by taking out all of the fasteners shown below.
31. Insert the harness into place, making sure that it will not jam or be pressed when the front rigid frame is rested on the pipe support.
32. Secure the rigid frame and reuse the same fasteners to assemble.

TOP REAR
MOUNTING POINTS

33. Take out the hex bolt fasteners from the front of the rear cabinet frame and the rear of the front cabinet as shown below.
34. Open side access covers and put all fasteners aside.

SIDE ACCESS COVER

SIDE ACCESS COVER

35. Take out the both of the small side covers and another set of screws on both side of the cabinet.
36. Position, align and push the front cabinet in place untill it's in contact with the rear frame.
37. Secure it using the same hex bolt fasteners removed in the previous step.
38. Reassemble the two small side covers and secure the front chaser assembly.

SMALL SIDE COVER

39. Locate the bottom rigid frame support brackets and assemble in place.
40. Take out the hex bolt fasteners from the front the side of the cabinet, align, and assemble the display arm.
41. Do the same procedure on the opposite side of the cabinet.
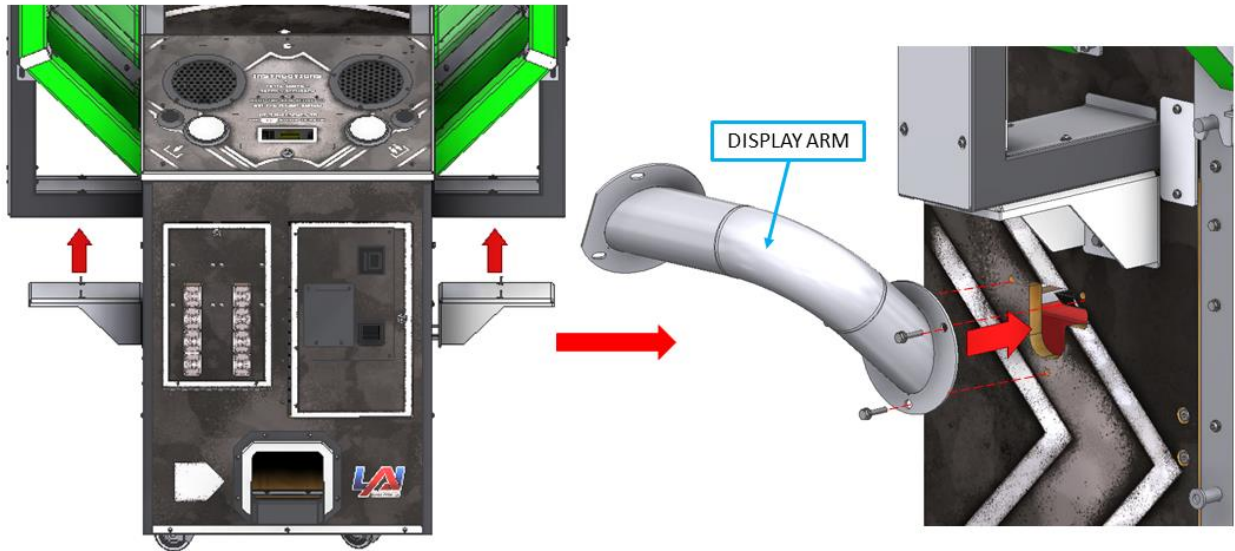
DISPLAY ARM

42. Prepare the side display assembly by taking out the hex nuts.
43. Insert the harness into the display arms and into the cabinet.
44. Secure it using the same hex nuts. Repeat the procedure on the opposite side of the cabinet.
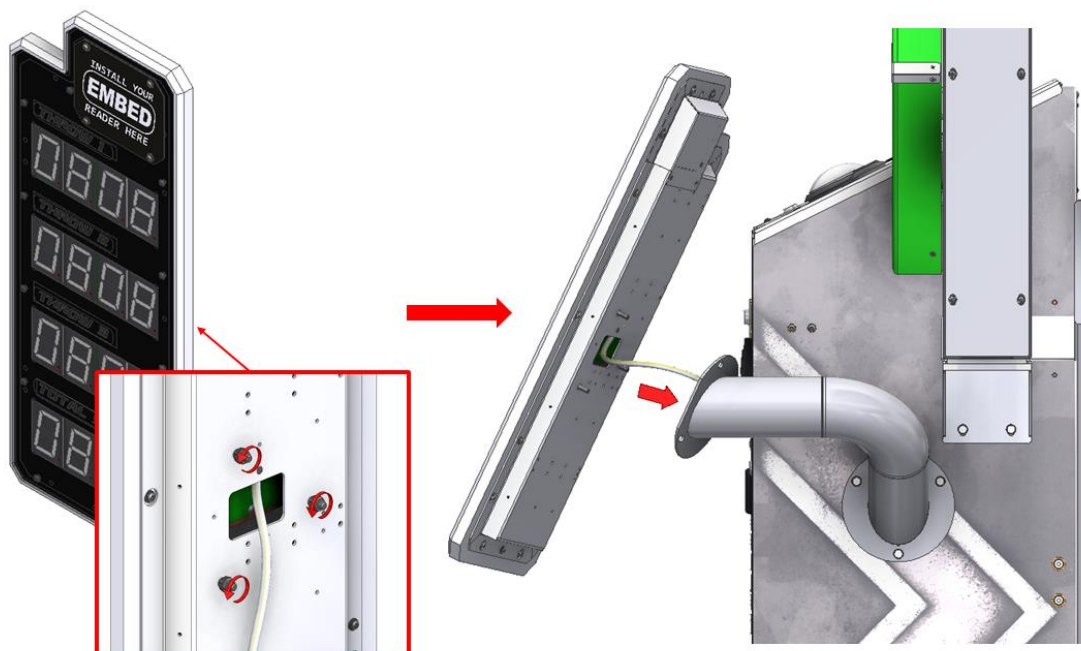
45. Take out all of the hex bolt fasteners at the area of assembly.
46. Locate the top marquee. Align and assemble it using the same fasteners taken out from the previous step.
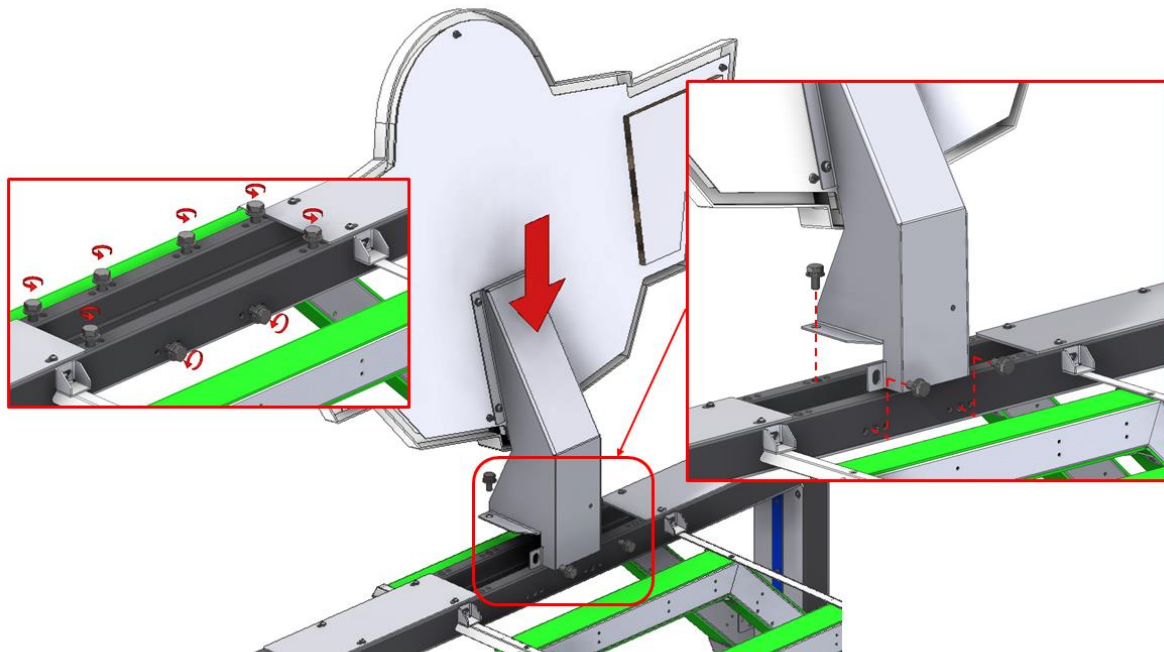
NOTE: Make sure that the harness for the Marquee is positioned in the correct place before assembly of the top header takes place. See next page for image.
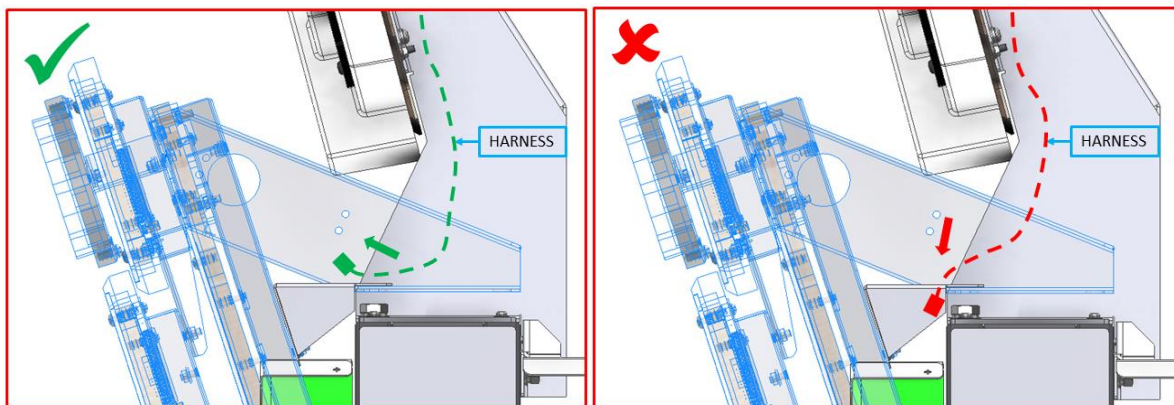
47. Locate the top header. Align and assemble using the same fasteners.
48. Secure the side support bracket by taking out the existing screws on the cover and assemble it back into place.

MARQUEE

TOP HEADER

SIDE SUPPORT BRACKET

SIDE SUPPORT BRACKET
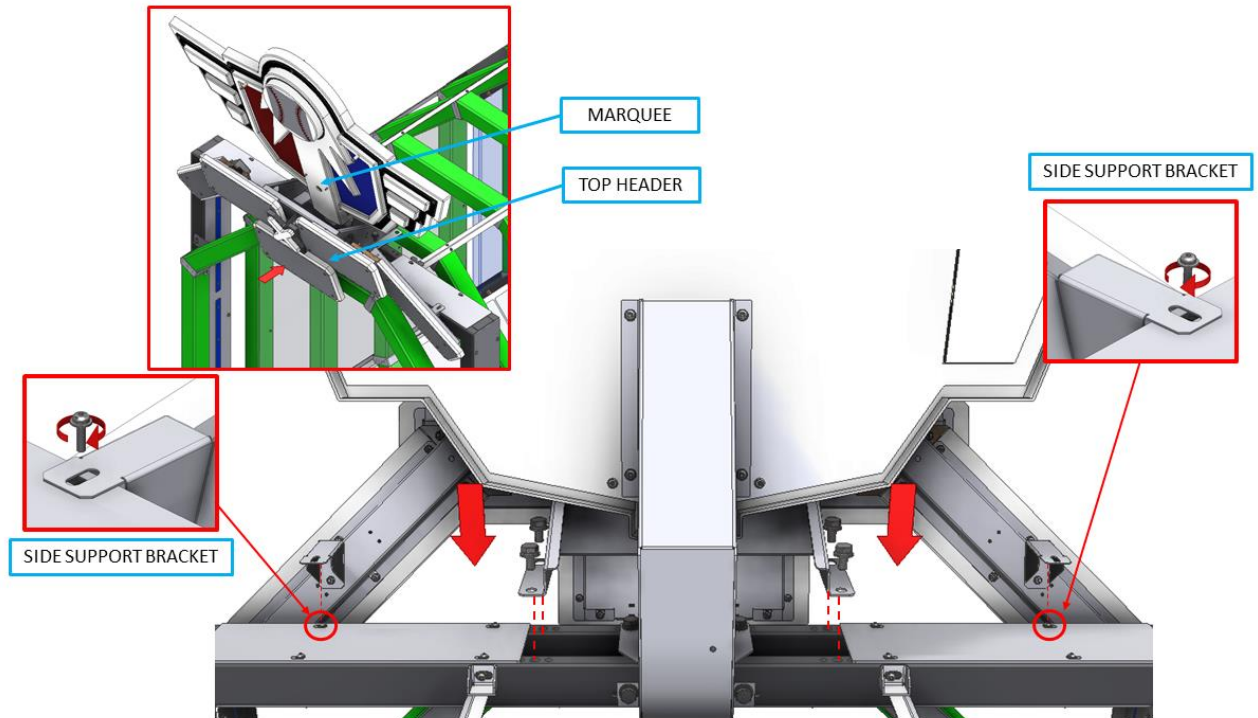
49. Plug in the connector for the marquee by referring to the matching connector.
50. Plug in the connectors for the top header by referring to the matching connector.
51. Locate the grounding stud and connect the grounding cable for the the top header.

MARQUEE

TOP HEADER
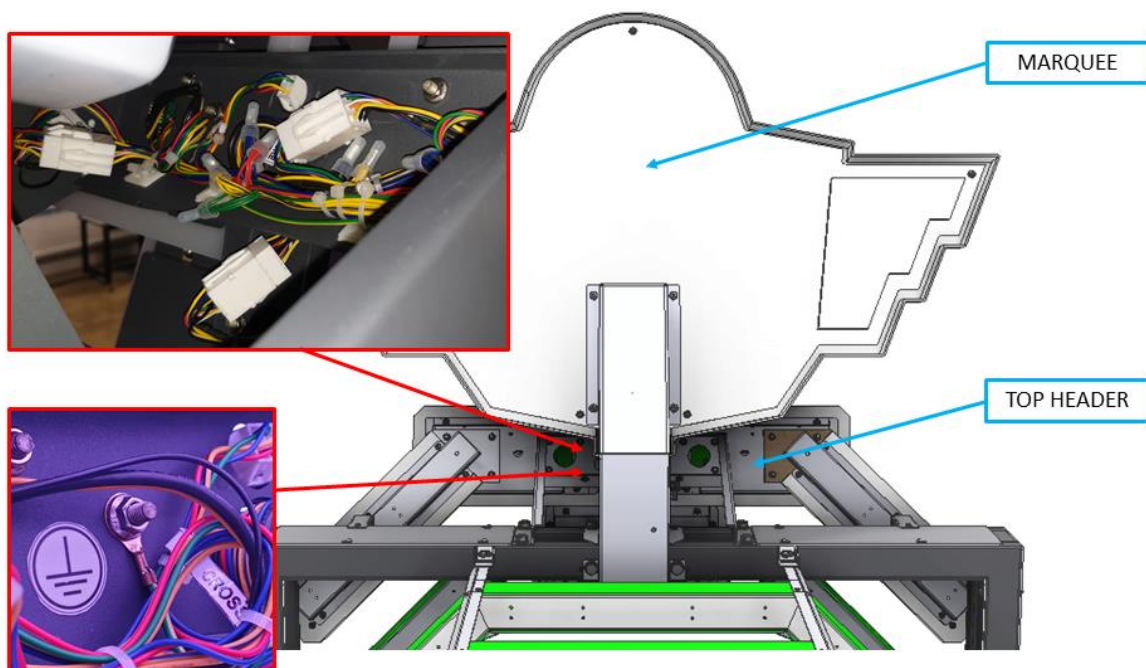
52. Open the front cabinet top cover, ticket door and coin door.

53. Plug in all connectors at the front top cover area for the following:
    A. Rear chaser lights assembly
   B. Front chaser light assembly
    C. Player panel

54. Plug in all connectors at the coin door area for the following:
   D. Front rigid frame and header
    E. Side display LH
55. Plug in all connectors at the ticket door area for the following:
    F. Side display RH
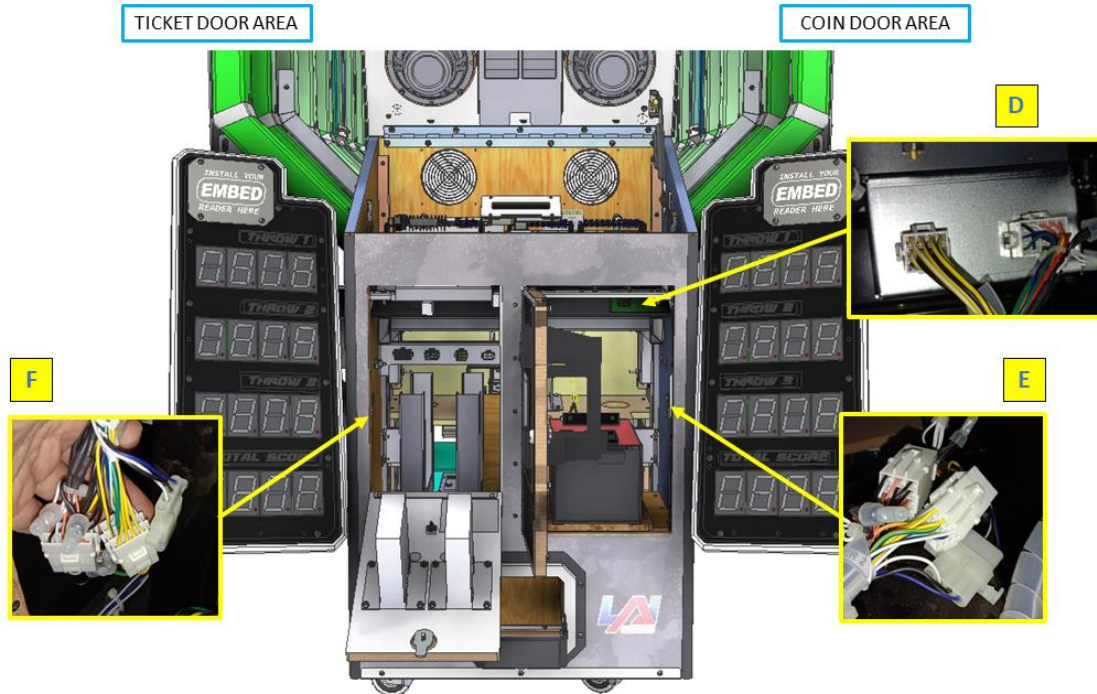
56. Plug all connectors at the rear cabinet RH access opening for the power connectors.
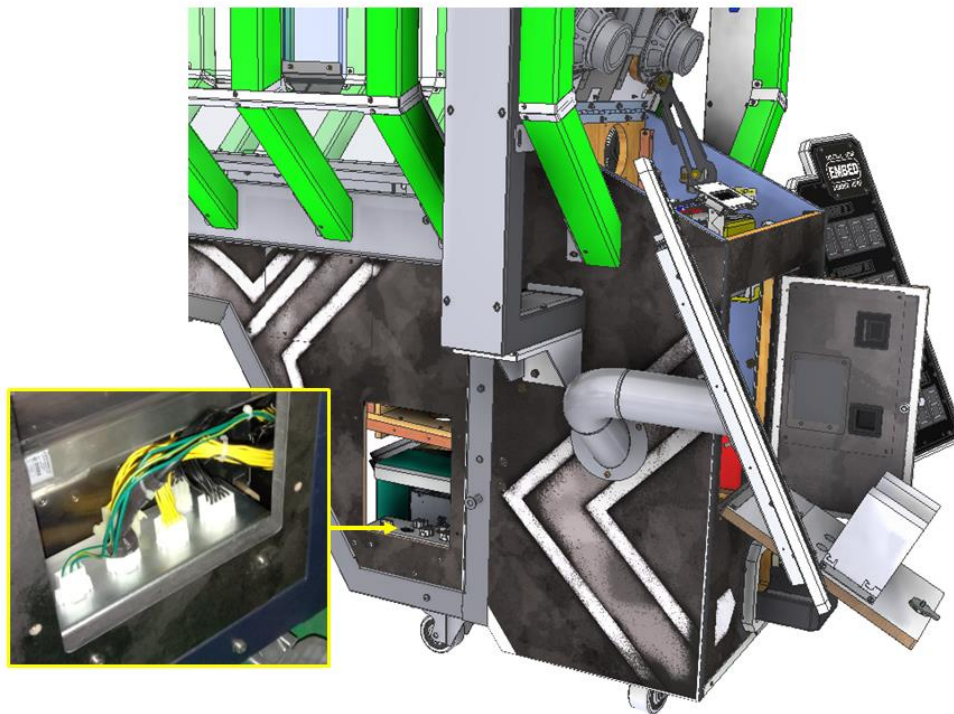
57. Close the cabinet front top cover.
58. Locate front ball protection cover and take out all of the fasteners at the area of assembly.
59. Secure the cover and reuse the same fasteners to assemble.
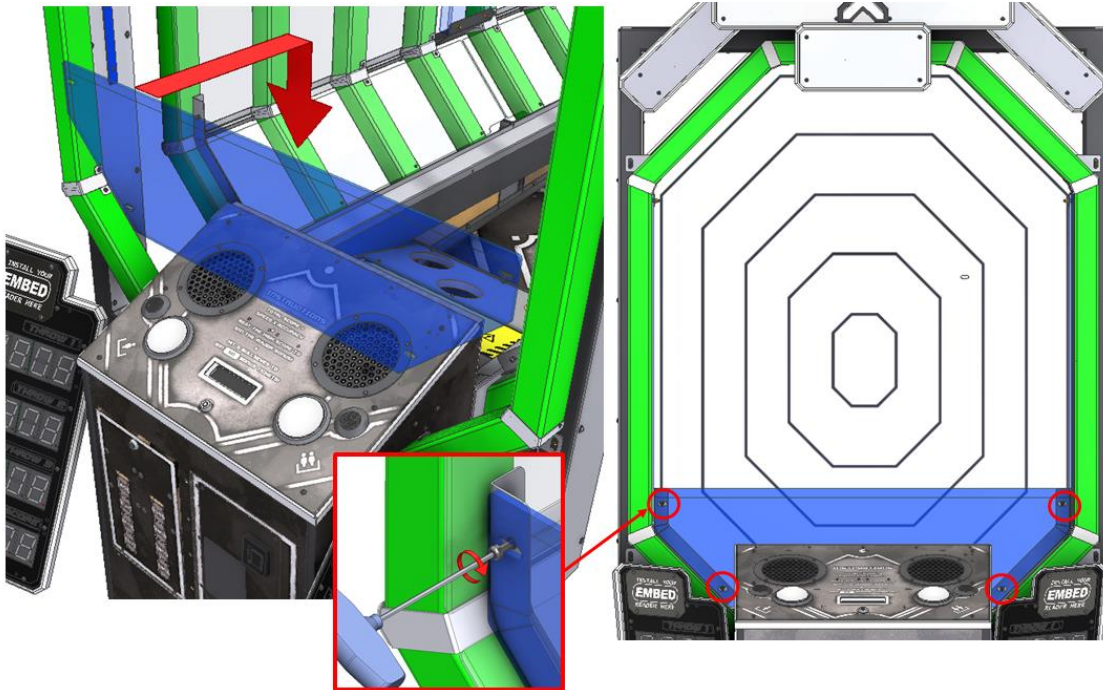
60. Power up and test the game.
61. Install both rear cabinet side access covers.

IMPORTANT NOTICE

To guarantee the successful operation of your game, please ensure that you operate it with LAI Games brand *HYPERpitch* balls only. These balls have been specially designed to dispense faster which increases both the playability and earning potential of the game. These balls are available for purchase on our website at **parts.laigames.com**.

INTRODUCTION

Congratulations on your purchase of *HYPERpitch* by LAI Games. We hope you take the time to read this manual and learn about the many features and user-friendly adjustments that can be made to fine-tune the game for maximum earning potential.

DESCRIPTION

HYPERpitch is an exciting strength and skill-based game. Players put their speed and accuracy to the test by pitching a ball at the bullseye as fast as they can.

PACKAGING

CONTENTS

- 1x HYPERpitch unit
- 1x Operator manual
- 4x Coin door keys
- 1x Optional NRI harness
- 1x Coin door blanking plate
- 2x EMBED card reader mounting plates
- 1x Single coin plate
- 1x Double coin plate
- 1x Plastic Polish #2 fine scratch remover
- 1x Main power plug
- 2x Spare mains fuse
- 2x Internal Fuse 2A
- 2x Internal Fuse 3A
- 2x Internal Fuse 4A
- 1x Allen Key 2.5mm
- 1x Allen Key 3mm
- 1x Wrench 8mm
- 1x Wrench 10mm
- 1x Wrench 17mm
- 1x SanDisk Micro SD Card – 8GB
- 12x HYPERpitch balls
- 12x JST receptacle contact (SYF-01T-P0.5)
- 12x JST plug contact (SYM-01T-P0.5)
- 12x JST terminal crimp (SXH-001T-P0.6)
- 1x Bullseye Bonus Decal Sheet

SPECIFICATIONS

ELECTRIC SUPPLY

- Mains Power Cable: 3-wires with PE, conductor size - 18 AWG. 3 x 0.75mm^2 (Cord can be chosen by operator to ensure compliance with local, regional, and national standards and regulations)
- Amps at 110VAC: 4.7A
- Amps at 220VAC 2.2A
- Watts: 600W
- Voltage: 110-240VAC
- Mains fuse Size: M205
- Mains fuse 110VAC: 6A
- Mains fuse 220VAC: 3A

LOCATION REQUIREMENTS

- Ambient temperature: 5C - 40C
- Ambient humidity: Low
- Ambient U.V. radiation: Very low
- Vibrations level: Low
- Altitude: ≤2000m (6,562 ft.)

BILL VALIDATOR REQUIREMENTS

- Volts: 110~220V
- Magazine Size: Up to 1000 bill capacity
- Loader Type: Up stack

WEIGHT AND DIMENSIONS

- Weight: 492kg (1084lb.) (with packaging, long version)
- Weight: 542kg (1091lb.) (with packaging, split version)
- Weight: 445kg (981lb.) (without packaging, long and split versions)
- Height: 2224mm (87.6") (excluding header)
- Height: 3000mm (118.1") (including header)
- Width: 1163mm (45.8")
- Length: 3034mm (119.4")

KEY POINTS

Beat Score/Accuracy

Jackpot Tickets/MPH

Total Round Score

Target Area

Speaker — Speaker

Single Player Button — Double Player Button

P1 Card Reader Area — P2 Card Reader Area

P1 Round 1 Score — P2 Round 1 Score

P1 Round 2 Score — P2 Round 2 Score

P1 Round 3 Score — P2 Round 3 Score

P1 Total Score — P2 Total Score

Ticket Dispense Exit — Coin Credit Entry

Ball Vend Area

Pitching Area
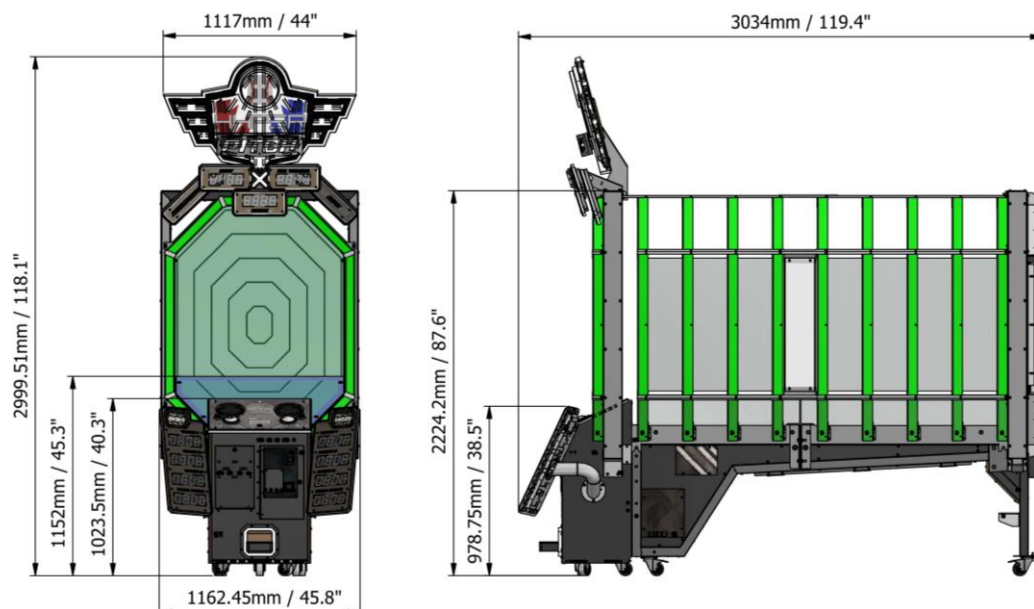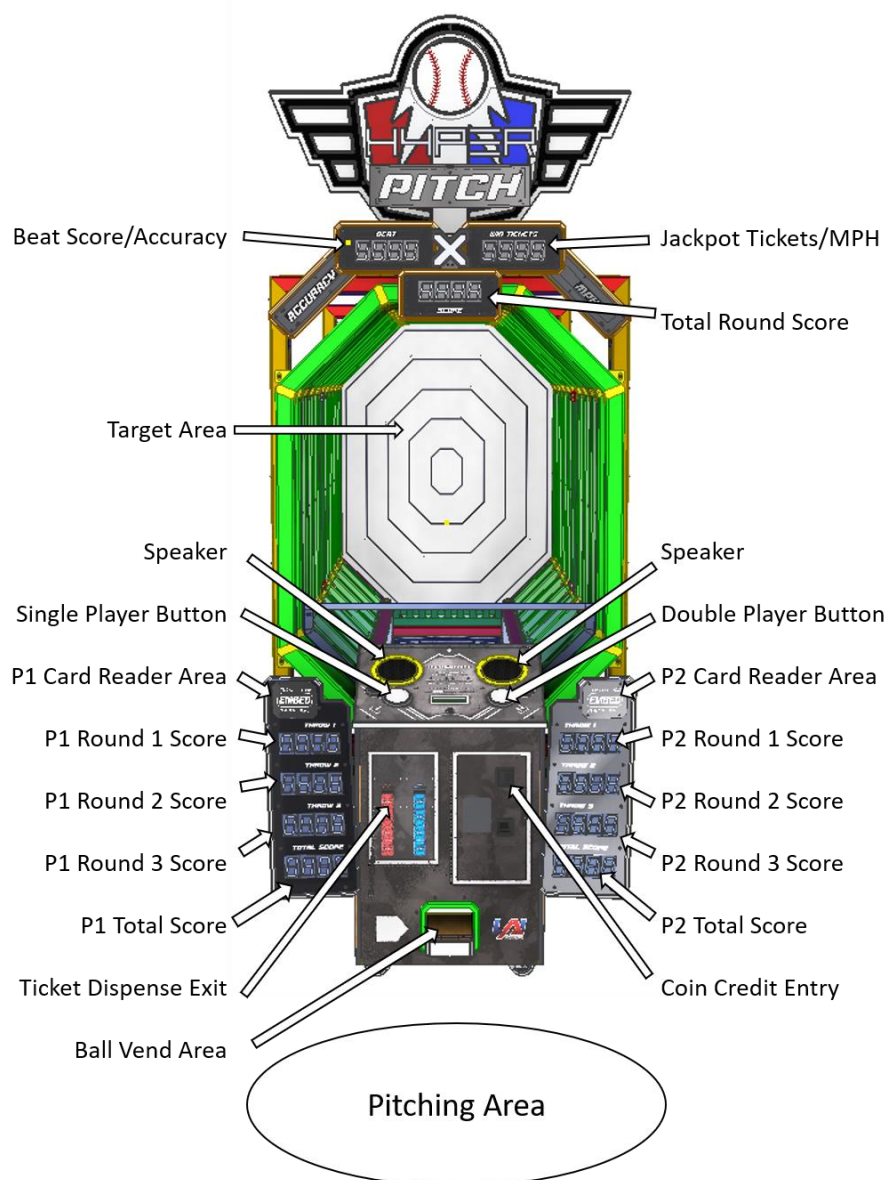
Note that the header display fields (shown above) will change, based on the configuration of your unit.

> **WARNING:** When placing the game into its permanent position, please ensure there is adequate space for players to safely pitch a ball.

GAMEPLAY AND MODES

OBJECTIVE

Throw the ball the fastest and most accurate to win the Jackpot and Bonus Tickets. 3 bullseyes in one game by a single player will payout the bonus prize. Beating the high score will payout the jackpot prize.

HOW TO PLAY

- Insert credit
- Select game mode
- Ball is released
- Throw ball at center of target
- Speed and Accuracy are combined to form a score
- 3 rounds for each player
- Tickets are dispensed based on total score/jackpot/bonus won
- Game over

ATTRACT MODE

Attract mode provides a visual and audio display while the game is not being played.

PLAY MODE

HYPERpitch has two play modes. The standard *Coin Play* mode, where a coin or coins are inserted, or *Free Play* mode, where no coins are necessary.

COIN PLAY

Coin Play mode is entered from *Attract mode*, by inserting coins in any of the two coin slots on the front of the machine cabinet, then following the instructions in the "How to Play" section.

FREE PLAY

Free play can be set in one of three ways:
- Entering the operator menu by pressing the red TEST button, then entering the game settings. From here, enter free play settings and turn free play mode on.
- For a single free game, just press the green SERVICE button once.
- Push and hold the white UTILITY button for 5 seconds. This is a temporary free mode, and the game will return to normal when reset.

OPERATION

Press the red TEST button to enter the operator menu. Menu items are shown below.

- Error Mode
- History
- Audits
- Program Settings
- Input Test
- Output Test
- Version

GAME SETTINGS

1. **Coin 1 Coins per Credit** *Default 1, Adjustable 1 – 20*

   Sets the number of coins that need to be inserted in exchange for each game credit.

2. **Coin 1 Games per Credit** *Default 1, Adjustable 1 – 20*

   Sets the number of games granted for each credit.

3. **Coin 2 Coins per Credit** *Default 1, Adjustable 1 – 20*

   Sets the number of coins in coin mech 2 input that need to be inserted in exchange for each game credit.

4. **Coin 2 Games per Credit** *Default 1, Adjustable 1 – 20*

   Sets the number of games granted for each credit from coin mech 2 input.

5. **Common Coin** *Default Off, Adjustable On / Off*

   If the setting is ON, coin 1 and coin 2 contribute to the same coin pool. If the setting is off, they are counted separately.
   This setting is only active is P20, Card System, is set to off.
   This setting is not available in New Jersey firmware.

6. **Card System** *Default On, Adjustable On / Off*

   Activate or deactivate the card system on the machine.

7. **Payment Prompt** *Default Tap to Play, Adjustable Insert Coin / Insert Credit / Insert Cash / Swipe Card / Insert Card / Tap to Play*

   Specifies the LCD message that is shown to the player prompting them to insert payment to play the game. If the Card System setting is set to ON then only card related prompts are available.
   If the Card System setting is OFF then only cash/coin related prompts are available.

8. **Free Play** *Default Off, Adjustable On / Off*

   Sets if the game requires a credit to start playing. If set to on, the game can be played for free.

9. **Prize Type** *Default Ticket, Adjustable Off / Ticket / Coupon*

   Defines the type of prize given to the player. This only affects how the jackpot number and tickets owing number is displayed.
   If set to "off" then no prize is paid out.
   If set to "tickets" then prize numbers shown on displays are the same as the number of tickets dispensed from the mech.
   If set to "coupons" (1 ticket = 2 coupons), then prize numbers displayed to the player double the number of tickets dispensed from the mech.
   In New Jersey firmware, and Free = OFF, the OFF option for this setting is not available.

10. **Points per Ticket** *Default 100, Adjustable 0 -1000*

    Sets how many points are required to dispense 1 ticket from the mech. Hidden if Prize Type is set to OFF.
    Note that when set to 0, players will not be awarded prizes based on their score, only Jackpot prizes and Bullseye prizes will be awarded.

11. **Maximum Tickets** *Default 300, Adjustable 1-1000*

    Sets the maximum number of tickets allowed to be dispensed based on the game score.

12. **Mercy Tickets** *Default 5, Adjustable 1-500*
    Set the number of mercy tickets that are paid out at the end of the game, regardless of player score.

13. **Mercy Payout** *Default Off, Adjustable On Credit / On Start / After Game / Off*
    Sets when mercy tickets will be paid out.
    If set to "off" then no mercy tickets are paid out.
    If set to "on credit" then the mercy tickets are paid out when the game is credited.
    If set to "on start" then the mercy tickets are paid out when gameplay begins.
    If set to "after game" then the mercy tickets will be paid out after the game has completed. Note that with this setting, mercy tickets are ONLY paid out if the player score does not reach the level of the "Number of Score per Tickets" setting.
    In New Jersey firmware, this setting is not adjustable, and is set to After Game.

14. **High Score** *Default 4000, Adjustable 0-9999*
    Current value of the high score. Beating this value will cause the Bonus Tickets / Bonus Credits to pay out.

15. **Reset High Score** *Default Power On - 4000, Adjustable Power On – 0-9999 / Never*
    Sets the reset value on power up to a specific value or can be set to never reset.

16. **Jackpot Prize Type** *Default Ticket, Adjustable Credit / Ticket / None*

17. **Jackpot Type** *Default Fixed, Adjustable Dynamic / Fixed*
    Sets if the high score is dynamic or fixed. If a dynamic high score is beaten, the high score Is then updated with the new score. If a fixed high score is beaten, it remains the same value as before.

18. **Jackpot Start Value** *Default 500 Tickets / 1 Credit, Adjustable 1-5000 Tickets / 0-1 Credits*
    When a jackpot is paid out, it gets reset to this value. If the Bonus Type is set to credit, only a single credit is paid out.

19. **Jackpot Increment** *Default 1, Adjustable 1-100 Tickets / 0-1 Credits*
    The Bonus Tickets value will be increased by this value every time a game is played, and the High Score is not beaten.
    If set to 0, then the jackpot will not increment.
    If Bonus Type is set to credit, the maximum value of this setting is 1.

20. **Jackpot Max Value** *Default 1000 Tickets / 1 Credit, Adjustable 1-5000 Tickets / 0-1 Credits*
    Sets the maximum value that an incrementing jackpot can reach before stopping.
    If Bonus Type is set to credit, the maximum value of this setting is 1.

21. **Bullseye Ticket / Bullseye Credits** *Default 50 Tickets / 1 Credits, Adjustable 0 – 5000 Tickets / 0 – 1 Credits*
    Hidden if Bonus Type is set to none.
    If Bonus Type is set to ticket, this sets the number of additional tickets awarded if the bullseye is hit for every throw.
    If Bonus Type is set to coupon, any ticket text is changed to coupon.

22. **Gameplay Volume** *Default 4, Adjustable 0-10*
    Controls the volume of the game during gameplay. Gameplay volume also applies to the operator menu. 0 is mute.

23. **Attract Volume** *Default 3, Adjustable 0-10*
    Controls the volume of the game during attract mode. Attract volume also applies to error voice overs. 0 is mute.

24. **Attract Interval** *Default 3 minutes, Adjustable Off, On, 2m, 3m, 4m, 5m, 10m, 30m*
    Controls the delay between the attract mode audio loop repeating.

25. **Voice Language** *Default English, Adjustable English / Japanese*
    Sets the language of the in-game voice overs, and the error message alert voice overs.

26. **Throw Duration** *Default 12, Adjustable 12 – 20*
    Configure how many seconds the player has to throw the ball.

27. **Speed Units** *Default MPH, Adjustable MPH / KMPH*
    Configure whether the game measures in Miles Per Hour or Kilometres Per Hour.
    Note: This will change the score multipliers from the target rings.
    If your target multipliers are 32x, 16x, 8x, 4x, 2x, your game should be set to MPH.
    If your target multipliers are 16x, 8x, 4x, 2x, 1x, your game should be set to KMPH.

28. **Coin Inhibit Pol** *Default Low to Enable, Adjustable Low to Enable / High to Enable*
    When set to Low to Enable, set the polarity of the coin inhibit signal low to inhibit the attached payment device. If set to High to Enable, set the polarity of the coin inhibit signal high to inhibit the payment device.

29. **Error Message Alert** *Default Display & Audio, Adjustable Display & Audio, Audio Only, Display Only, Off*
    Controls how the game indicates an error has occurred. Errors can be shown on the display and/or with an error voice message that is played through the speakers or hidden completely.

AUDITS

1. **Total Coins 1**

   Shows the number of coins inserted on COIN1 input.

2. **Total Coins 2**

   Shows the number of coins inserted on COIN2 input.

3. **Total Service Credits**

   Shows the number of times the service button was used to issue 1 credit to the game.

4. **Single Player Games**

   Shows the total number of single player games played.

5. **Two Player Games**

   Shows the total number of two player games played.

6. **Bonus Count**

   Shows the number of times the game bonus was paid out.

7. **Total Games Played**

   Shows the total number of games completed.

8. **Average Tickets Per Game**

   Shows the average number of tickets won from each game.

9. **Average Score Per Player**

   Shows the average score based on every game played.

10. **Games Per Bonus Payout**

    Shows how many games were played on average between bonus payouts. If no bonuses have been won, this will show 0.

11. **Average Jackpot Payout**

    Used when incrementing jackpots are configured. Displays the average jackpot paid out to the player. This will automatically reset to 0 if the Bonus Type game setting is changed.

12. **Highest Speed**

    The fastest ball throw speed recorded.

13. **Average Speed**

    The average ball throw speed recorded.

14. **Total Throws**

    The total number of balls throw. This may be greater than the sum of Target Hit and Bad Throws due to the front sensors being blocked incrementing this value.

15. **Hits – Region 1**

    The percentage of throws that landed on the bullseye.

16. **Hits – Region 2**

    The percentage of throws that landed in region 2.

17. **Hits – Region 3**

    The percentage of throws that landed in region 3.

18. **Hits – Region 4**

    The percentage of throws that landed in region 4.

19. **Hits – Region 5**

    The percentage of throws that landed in region 5 (outer ring).

20. **Bad Throws**

    The percentage of throws that did not hit the target.

21. **Bonus Count (Bullseye)**

    Shows how many times the bonus for hitting three bullseyes was awarded

22. **Games Per Bullseye Bonus**

    Shows how many games on average were played between each bullseye bonus payout.

OUTPUT TEST

- **All Outputs**

  Flash all lamps, run all 7 segment displays, chase lights, player lamps and round lamps.

- **Ball Dispenser**

  Dispense a single ball from the dispenser.

- **Ticket Dispenser**

  Dispense a single ticket from both ticket mechs.

- **7 Segment**

  Counts on all 7 segment displays from 0 to 9, then shows the display number on each display. This can be used to verify that each display is wired correctly.

- **Lights**

- Runs all lighting channels individually. Cabinet lighting from chase light 1 → chase light 10 → FB215 Output 11 → FB215 Output 12→ FB215 Output 13→ FB215 Output 14→ FB215 Output 15; player lamps and round lamps.

- **Sounds**

  Play all sounds in sequence.

- **Max Load**

  Runs all outputs at the same time at maximum power. All 7 segment displays are set to 8888, audio plays, all motors run, and all lamps are turned on.

- **Coin Inhibit**

  Checks the payment device state. If 'UNINHIBIT', it means the payment device is unlocked. If state is 'INHIBITED', the payment device is locked.

INPUT TEST

When the Input Test is running, the display is updated, and an audio indication is given when the inputs have changed. To test multiple inputs at once, choose the **ALL INPUTS** selection. The following tests state the status of the individual input, along with the quantity of triggers, on the LCD screen.

- **Coin 1**
- **Coin 2**
- **Single-player button**
- **Two-player button**
- **Up button**
- **Down button**
- **Left / Service button**
- **Right / Test button**

- **Utility button**
- **Front sensor**
- **Rear sensor**
- **Rear Coordinates**
- **Ball gate sensor**
- **Ticket 1 notch**
- **Ticket 2 notch**

REAR COORDINATES TEST

This test can be used to ensure the rear target board sensors are accurately reporting positioning data to the FB216.

If the connection check fails when entering this menu, there is an issue in the connection between the rear sensors and the FB216.

The below image can be used to ensure that hits at specific points on the target are reporting their position accurately.

Note that the values on your target board may change, depending on the version of the game you own.
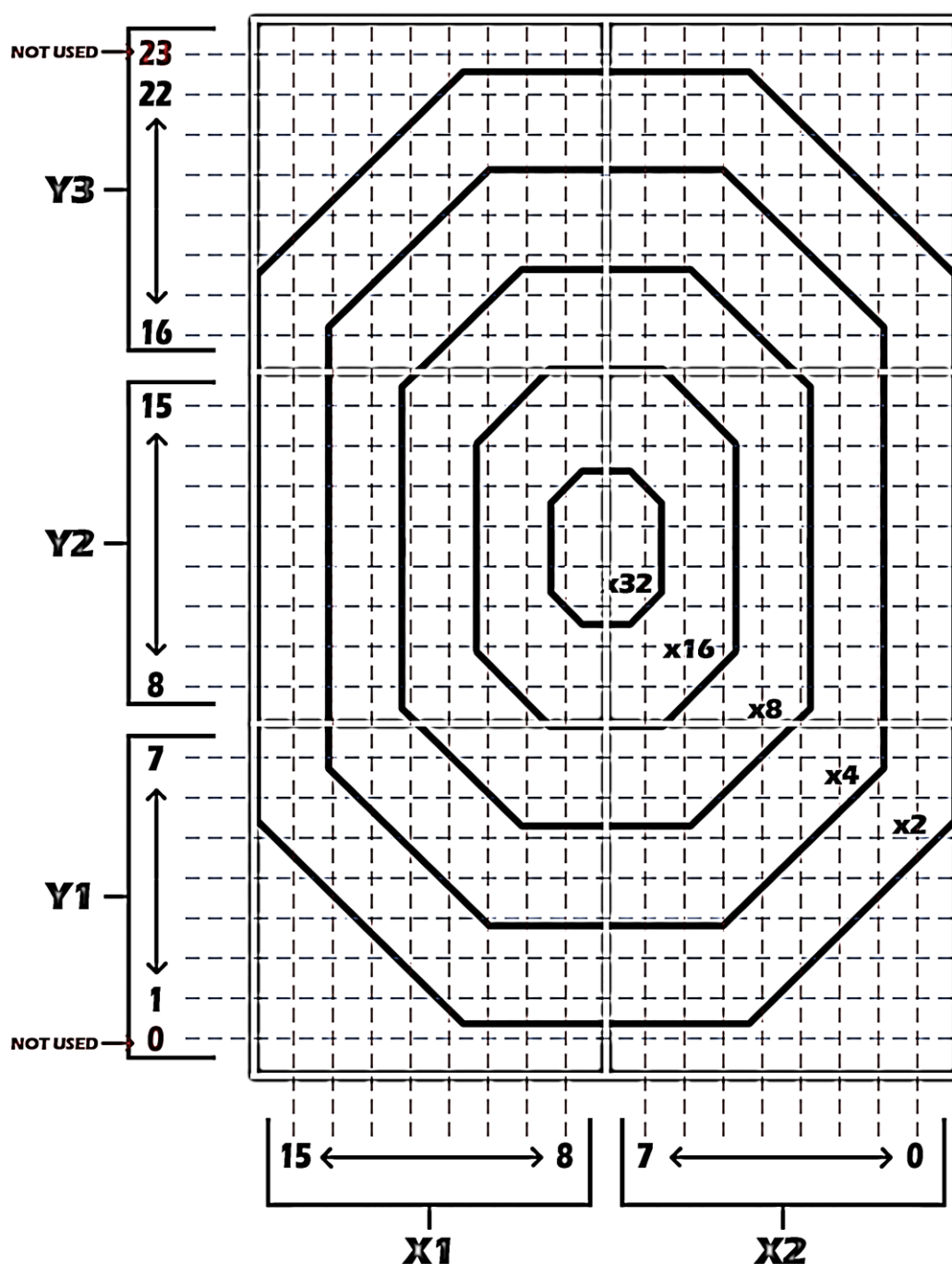
GAME HISTORY

This menu lists the data on the last 10 game plays. Each entry lists five pieces of data:

- SPL / DPL – Single player or double player game
- P1 – Player one's score
- P2 – Player two's score
- T1 – The number of tickets paid out to player one
- T2 – The number of tickets paid out to player two

ERRORS

The following errors can occur during normal operation. The display will update when the error occurs and automatically clear when the fault condition is removed.

Name	Cause	Solution
BTN 2Player Jam	The "Double Player" button has been held for too long.	Release the button to clear. If the issue persists, check that the button is not damaged. Replace button if necessary.
BTN 1Player Jam	The "Single Player" button has been held for too long.	Release the button to clear. If the issue persists, check that the button is not damaged. Replace button if necessary.
Coin 1 Jam	The coin switch has been pressed for a long period of time.	Release the coin sensor to clear the error.
Coin 2 Jam	The coin switch has been pressed for a long period of time.	Release the coin sensor to clear the error.
BTN Up Jam	The "UP" button has been pressed for more than five seconds.	Release the button to clear. If the issue persists, check that the button is not damaged. Replace button if necessary.
BTN Down Jam	The "DOWN" button has been pressed for more than five seconds.	Release the button to clear. If the issue persists, check that the button is not damaged. Replace button if necessary.
BTN Right Jam	The "ENTER" button has been pressed for more than five seconds.	Release the button to clear. If the issue persists, check that the button is not damaged. Replace button if necessary.
BTN Left Jam	Service button has been held for too long.	Release the button to clear. If the issue persists, check that the button is not damaged. Replace button if necessary.
BTN Utility Jam	Utility button has been held for too long.	Release the button to clear. If the issue persists, check that the button is not damaged. Replace button if necessary.

Sensor Front Jam	Too many triggers happening at the front sensor within a period of time.	• Clear any obstruction to the sensors • clean sensor area • Check fuse (pg.38) • Check sensor wiring and connections • Troubleshoot sensor board by swapping it with a known working board (rear sensor) • Replace faulty IR board
Sensor Rear Jam	Too many triggers happening at the rear sensor within a period of time.	• Clear any obstruction to the sensors • Clean sensor area • Check fuse (pg. 38) • Check sensor wiring and connections • Troubleshoot sensor board by swapping it with a known working board (front sensor) • Replace faulty IR board

The following are errors that occur that can be viewed and cleared in the operator menu.

Name	Cause	Solution
Ticket 1 Error	Player 1 side has either run out of tickets or the dispenser is jammed.	Refill the tickets and ensure there is no jam. The game will automatically pay out remaining tickets if there is activity on the ticket sensor.
Ticket 2 Error	Player 2 side has either run out of tickets or the dispenser is jammed.	Refill the tickets and ensure there is no jam. The game will automatically pay out remaining tickets if there is activity on the ticket sensor.
Tickets Owed *New Jersey firmware only*	Ticket vending has been interrupted by either an error or power loss.	Check the ticket mechs to ensure there are no jams, and there are tickets present. • Clear the tickets by viewing the error in the errors menu and holding the Utility button • Vend the tickets by viewing the error in the errors menu and pressing the right button
Ball Disp Jam	Ball dispenser was not able to successfully dispense a ball and the ball dispense sensor is blocked.	• Clear ball obstruction • Clean/check the dispense sensor and wiring • Check fuse (pg. 38) • Replace sensor

Ball Disp Empty	Ball dispense sensor not detecting ball. Possible reasons: • Cabinet out of balls • Balls jammed • No power to ball dispenser • Ball dispense motor issue	• Check the cabinet for balls • Check that the motor is receiving 12VDC during Motor Run Test • check fuse if no power (pg. 38) • Check set screws on jaw coupler and motor shaft (pg.86)
History Error	The CPU cannot read or write to its on-board EEPROM history data or is receiving errors during communication with the EEPROM.	Clear the error by viewing it in the errors menu and pressing the right button. If the error still occurs, the IC is faulty and needs to be replaced.
Sound Error	Sound hardware initialization failure. Possible reasons: • No power to FB225 • No data coming from FB225 • SD card is not present in Rasp Pi • Corrupt sound file on SD card in Rasp pi	• Clear the error by viewing it in the errors menu and pressing the right button • Check connections on FB225 • If no power, check wiring, fuse • Replace sound file
Audits Error	The CPU cannot read or write to its on-board EEPROM resettable audits or is receiving errors during communication with the EEPROM.	Commonly seen following a firmware update. Set all audits to default by viewing the error in the errors menu and pressing the right button. See "Clearing Audits" section below to clear audits at any time.
PSET Error	The CPU cannot read or write to its on-board EEPROM program settings or is receiving errors during communication with the EEPROM.	Commonly seen following a firmware update. **Record your current settings**. Clear the error by viewing it in the errors menu and pressing the right button. **Adjust your settings accordingly.** If the error still occurs, the IC is faulty and needs to be replaced.
Version Error	Major version change.	Commonly seen following a firmware update. Clear the error by viewing it in the errors menu and pressing the right button. If the error still occurs: • Reflash software • Reflash new firmware file • Revert to old firmware to see if problem persists • Contact support

MAINTENANCE AREA

PLAYER PANEL ACCESS
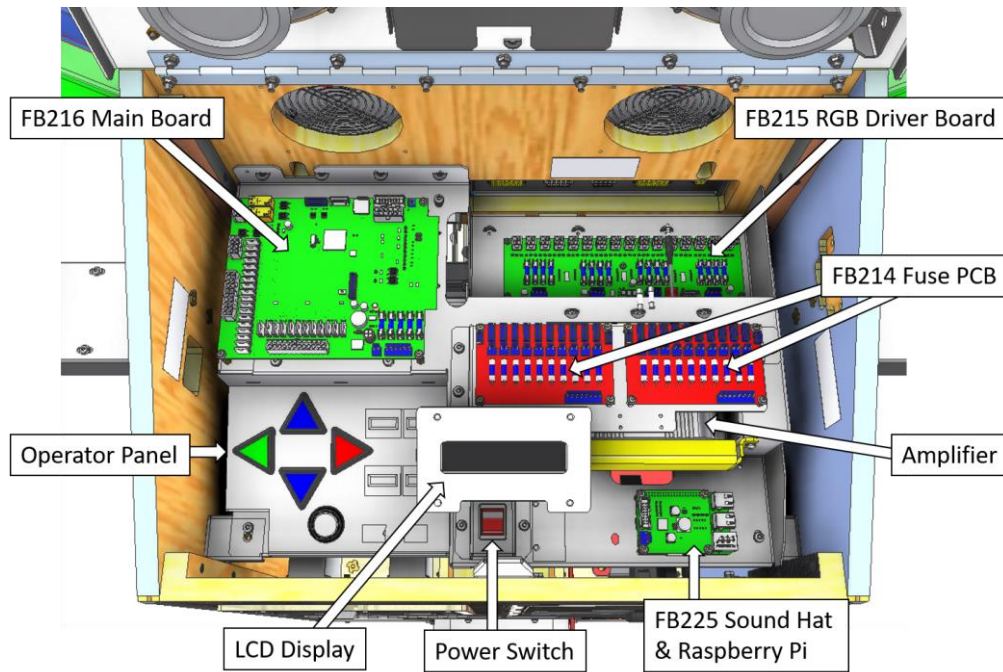
PLAYER PANEL PART DESCRIPTIONS

POWER SWITCH

This power switch removes power to the power supply and the DBA connection. This switch does **NOT** remove all mains voltage inside the cabinet.

FB216 MAIN BOARD

Main board that operates the inputs and outputs for the game. See page 52 and 53 for the wiring drawing. See page 45 for firmware installation steps.

FB225 SOUND HAT & RASPBERRY PI

This PCB and Raspberry Pi are used in conjunction to provide the sound for the game. See wiring drawings for more information.

Note that Raspberry Pi 3 and 4 can be used in HYPERpitch. A sticker on top will indicate if a Raspberry 4 is in use. If no sticker is present, a Raspberry Pi 3 is in use. This will impact which image file should be used if the sound image needs to be reinstalled. Only image files with RPI4 in the file name should be used with Raspberry Pi 4.

FB214 FUSE PCB

Fuses the various 12VDC components in the cabinet. See page 51 for the wiring drawing.

> **WARNING:**   **ALWAYS** turn **OFF** mains power and unplug the game before replacing any fuses. **ALWAYS** use the correctly rated fuse.
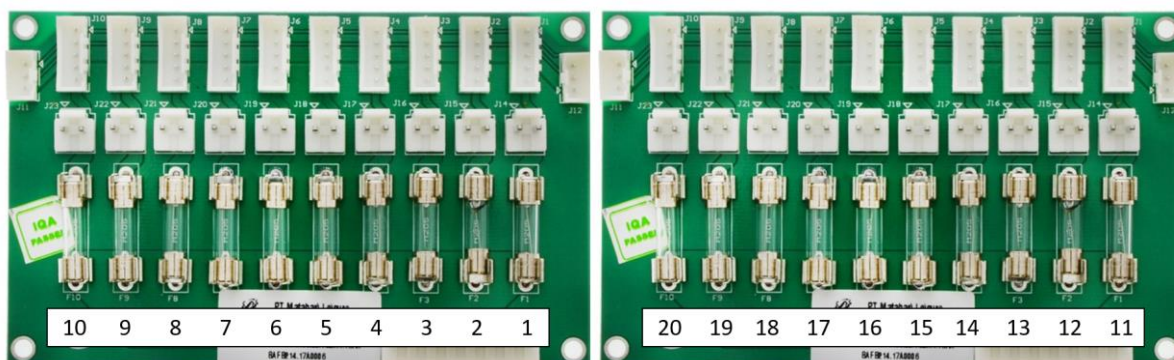
1	Single player/double player button lamps, P1 "Throw 1" display	11	Sound amp, speaker lighting
2	P1 "Throw 2" display	12	"Speed", "Accuracy", "Beat", and "Win Tickets" lighting
3	P1 "Throw 3" display, Coin door area	13	Header display surround lighting
4	Operator panel, P1 "Total Score" display	14	Right side header lighting
5	P1 display area lighting	15	FB225 sound hat
6	P2 "Throw 1" display, P2 "Throw 2" display	16	Front sensors
7	P2 "Throw 3" display, P2 "Total Score" display	17	P2 display area lighting
8	FB226 and rear sensors	18	Ticket 1
9	"Hyperpitch" header lighting, left side header lighting	19	Ticket 2
10	"Beat", "Score", "Win Tickets" displays	20	Ball gate motor, shaker motor, dispense sensor

FB215 RGB DRIVER BOARD

Controls and fuses the alternating RGB lighting on the cabinet. See page 55 for the wiring drawing.
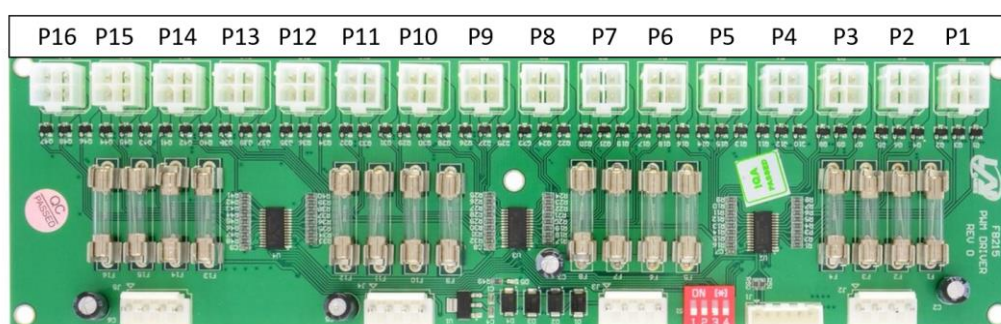
1	Light chaser ring #1 (Front)	9	Light chaser ring #9
2	Light chaser ring #2	10	Light chaser ring #10
3	Light chaser ring #3	11	Target region light #1 (Bullseye)
4	Light chaser ring #4	12	Target region light #2
5	Light chaser ring #5	13	Target region light #3
6	Light chaser ring #6	14	Target region light #4
7	Light chaser ring #7	15	Target region light #5
8	Light chaser ring #8	16	Ball exit light

OPERATOR PANEL / SERVICE CONTROLS
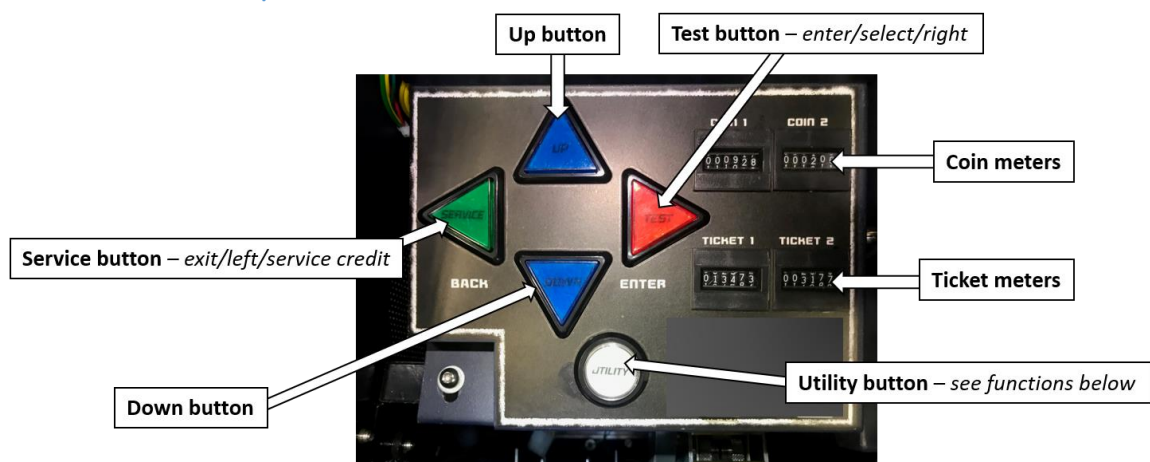
Press the green SERVICE/BACK button to issue a service credit from attract mode. Press and hold the green SERVICE/BACK button to enter temporary Free Play Mode. This will remain in place until machine power is reset.

Press the red TEST/ENTER button to enter the operator menu from attract mode.

When in the operator menu, use four up/down/left/right buttons to navigate through the menu.

UTILITY BUTTON FUNCTIONS

1. **Free Play Mode**

   Continuously holding down the Utility button while in attract mode will put the game into a temporary free play mode. The game will revert back to regular play following a power cycle.

2. **Clearing Audits**

   Continuously holding down the Utility button while in the AUDITS MENU will clear all resettable audit data.

3. **Resetting to Factory Defaults**

   Continuously holding down the Utility button while in the MAIN MENU will revert all program settings to factory defaults.

4. **Clearing Owed Tickets** *Only applicable to New Jersey firmware*

   If tickets are owed, they can be cleared by viewing the Tickets Owed error in the ERROR MENU and holding the Utility button.

5. **New Jersey Mode**

   Continuously holding down the Utility button while in the VERSION MENU will change the machine to New Jersey Mode (NJ Mode).

COIN/TICKET METERS

Meters will increment for each coin inserted and each ticket paid out. Meters are under firmware control and are not directly connected to the mechanisms.

COIN/TICKET ACCESS

COIN/TICKET PART DESCRIPTIONS

TICKET MECHS

Tickets won are paid out from two ticket mechs. Being a 2-player game, tickets are paid out on the mech corresponding to the player. Player 1 tickets are paid out on ticket mech 1 and player 2 tickets are paid out on ticket mech 2. The exception being when the "Card System" game setting is set to ON. If a 2-player game is played by crediting only a single player position, then all tickets are paid out on that players ticket mech.
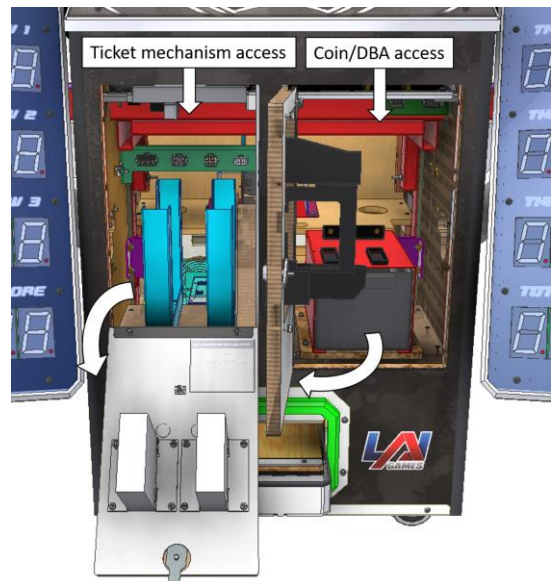
Connections are available through a standard 4-way Molex receptacle. Deltronic DL-1275 mechs are installed by default.
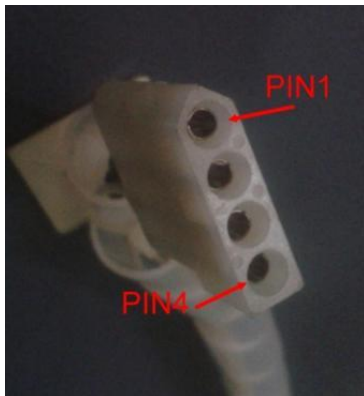
Shell part number:
Molex 03-09-1042

Pins:
Molex 02-09-1119 (loose)
Molex 02-09-1117 (chain)

PIN1 = NOTCH
PIN2 = GND
PIN3 = DRIVE
PIN7 = 12VDC

TICKET HOLDER

Ticket holders for this unit were specially designed to allow for easier ticket stocking. To stock tickets, loosen the wing nuts, lift up on section A, and then rotate it toward you. Once the tickets have been loaded, rotate section A away from you and push down to put back into place. Then retighten the wing nuts. Each holder can hold a maximum of 4000 tickets. **Do not overfill tickets above the top of the holder.**

To Fill Tickets   **When Finished**
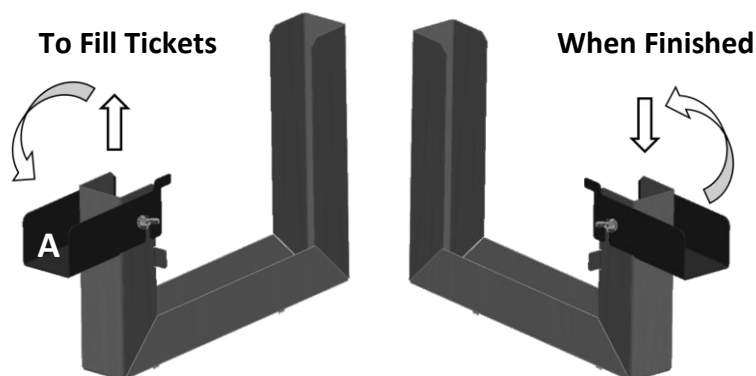
COIN MECHANISM / BILL ACCEPTOR / CARD SYSTEM

Credits can be inserted via a coin mech, bill acceptor and/or card system connection.
By default, the coin door contains a micro switch connected to the COIN2 input for crediting the machine. A 6-way Molex connector has been installed on the coin door which can be optionally used to make adaptors for most electronic coin systems and comparators. See connector pin-out below.
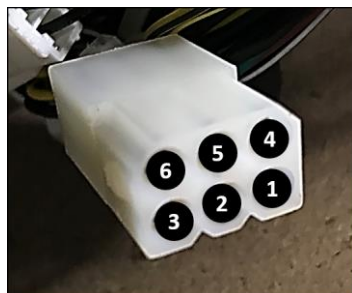
PIN1 = GND
PIN2 = COIN1 input
PIN3 = 12VDC
PIN4 = GND
PIN5 = COIN2 input
PIN6 = 12VDC

UNIVERSAL CARD LINK CONNECTION

9-pin Universal Card Link connectors are located on both player scoring panels to the left and right of the cabinet. For easier installation, there has been additional ticket mech harnessing added to the card reader area. See *Card Reader Installation* instructions below.

CARD READER INSTALLATION

Follow the instructions on the UCL/Ticket labels located in the areas below in order to install card readers on the unit.
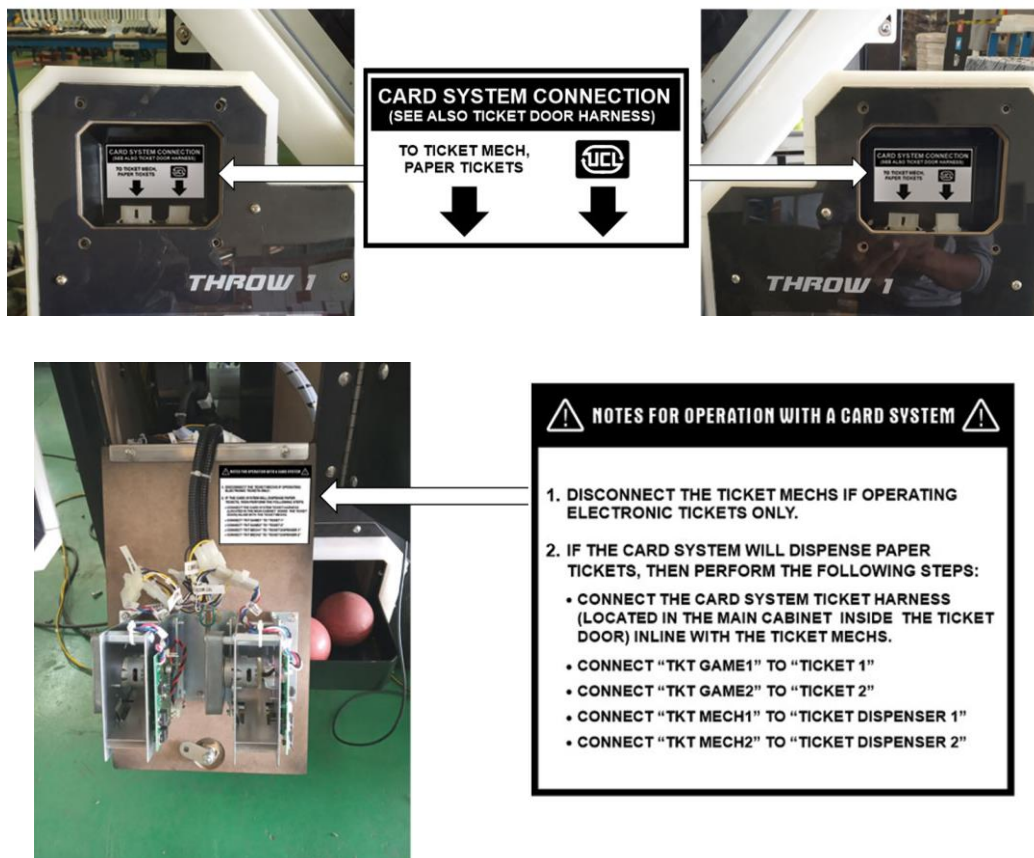
BALL JAM ACCESS – SIDE OF PLAYFIELD

Ball jammed at the front

WARNING: Pinch Hazard

These two areas are not connected which could lead to movement. Avoid inserting fingers or resting body parts on this area.

SAFE OPERATING
10 BA
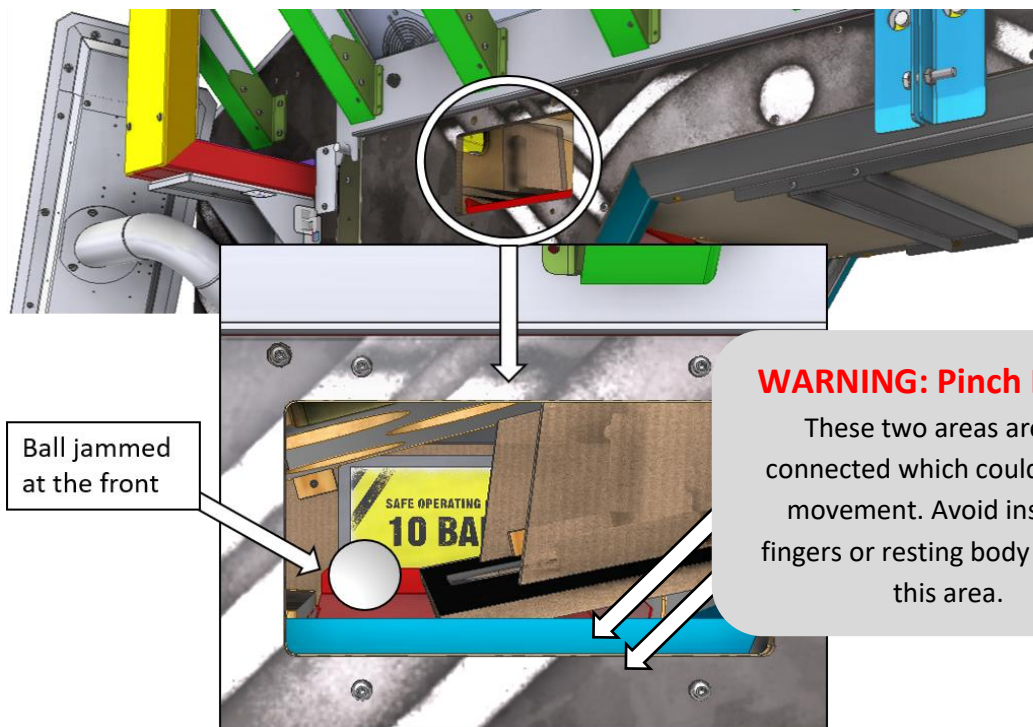
BALL JAM ACCESS – INSIDE PLAYFIELD

WARNING: MOVING PARTS - ALWAYS turn **OFF** mains power and unplug the game before removing the ball return cover.

Always take caution when entering the tunnel of the playfield and **DO NOT STEP** on the ball return cover.

Remove the cover by removing 2 bolts

Ball return cover

Access to the channel
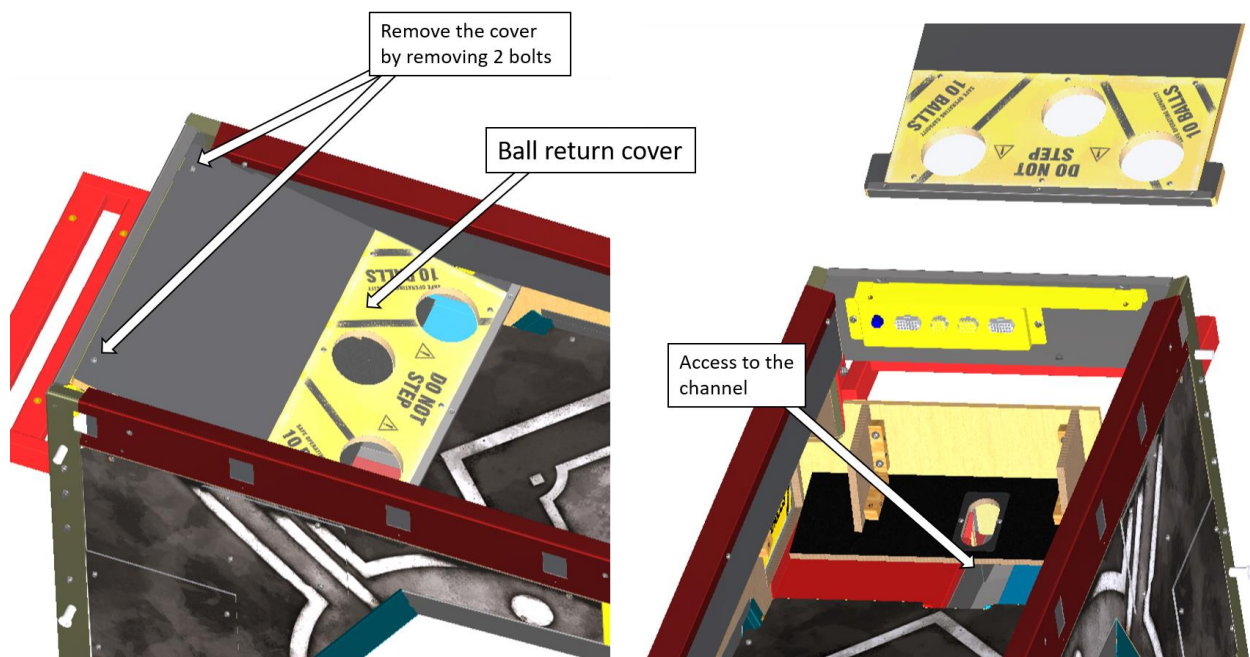
SERVICE AREA

NOTE: Be sure to read the following carefully before servicing the machine.

WARNING: It is advised that anyone using this section for repairing or modifying any of the components of the game should be a qualified technician, having at least a basic knowledge of digital components, integrated circuits and electricity.

REAR PLAYFIELD ACCESS - BELOW TARGET

FB213a Receiver

FB226 Controller PCB

Target RGB Connections
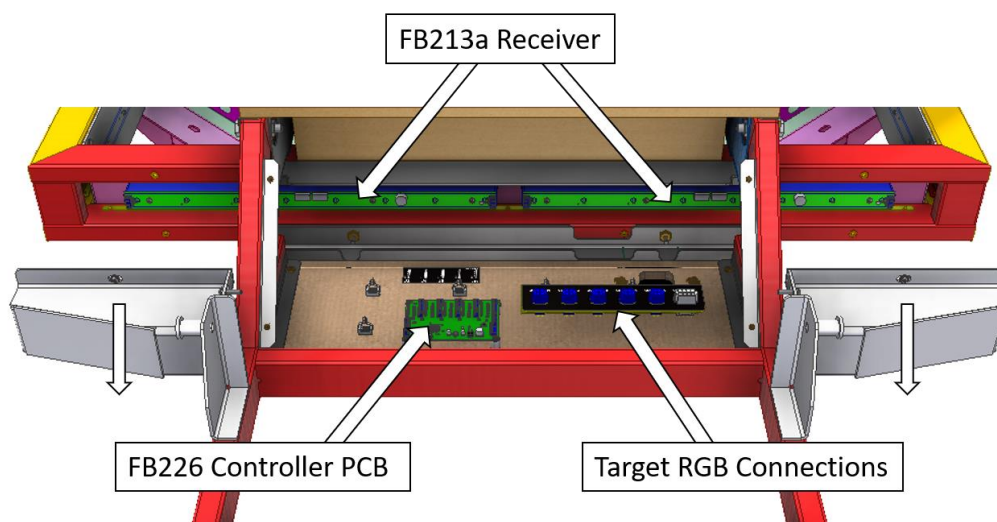
REAR PLAYFIELD PART DESCRIPTIONS

FB226 CONTROLLER PCB

Controls the inputs/outputs from the target sensors. This is located at the rear of the cabinet underneath the target area. See page 68 for the wiring drawing.

FB213 A/B INFRARED RECEIVERS/EMITTERS

Located at the front and rear sides/top/bottom of the playfield area. The FB213B emits infrared beams that are sensed by the FB213A. Blocking this beam will send a signal to the FB226 and FB216. There is a total of 7 emitters and 7 receivers installed in the cabinet. See page 65 and 68 for the wiring drawing.

THROW SENSOR/TARGET SENSOR ACCESS

FB213b Emitter

FB213b Emitter

FB213a Receiver
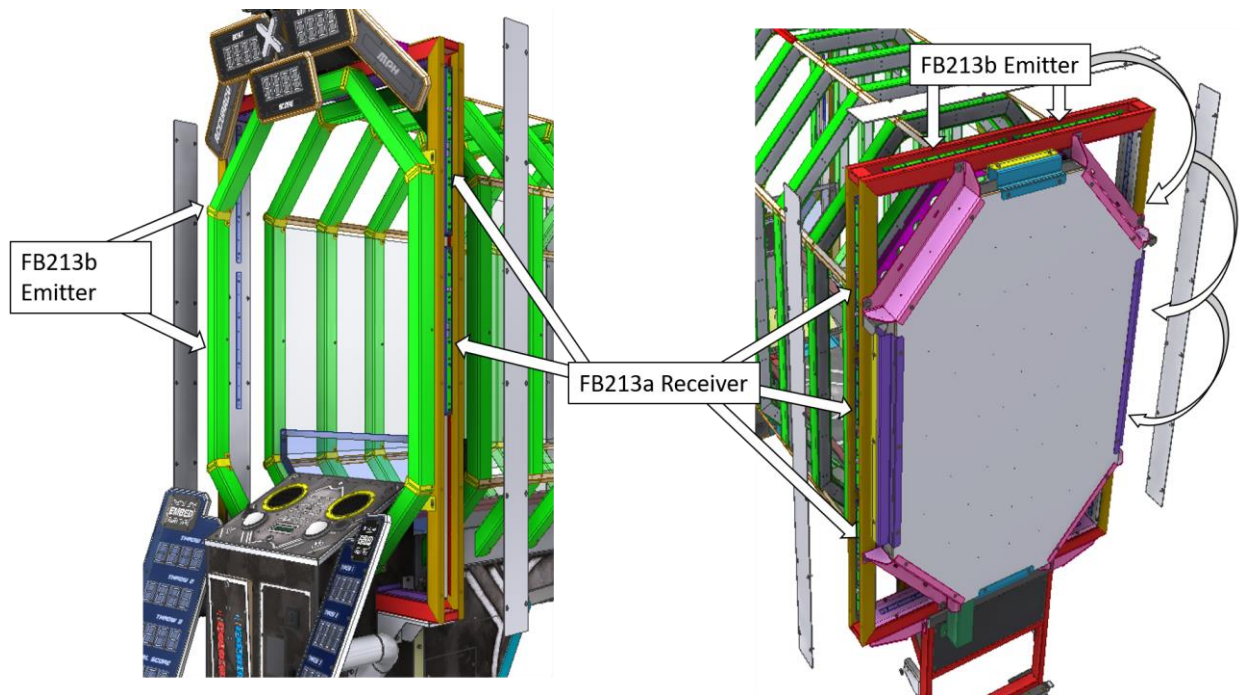
REAR CABINET ACCESS

WARNING: MOVING PARTS - ALWAYS turn **OFF** mains power and unplug the game before accessing this area.

WARNING: HIGH VOLTAGE - ALWAYS turn **OFF** mains power and unplug the game before accessing this area.

Shaker Motor

Ball Dispenser Motor

Power Inlet / Mains Switch

Power Supply
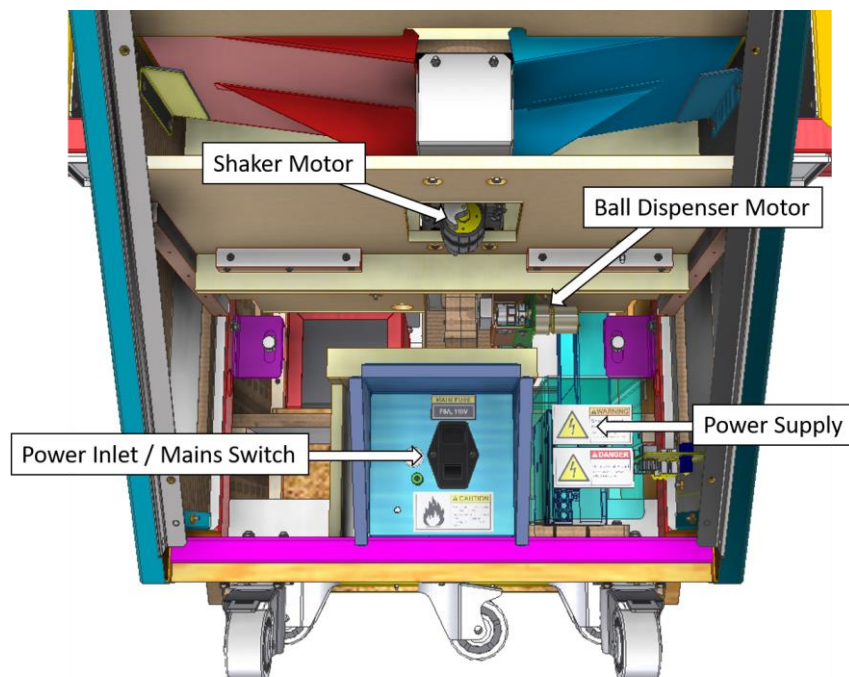
REAR CABINET PART DESCRIPTIONS

POWER INLET/MAINS SWITCH

The power inlet is a standard IEC inlet socket with a mains power switch, located at the rear of the machine. There is a main power fuse internal in this IEC socket. Use the steps below when replacing fuses.

> **WARNING:** **ALWAYS** turn **OFF** mains power and unplug the game before replacing any fuses.
> **ALWAYS** use the correctly rated fuse.

Always remove power plug

Fuse housing

Pull forward
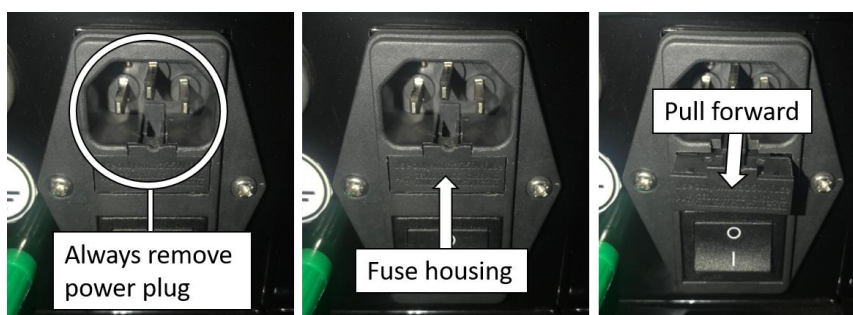
MOTORS

The *shaker motor* vibrates the ball channel to reduce the chance of balls jamming. The *ball dispenser motor* dispenses one ball at a time during gameplay. You can perform a RUN TEST through the operator menu to test that both motors are functioning. See page 67 for the wiring drawing.

POWER SUPPLY

Adjustment pot & Power LED

The universal AC input power supplies generates 12VDC for the entire machine. The green LED indicates powered operation.

The power supply output voltage should be 12VDC. It can be adjusted when necessary by turning the blue adjustment trim-pot with a small Philips screwdriver.

Power supply rating:

- Input: 110-240VAC 6A/3A
- Output: 12VDC 50A

FB84 A/B BALL DISPENSE SENSOR

(Not pictured above) The FB84-A and FB84-B work in tandem to detect when a ball is dispensed for each round. The sensor can be accessed through the ticket/coin access areas, or by separating the front cabinet from the playfield. See page 67 for the wiring drawing.

PREVENTATIVE MAINTENANCE

EXTERIOR

- Regularly dust and clean the external cabinet areas as required, using a soft water-damp cloth and mild soap.
- Check for blown bulbs and replace as required.
- Check all LED strips are functioning, and repair as required.
- Check for any broken or damaged acrylics.

LAMPS

> **WARNING:** **Always** turn **OFF** mains power and unplug the game, before replacing any lamps.
> **Always** replace the lamps with the same or equivalent size, wattage, and voltage**.**

- All button lamps are 12VDC T10 LED or equivalent.
- All remaining lighting is 12VDC RGB LED strip lighting.

INTERIOR

> **WARNING:** **Always** turn **OFF** mains power and unplug the game before cleaning the interior of the machine.

- Regularly dust and vacuum the interior of the cabinet, taking care to remove any objects that may have fallen.
- Check and tighten all fixing hardware and fasteners as required.
- Check the ball dispense sensor is clear, blow out any dust from the optical sensor.
- Check the balls are clean and undamaged.
- Use the provided acrylic polish and a soft cloth or buffer to buff out any scratches on the acrylics.
- Regularly clean the target area with a soft damp cloth (not wet).

> **WARNING:** **Always** turn **OFF** mains power and unplug the game before cleaning the target area.
> **Always** take care when entering the tunnel of the playfield and observe the **DO NOT STEP** areas.

FB216 FIRMWARE UPDATE PROCEDURE

TOOLS REQUIRED

- 1 x microSD card formatted as FAT32 (Size needs to be at least 2MB)
- 1 x firmware file:
    a) A game update - for example, *HYPERpitch v3.02.003.gfw*
    b) A bootloader update - for example, *BL_vX.XX.XXX.gfw*
    c) A bootloader updater update - for example, *BU_vX.XX.XXX.gfw*

CHECKING FOR FAT32 FILE SYSTEM *(Windows)*

Step 1. Insert the micro SD card in your computer.

Step 2. Open the File Browser and right click on the SD card drive.

Step 3. Select "Properties" to view the General Properties of the micro SD card.

Step 4. Follow the steps below if the File System is anything other than FAT32, or continue to the *Update Instructions* section.
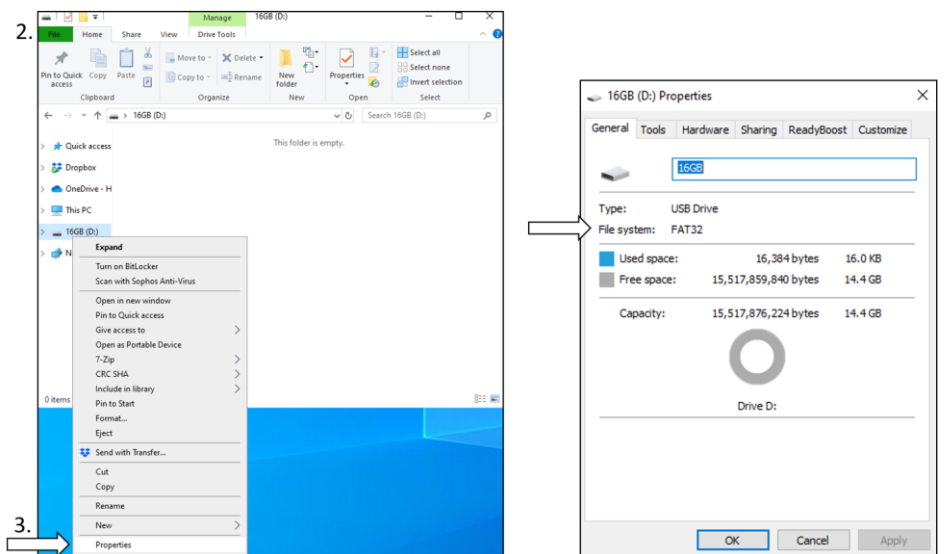
FORMATING A MICRO SD CARD *(Windows)*

Step 1. Insert the micro SD card in your computer.

Step 2. Open the File Browser and right click on the SD card drive.

Step 3. Select "Format."

Step 4. Ensure the "FAT32" is selected as the File System and click "Start."

Step 5. Click "OK" to allow the memory to be cleared.

Step 6. Re-open your File Browser and follow the steps below to complete the update.
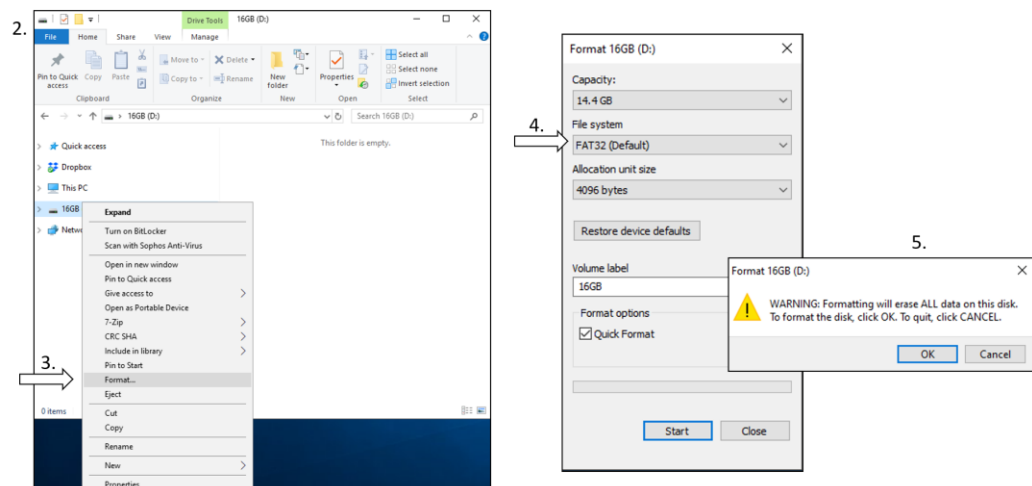
UPDATE INSTRUCTIONS

1. Insert the microSD card into your PC or laptop and put the .gfw file on the microSD card. Note that there must only be one .gfw file on the microSD card, and it must be located in the root directory (top level) of the card.

2. With the cabinet turned off, insert the microSD card into the slot on the FB216. See image, right.

3. Turn on the cabinet.

4. Watch the LCD for progress – this should take less than 15 seconds. Depending on the type of .gfw file you are installing, the messages displayed will be different.

	LCD Messages
1	LAI Bootloader vX.XX.XXX XXX
2	LAI BldrUpdr vX.XX.XXX XXX
3	Reading <first 16 characters of the current .gfw filename>
4	Flashing GameApp
5	GameApp Flashed
6	Starting GameApp
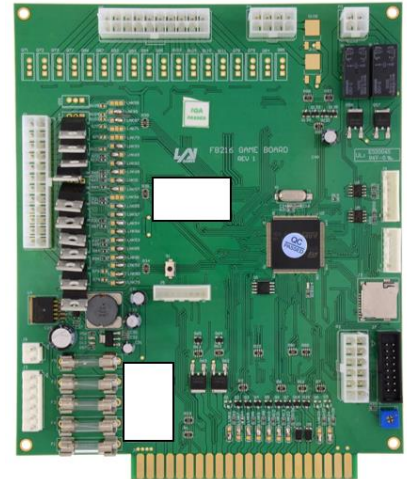
5. Once final message appears for the new .gfw file, it indicates the process is complete.

6. Once the game boots up, power off the machine and remove the SD card.

7. Power on the machine and go into the operator menu to verify that the version of the game firmware installed is correct.

NEW JERSEY COMPLIANCE

NOTE: New Jersey harnessing is not included with each unit. To purchase, contact your distributor or visit our webstore at parts.laigames.com. Changing only the firmware setting does not make the unit New Jersey compliant.

OPERATION

There are a few key functionalities when running New Jersey firmware. Note that you can check if you are running New Jersey firmware, by viewing the version label in the operator menu. If an NJ is shown after the version number, it is New Jersey firmware.

- If power is lost during ticket vending, tickets owed will be shown when the machine is started up.
- If power is lost while credits are on the machine, or a game is in session, the credits will be present when the machine is started up.
- Players are not able to insert more than 2 credits per session.
- Players are not able to insert credits during ticket dispensing; credits can only be inserted when ticket dispensing is fully completed
- When 2 credits are inserted, players can only select Two Player mode
- Some game settings are changed or inaccessible.

FIRMWARE SETTING

1. Power up the cabinet. Then enter the Operator Menu and choose Version. If NJ mode is not enabled (*image 1 below*), press & hold the Utility Button while in the Version menu until "ENTERING NEW JERSEY MODE" appears on LCD Display. The version should now appear as it does in *image 3*.

Image 1	*Image 2*	*Image 3*

2. Exit Version Menu navigate to Program Settings. Scroll through the settings until you see "COIN INHIBIT POL" settings. Choose ONLY "LOW TO ENABLE" on "COIN INHIBIT POL" settings to get the Relay Enable working. Exit Operator Menu afterwards.
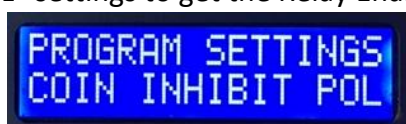
HARNESS INSTALLATION

REMOVING EXISTING COIN HARNESS

1. Unscrew the bolt on the coin door and remove the earthing terminal.
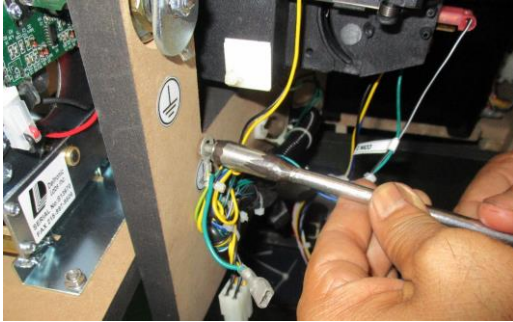
2. Cut all cable ties installed on the existing coin door harness
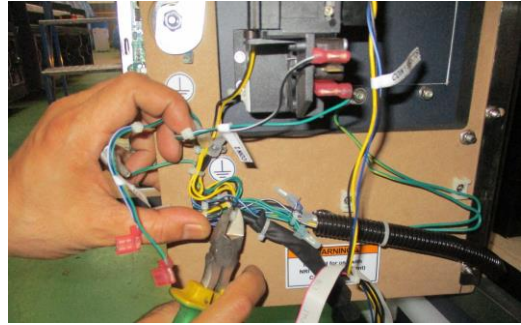
3. Cut the cable ties on the coin lamp and unplug the coin lamp connector.

4. Unplug all coin switch connections.
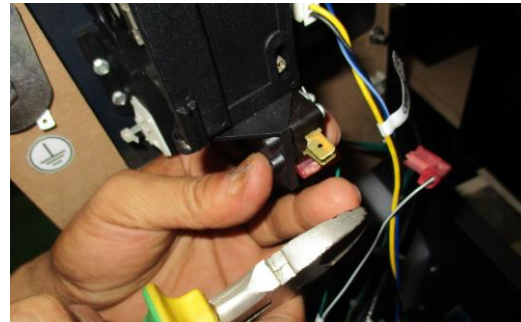
5. Cut all cable ties then unplug YLR 12 Way and VLR 4 Way Connector. This connection is located just inside of the ticket mechanism access door.
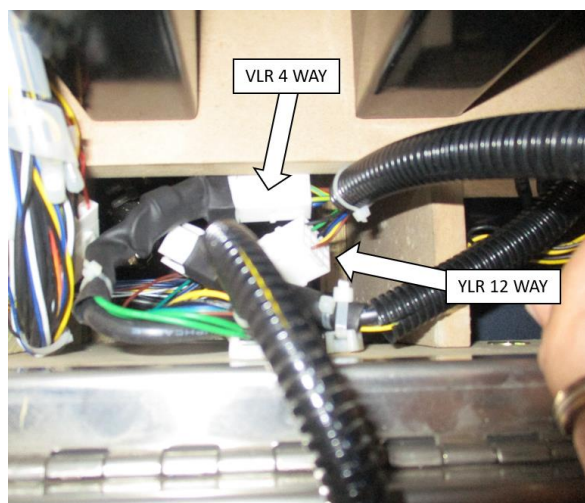
RELAY ENABLE HARNESS INSTALLATION

3. Connect the YLR 12 Way and VLR 4 Way Connector into the Coin Door Connection (Located in ticket door).
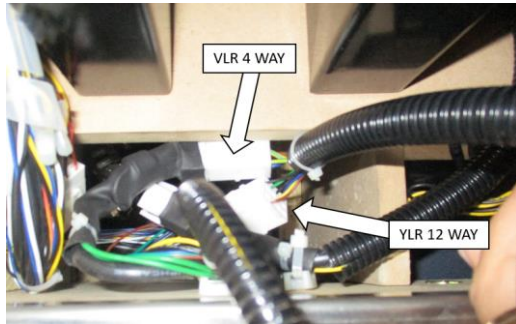
4. Connect the 6 Way Molex Connector to Coin NRI Connection. Located at the bottom of the coin door.
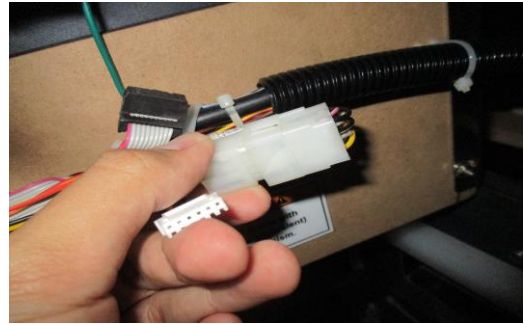
5. Connect the Coin Light harness to the Coin Lamp. This is important for testing purposes later.
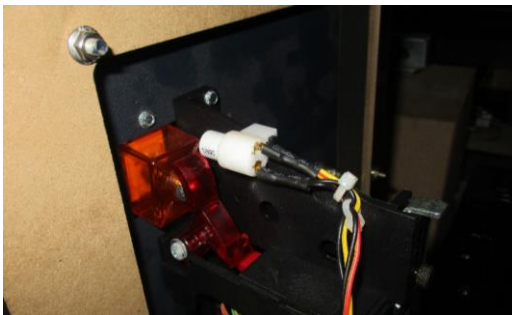
6. Mount the relay PCB in between player 2 ticket holder and the coin box.

7. Ensure that jumper cap is installed ONLY on "L" position as shown in image below.
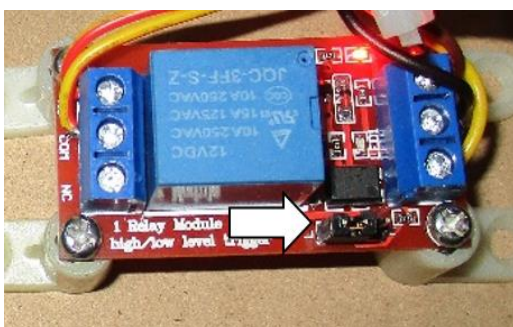
8. Connect either Coin 1 or Coin 2 Switch to the cabinet (for example: Coin 1 Switch).

9. Reinstall all earth ground points and add cable ties to secure the harnessing and any other loose wiring. Be sure to cable tie the split loom in these two locations to reduce stress on connections (shown on next page).

Coin door

Ticket door
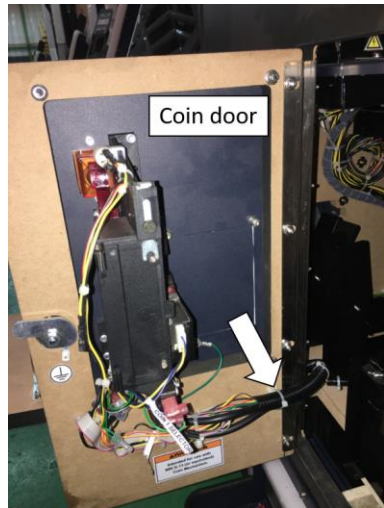
TESTING PROCEDURE

When testing the Relay Enable harness, pay close attention to the coin light, relay click, LED1 lamp indicator on the Relay PCB, the "Coin Inhibit" status on the Output Test menu as well as the amount of credits shown on LCD display while in attract mode. Follow the steps below to test for proper harness installation.

1. Power up the cabinet with the Relay Enable Harness fully connected and let it run on Attract Mode. Ensure LED1 lamp indicator is solid ON (as shown below right) and the coin door light is also ON.

LED 1
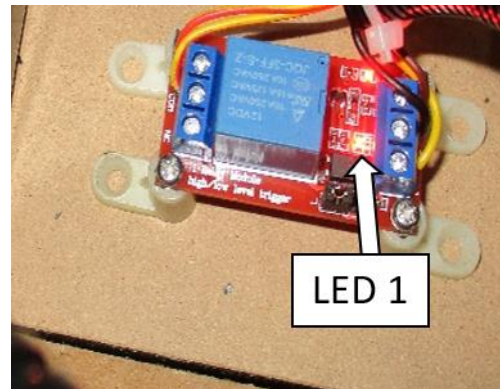
2. When on Attract Mode, enter Operator Menu then choose Output Test. Scroll through the Output Test menu until you find "COIN INHIBIT". Ensure the "COIN INHIBIT" status is "UNINHIBITED" during Attract Mode.

OUTPUT TEST
COIN INHIBIT

COIN INHIBIT
STATE: UNINHIBIT
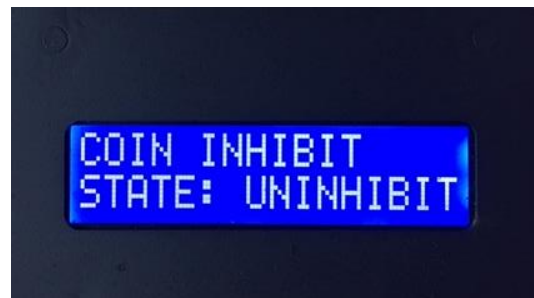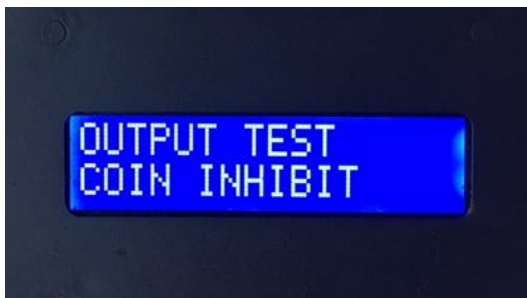
3. Exit Operator Menu. Try to insert coin until you see "CREDITS: 1" on the LCD display during attract mode.
4. Ensure that the LED1 lamp indicator on Relay PCB is still ON, and the coin door lamp still ON.
5. Enter the operator menu and choose Output Test. Check that the COIN INHIBIT state remains "UNINHIBITED".
6. Now exit the Operator Menu. Insert coins until you see "CREDITS: 2" on the LCD Display during Attract Mode. The relay should click, LED1 lamp indicator on the relay PCB goes OFF, and the coin door lamp also goes OFF (please refer to images below).
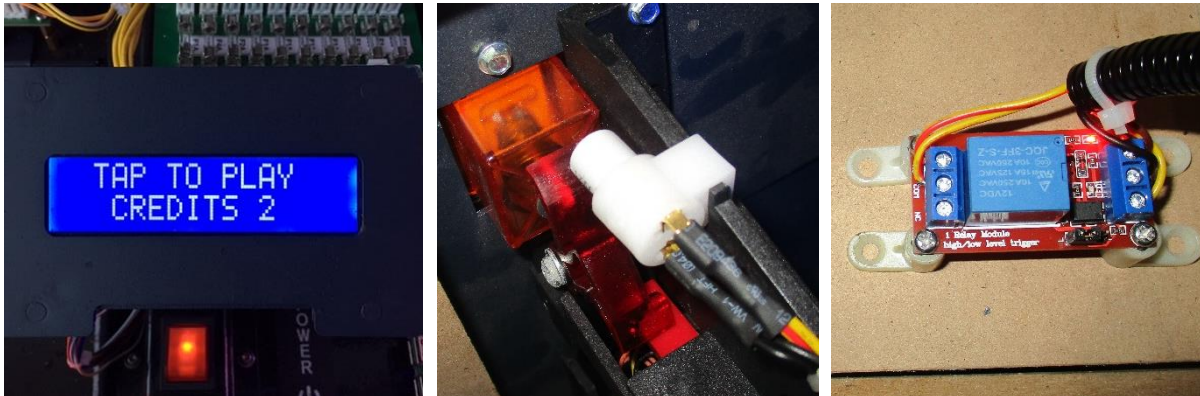
7. Enter Operator Menu, choose Output Test and find COIN INHIBIT menu. The COIN INHIBIT status should show "INHIBITED". This indicates that the Relay Enable Harness could work correctly when credits are sufficient for Double Player games following NJ requirements.

WIRING DIAGRAMS

(Next Page)

Title HYPERpitch

Page Size: A4   Revision: 13

Design Date: 14-AUGUST-2018   Sheet 1 of 16
Engineer: KIM S   FileName: SB-EO-001 Power Supply.SchDoc

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73

TO POWER PSU DC
SHEET SB-EO-001

PCB FB214 (1)

PCB FB 214 (2)

TO CPU & AMPLIFIER
SEE SHEET SB-EO-003

TO EXTENSION HEADER
SEE SHEET SB-EO-010

TO CONNECTION FRONT
SEE SHEET SB-EO-006

TO CONNECTION REGION LIGHT
SEE SHEET SB-EO-013

PCB FB214 (1)

C16 / J13 / J14 / C17

+12V DC 1
+12V DC 2
+12V DC 3
+12V DC 4
5
6
GND 7
GND 8

VHR 8W — JST 8W

J13: 1 +12 VDC, 2 +12 VDC, 3 +12 VDC, 4 +12 VDC, 5 +12 VDC, 6 +12 VDC, 7 GND, 8 GND

FB214 FUSE PCB

FB214

Fuse	J	C	GND / +12V DC
FUSE 1A	J14 GND/+12V (1 2)	C17 (1 2)	GND (F1) / +12V DC (F1) JST 2W VHR 2W
FUSE 1A	J15 GND/+12V (1 2)	C18 (1 2)	GND (F2) / +12V DC (F2) JST 2W VHR 2W
FUSE 1A	J16 GND/+12V (1 2)	C19 (1 2)	GND (F3) / +12V DC (F3) JST 2W VHR 2W
FUSE 1A	J17 GND/+12V (1 2)	C20 (1 2)	GND (F4) / +12V DC (F4) JST 2W VHR 2W
FUSE 1A	J18 GND/+12V (1 2)	C21 (1 2)	GND (F5) / +12V DC (F5) JST 2W VHR 2W
FUSE 1A	J19 GND/+12V (1 2)	C22 (1 2)	GND (F6) / +12V DC (F6) JST 2W VHR 2W
FUSE 1A	J20 GND/+12V (1 2)	C23 (1 2)	GND (F7) / +12V DC (F7) JST 2W VHR 2W
FUSE 2A	J21 GND/+12V (1 2)	C24 (1 2)	GND (F8) / +12V DC (F8) JST 2W VHR 2W
FUSE 4A	J22 GND/+12V (1 2)	C25 (1 2)	+12V DC (F9) JST 2W VHR 2W
FUSE 1A	J23 GND/+12V (1 2)	C26 (1 2)	GND (F10) / +12V DC (F10) JST 2W VHR 2W

PCB FB 214 (2)

C27 / J13 / J14 / C28

+12V DC 1
+12V DC 2
+12V DC 3
+12V DC 4
5
6
GND 7
GND 8

VHR 8W — JST 8W

J13: 1 +12 VDC, 2 +12 VDC, 3 +12 VDC, 4 +12 VDC, 5 +12 VDC, 6 +12 VDC, 7 GND, 8 GND

FB214 FUSE PCB

FB214

Fuse	J	C	GND / +12V DC
FUSE 3A	J14 GND/+12V (1 2)	C28 (1 2)	GND (F11) / +12V DC (F11) JST 2W VHR 2W
FUSE 3A	J15 GND/+12V (1 2)	C29 (1 2)	+12V DC (F12) JST 2W VHR 2W
FUSE 3A	J16 GND/+12V (1 2)	C30 (1 2)	+12V DC (F13) JST 2W VHR 2W
FUSE 4A	J17 GND/+12V (1 2)	C31 (1 2)	+12V DC (F14) JST 2W VHR 2W
FUSE 1A	J18 GND/+12V (1 2)	C32 (1 2)	GND (F15) / +12V DC (F15) JST 2W VHR 2W
FUSE 1A	J19 GND/+12V (1 2)	C33 (1 2)	GND (F16) / +12V DC (F16) JST 2W VHR 2W
FUSE 1A	J20 GND/+12V (1 2)	C34 (1 2)	GND (F17) / +12V DC (F17) JST 2W VHR 2W
FUSE 1A	J21 GND/+12V (1 2)	C35 (1 2)	GND (F18) / +12V DC (F18) JST 2W VHR 2W
FUSE 1A	J22 GND/+12V (1 2)	C36 (1 2)	GND (F19) / +12V DC (F19) JST 2W VHR 2W
FUSE 1A	J23 GND/+12V (1 2)	C37 (1 2)	GND (F20) / +12V DC (F20) JST 2W VHR 2W

Title: **HYPERpitch**

Page Size: A4   Revision: 13

Design Date: 14-AUGUST-2018   Sheet 2 of 16

Engineer: KIM S   FileName: SB-EO-002 Power Fuse PCB.SchDoc

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CPU & AMPLIFIER

TO EXTENSION HEADER
SEE SHEET SB-EO-010

LCD DISPLAY

TO RGB DRIVER
SEE SHEET SB-EO-005

PCB FB216
I/O BOARD

GATE MOTOR +
GATE MOTOR -
MINIFIT 4W C44
RS485 A
RS485 B
GND (SHIELD)
MINIFIT 4W C43

P1 C45
PA0
PA1
GND
PA5
PA6
PA7
PB3
PB4
PB5
GND
PB10
PB10
PE9
PE10
PE11
PE12
PE13
PE14
PE15
PF2
PF3
PF4
PF5
PF6

ANY DETECT
FRONT SENSOR
GND SHIELD
BALL DISP SENSE
DISP 7SEG 3 CLK
DISP 7SEG 1 CLK
DISP 7SEG 1-3 DATA
DISP 7SEG 2 CLK
DISP 7SEG 1-3 SHIELD

SPEED,SCORE,ACCURACY LIGHT
BEAT LIGHT
WIN,TICKET,CREDIT LIGHT
CONTROL PCBFB213E

MINIFIT 24W J8
MINIFIT 24W
+5VDC
GND

JST 2W J2

C38 J2
+12 VDC F(3)
+12 VDC F(3)
+12 VDC F(4)
+12 VDC F(4)
+12 VDC F(1)
+12 VDC F(1)

+12V J2 FUSE 3
+12V J2 FUSE 4
+12V J2 FUSE 1

VHR 6W JST 6W

FUSE 1A
FUSE 4A
FUSE 4A
FUSE 4A
FUSE 3A

I2C SCL RGB
I2C SDA RGB
GND
RG3 DATA
GND
I2C SDA 2
I2C SCL 2

J6 C42
RG3 CLOCK
RG3 DATA
GND (J6)

MINI JST 6W

J3 C41
SND/LCD D0
SND/LCD D2
LCD RS
VCC
GND
SND/LCD D1
SND/LCD D3
LCD CLK
P2 10
GND
GND

LCD-BD4
LCD-BD6
LCD-RS
VCC
GND (A)
LCD-BD5
LCD-BD7
LCD-ENABLE
VDO
LCD-RW

MINIFIT 12W MIN FIT 12W

J5
VCC IN
SWDIO
SWDCLK
PB10
PB11
BOOT 0
GND
RESET

MINI JST 7W

IDC 16W
IDC 16W C40

TO CONNECTION REGION LIGHT
SEE SHEET SB-EO-013

POWER INLET 12 VDC
AMP
AUDIO IN
Stereo Jack 3.5

SPK L+
SPK L-
SPK R+
SPK R-
SUBWOOFER +
SUBWOOFER -
WOOFER +
WOOFER -

HONGXING 2.1 CH HX168AN
AMPLIFIER

TO POWER SUPPLY
SEE SHEET SB-EO-001

TO OPERATOR PANEL
SEE SHEET SB-EO-004

RIBBON CABLE

SOUND HAT
PCB FB225
TO RASPBERRY P.

C47
IDC 16W
USB
USB

C6 J1
GND
+12V DC
GND
VHR 3W

AUDIO FILTER
Stereo Jack 3.5

TO CONNECTION FRONT
SEE SHEET SB-EO-006

GND (F15)
+12V DC (F15)

TO PLAYER PANEL
SEE SHEET SB-EO-009

TO POWER FUSE PCB
SEE SHEET SB-EO-002

Title: HYPERpitch
Page Size: A3   Revision: 13
Design Date: 14-AUGUST-2018   Sheet 3 of 16
Engineer: KIM S   FileName: SB-EO-003 Cpu & Amplifier.SchDoc

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CPU ZOOM IN

PCB FB216
I/O BOARD

C45 / P1 — MINIFIT 24W / MINIFIT 24W

Pin	Signal
1	PA0 — ANY DETECT
2	PA1 — FRONT SENSOR
3	GND — GND SHIELD 1
4	PA5
5	PA6 — BALL DISP SENSE
6	PA7 — DISP 7SEG 3 CLK
7	PB3 — DISP 7SEG 1 CLK
8	PB4 — DISP 7SEG 1-3 DATA
9	PB5 — DISP 7SEG 2 CLK
10	GND — DISP 7SEG 1-3 SHIELD
11	PB10
12	PB11
13	PE9
14	PE10
15	PE11 — SPEED,SCORE,ACCURACY LIGHT
16	PE12 — BEAT LIGHT
17	PE13 — WIN,TICKET,CREDIT LIGHT
18	PE14
19	PE15
20	PF2
21	PF3
22	PF4
23	PF5 — CONTROL PCBFB213B
24	PF6

P5: PF7, PF8, DGND, PF9, PF10, PF11, PF12, DGND, PF13, PF14, PF15, PG0, PG1, PG2, PG3, PG4, PG5, PG6, PC14, PC15 (1–20) MINIFIT 20W

P4: GND, GND, GND, PG5, PG6, PC14, PC15 (1–8) MINIFIT 8W

C44 — GATE MOTOR +, GATE MOTOR -

P3: MOTOR 1+, MOTOR 2+, MOTOR 1-, MOTOR 2- (1–4) MINIFIT 4W

J9 / C43: RS485 CH 1 A+, RS485 CH 1 B-, GND, RS485 CH2 A+, RS485 CH 2 B-, GND (1–7) — RS485 A, RS485 B, GND (SHIELD) — MINI JST 7W / XHP 7

J6 / C42 — MINI JST 6W / XHP 6
Pin	Signal
1	I2C SCL RGB — RGB CLOCK
2	I2C SDA RGB — RGB DATA
3	GND — GND (J6)
4	GND
5	I2C SDA 2
6	I2C SCL 2

J3 / C41 — MINIFIT 12W / MINIFIT 12W
Pin	Signal
1	SND/LCD D0 — LCD-BD4
2	SND/LCD D2 — LCD-BD6
3	LCD RS — LCD-RS
4	VCC — VCC
5	GND — GND (A)
6	GND
7	SND/LCD D1 — LCD-BD5
8	SND/LCD D3 — LCD-BD7
9	LCD CLK — LCD-ENABLE
10	P2 10 — VDO
11	GND — LCD-RW
12	GND

J8 — JST 2W
| 1 | +5VDC |
| 2 | GND |

J5 — MINI JST 7W
1	VCC IN
2	SWDIO
3	SWDCLK
4	PB10
5	PB11
6	BOOT 0
7	GND
8	RESET

FUSE 1A
FUSE 4A
FUSE 4A
FUSE 4A
FUSE 3A

⚠4

C38 / J2 — VHR 6W / JST 6W
Pin	Signal
1	+12 VDC F(3) — +12V J2 FUSE 3
2	+12 VDC F(3)
3	+12 VDC F(4) — +12V J2 FUSE 4
4	+12 VDC F(4)
5	+12 VDC F(1) — +12V J2 FUSE 1
6	+12 VDC F(1)

J1 / C39 — EDGE 22W / Edge 22P

Pin	Label
1 / A	GND — GND
2 / B	GND — GND
3 / C	GND — GND
4 / D	GND — GND
5 / E	+12VDC 1 — +12V DC
6 / F	+12VDC 2 — +12V DC
7 / G	+12VDC 3 — +12V DC
8 / H	+12VDC 4 — +12V DC
9 / I	OPERATOR BTN ENTER
10 / J	OPERATOR BTN RIGHT — UTILITY BTN
11 / K	OPERATOR BTN UP — RIGHT BTN
12 / L	OPERATOR BTN LEFT — UP BTN
13 / M	OPERATOR BTN DN — LEFT BTN
14 / N	PC0 — DOWN BTN
15 / O	TICKET DRIVE 2 — DISP 7SEG 10 CLK
16 / P	TICKET NOTCH 2 — TICKET 2 DRIVE
17 / Q	TICKET DRIVE 1 — TICKET 2 NOTCH
18 / R	TICKET NOTCH 1 — TICKET 1 DRIVE
19 / S	PC3 — TICKET 1 NOTCH
20 / T	COIN 1 (COIN MECH DEFAULT) — COIN 1
21 / U	COIN 2 (DBA DEFAULT) — COIN 2
22 / V	PC4 — DBA ENABLE

(additional EDGE signals)
PC5 — DISP 7SEG 4 CLK
PD0 — DISP 7SEG 7 CLK
PD4 — DISP 7SEG 9 CLK
PD5 — DISP 7SEG 5 CLK
PD6 — DISP 7SEG 11 CLK
PD7 — DISP 7SEG 8 CLK
PD8 — DISP 7SEG 6 CLK
PD9 — DISP 7SEG 1 DATA
PD10 — COIN 1 METER
COUNTER 1 — COIN 2 METER
COUNTER 2 — TICKET 1 METER
COUNTER 3 — TICKET 2 METER
COUNTER 4 — PLAYER 1 BTN
COUNTER 5 — PLAYER 1 BTN LAMP
PE5 — PLAYER 2 BTN
PE6 — PLAYER 2 BTN LAMP
PE7 — DISP 7SEG 4-11 SHEILD
PE8 — DGND
DGND — DGND
DGND — DGND
DGND — DGND

IDC 16W / C40 — IDC 16W

TO POWER SUPPLY
SEE SHEET SB-EO-001

⚠10

TO C...
SEE...

76

OPERATOR PANEL

UTILITY BTN
UP BTN
RIGHT BTN
LEFT BTN
DOWN BTN

UTILITY LAMP
UP LAMP
LEFT LAMP
RIGHT LAMP
DOWN LAMP

COIN 1 METER
COIN 2 METER
+12V J2 FUSE 4

C52   YLP 2
C53   YLR 2
C54   YLP 2
C55   YLR 2

COIN 1 COUNTER
COIN 2 COUNTER

TICKET 1 COUNTER
TICKET 2 COUNTER

COUNTER+
COUNTER-

C57   YLR 2
C56   YLP 2
C59   YLR 2
C58   YLP 2

+12V J2 FUSE 4
TICKET 1 METER
TICKET 2 METER

C50   C51

	C50	C51	
RIGHT BTN	1	1	RIGHT BTN
LEFT BTN	2	2	LEFT BTN
DGND	3	3	DGND
COIN 1 METER	4	4	COIN 1 METER
COIN 2 METER	5	5	COIN 2 METER
TICKET 1 METER	6	6	TICKET 1 METER
TICKET 2 METER	7	7	TICKET 2 METER
UTILITY BTN	8	8	UTILITY BTN
UP BTN	9	9	UP BTN
DOWN BTN	10	10	DOWN BTN
GND	11	11	GND
+12V J2 FUSE 4	12	12	+12V J2 FUSE 4
	13	13	
	14	14	
EARTH	15	15	EARTH

YLP 15   YLR 15

EARTH

EARTH

TO POWER SUPPLY
SEE SHEET SB-EO-001

TO CPU & AMPLIFIER
SEE SHEET SB-EO-003

Title *HYPERpitch*

Page Size: A4   Revision: 13

Design Date: 14-AUGUST-2018   Sheet 4 of 16
Engineer: KIM S   FileName: SB-EO-004 Operator Panel.SchDoc

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CHASER LIGHT

RGB DRIVER

PCB FB215
PWM DRIVER

TO PLAYER PANEL
SEE SHEET SB-EO-009

TO CONNECTION FRONT
SEE SHEET SB-EO-006

TO REGION LIGHT
SEE SHEET SB-EO-012

TO EXTENSION HEADER
SEE SHEET SB-EO-010

TO POWER SUPPLY
SEE SHEET SB-EO-001

TO CPU & AMPLIFIER
SEE SHEET SB-EO-003

Title: HYPERpitch

Page Size: A3   Revision:13
Design Date: 14-AUGUST-2018
Engineer: KIM S

Sheet 5 of 16
FileName: SB-EO-005 RGB Driver & Chaser Light.SchDoc

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78

TO POWER FUSE PCB
SEE SHEET SB-EO-002

TO POWER SUPPLY
SEE SHEET SB-EO-001

TO RGB DRIVER
SEE SHEET SB-EO-005

TO CPU & AMPLIFIER
SEE SHEET SB-EO-003

C109 C110

DISP_7SEG_4-11 SHEILD
DISP_7SEG_4-11 DATA
DISP_7SEG 4 CLK
DISP_7SEG 5 CLK
DISP_7SEG 6 CLK
DISP_7SEG 10 CLK
+12V DC (F1)
+12V DC (F2)
+12V DC (F3)
+12V DC (F4)
+12V DC (F5)
GND (F1)
GND (F2)
GND (F3)
GND (F4)
GND (F5)
COIN 1
COIN 2
DGND
GND
+12V J2 FUSE 3

YLP 21   YLR 21

C111 C112

TICKET 1 NOTCH
TICKET 1 DRIVE
TICKET 2 NOTCH
TICKET 2 DRIVE
+12V DC (F18)
+12V DC (F19)
GND (F18)
GND (F19)
12V-16
RED-16
GREEN-16
BLUE-16

YLP 12   YLR 12

C126 C125

EARTH
EARTH

VLR 3   VLP 3

EARTH

C113 C114

DISP_7SEG_4-11 SHEILD
DISP_7SEG_4-11 DATA
DISP_7SEG 7 CLK
DISP_7SEG 8 CLK
DISP_7SEG 9 CLK
DISP_7SEG 11 CLK
+12V DC (F6)
+12V DC (F7)
+12V DC (F17)
GND (F6)
GND (F7)
GND (F17)
COIN 1 METER
DBA ENABLE
COIN 2 METER

YLP 15   YLR 15

C121

DISP_7SEG_4-11 SHEILD
DISP_7SEG_4-11 DATA
DISP_7SEG 4 CLK
DISP_7SEG 5 CLK
DISP_7SEG 6 CLK
DISP_7SEG 10 CLK
GND (F1)
GND (F2)
GND (F3)
GND (F4)
GND (F5)
COIN 1
COIN 1 METER
+12V J2 FUSE 3
GND

YLR 15

C122

+12V DC (F1)
+12V DC (F2)
+12V DC (F3)
+12V DC (F4)
+12V DC (F5)
EARTH
DBA ENABLE
TICKET 1 NOTCH
TICKET 1 DRIVE
TICKET 2 NOTCH
TICKET 2 DRIVE

YLP 12

C61

TICKET 1 NOTCH (CS)
GND (CS1)
TICKET 1 DRIVE (CS)

Receptacle Housing 4W **PLAYER 1**

TO CONTROL DISPLAY PLAYER
SEE SHEET SB-EO-007

C123

DISP_7SEG_4-11 SHEILD
DISP_7SEG_4-11 DATA
DISP_7SEG 7 CLK
DISP_7SEG 8 CLK
DISP_7SEG 9 CLK
DISP_7SEG 11 CLK
GND (F6)
GND (F6)
GND (F7)
GND (F7)
GND (F17)
COIN 2
COIN 2 METER
+12V J2 FUSE 3
GND

YLR 15

C124

+12V DC (F6)
+12V DC (F6)
+12V DC (F7)
+12V DC (F7)
+12V DC (F17)
EARTH
DBA ENABLE
TICKET 1 NOTCH
TICKET 1 DRIVE
TICKET 2 NOTCH
TICKET 2 DRIVE

YLP 12

C60

TICKET 2 NOTCH (CS)
GND (CS2)
TICKET 2 DRIVE (CS)

Receptacle Housing 4W **PLAYER 2**

TO CONTROL DISPLAY PLAYER
SEE SHEET SB-EO-007

C117

TICKET 1 NOTCH
GND (F18)
TICKET 1 DRIVE
+12V DC (F18)

Receptacle Housing 4W

C279

GND (CS1)
+12V (CS) 1

PLUG 4W

C278

TICKET 1 NOTCH (CS)
GND (CS1)
TICKET 1 DRIVE (CS)
+12V (CS) 1

Receptacle Housing 4W

TICKET 1 DISPENSER

C118

TICKET 2 NOTCH
GND (F19)
TICKET 2 DRIVE
+12V DC (F19)

Receptacle Housing 4W

C281

GND (CS2)
+12V (CS) 2

PLUG 4W

C280

TICKET 2 NOTCH (CS)
GND (CS2)
TICKET 2 DRIVE (CS)
+12V (CS) 2

Receptacle Housing 4W

TICKET 2 DISPENSER

C119

COIN 1
COIN 2
DGND
GND
+12V J2 FUSE 3
DBA ENABLE

YLP 12

TO COIN DOOR
SEE SHEET SB-EO-008

C120

L
E
N
E

VLP 4

TO POWER SUPPLY
SEE SHEET SB-EO-001

FLOOR LIGHTING
Led Strip RGB

C284 C285

12V
RED
GREEN
BLUE

12V-16
RED-16
GREEN-16
BLUE-16

YLR 4   YLP 4

C115 C116

12V-16
RED-16
GREEN-16
BLUE-16

12V
RED
GREEN
BLUE

YLP 4   YLR 4

BALL EXIT LIGHT
Led Strip RGB

79

PLAYER 1

PLAYER 2

THROW 1 — Led Strip RGB (RED LIGHT)
THROW 1 — PCB FB44R
THROW 2 — Led Strip RGB (RED LIGHT)
THROW 2 — PCB FB44R
THROW 3 — Led Strip RGB (RED LIGHT)
THROW 3 — PCB FB44R
TOTAL SCORE PLAYER 1 LAMP — Led Strip RGB (RED LIGHT)
TOTAL SCORE — PCB FB44R

THROW 1 LAMP — Led Strip RGB (BLUE LIGHT)
THROW 1 — PCB FB44
THROW 2 LAMP — Led Strip RGB (BLUE LIGHT)
THROW 2 — PCB FB44
THROW 3 LAMP — Led Strip RGB (BLUE LIGHT)
THROW 3 — PCB FB44
TOTAL SCORE PLAYER 2 LAMP — Led Strip RGB (BLUE LIGHT)
TOTAL SCORE — PCB FB44

C137 C138 — +12V DC / GND — +12V DC (F5) / GND (F5) — YLP 2
C139 — 12V DC / 12V DC / GND / GND / DATA / CLOCK — +12V DC (F1) / GND (F1) / DISP 7SEG 4-11 SHEILD / DISP 7SEG 4-11 DATA / DISP 7SEG 4 CLK — JST 6W
C140 C141 — +12V DC / GND — +12V DC (F5) / GND (F5) — YLP 2
C142 — 12V DC / 12V DC / GND / GND / DATA / CLOCK — +12V DC (F2) / GND (F2) / DISP 7SEG 4-11 SHEILD / DISP 7SEG 4-11 DATA / DISP 7SEG 5 CLK — JST 6W
C143 C144 — +12V DC / GND — +12V DC (F5) / GND (F5) — YLR 2 YLP 2
C145 — 12V DC / 12V DC / GND / GND / DATA / CLOCK — +12V DC (F3) / GND (F3) / DISP 7SEG 4-11 SHEILD / DISP 7SEG 4-11 DATA / DISP 7SEG 6 CLK — JST 6W
C146 C147 — +12V DC / GND — +12V DC (F5) / GND (F5) — YLR 2 YLP 2
C148 — 12V DC / 12V DC / GND / GND / DATA / CLOCK — +12V DC (F4) / GND (F4) / DISP 7SEG 4-11 SHEILD / DISP 7SEG 4-11 DATA / DISP 7SEG 10 CLK — JST 6W

C131 — +12V J2 FUSE 3 / COIN 1 / COIN 1 METER / TICKET 1 NOTCH / DBA ENABLE / TICKET 1 DRIVE / GND — UCL — Receptacle Housing 9W/ With panel mount
C63 — TICKET 1 NOTCH (CS) / GND (CS1) / TICKET 1 DRIVE (CS) — PLUG 4W

C132 — +12V J2 FUSE 3 / COIN 2 / COIN 2 METER / TICKET 2 NOTCH / DBA ENABLE / TICKET 2 DRIVE / GND — UCL — Receptacle Housing 9W/ With panel mount
C62 — TICKET 2 NOTCH (CS) / GND (CS2) / TICKET 2 DRIVE (CS) — PLUG 4W

C133 C134 — +12V DC (F5) / GND (F5) — YLR 2 YLP 2
C135 C136 — +12V DC (F17) / GND — +12V DC (F17) / GND (F17) — YLR 2 YLP 2

SURROUND PLAYER 1 LIGHT — Led Strip RGB (RED LIGHT)
SURROUND PLAYER 2 LIGHT — Led Strip RGB (BLUE LIGHT)

C149 C150 — +12V DC (F 7) / GND (F 17) — +12V DC / GND — YLP 2 YLR 2
C151 — +12V DC (F6) / GND (F6) / DISP 7SEG 4-11 SHEILD / DISP 7SEG 4-11 DATA / DISP 7SEG 7 CLK — 12V DC / 12V DC / GND / GND / DATA / CLOCK — JST 6W
C152 C153 — +12V DC (F17) / GND (F17) — +12V DC / GND — YLP 2 YLR 2
C154 — +12V DC (F6) / GND (F6) / DISP 7SEG 4-11 SHEILD / DISP 7SEG 4-11 DATA / DISP 7SEG 8 CLK — 12V DC / 12V DC / GND / GND / DATA / CLOCK — JST 6W
C155 C156 — +12V DC (F17) / GND (F17) — +12V DC / GND — YLP 2 YLR 2
C157 — +12V DC (F7) / GND (F7) / DISP 7SEG 4-11 SHEILD / DISP 7SEG 4-11 DATA / DISP 7SEG 9 CLK — 12V DC / 12V DC / GND / GND / DATA / CLOCK — JST 6W
C158 C159 — +12V DC (F17) / GND (F 7) — +12V DC / GND — YLP 2 YLR 2
C160 — +12V DC (F7) / GND (F7) / DISP 7SEG 4-11 SHEILD / DISP 7SEG 4-11 DATA / DISP 7SEG 11 CLK — 12V DC / 12V DC / GND / GND / DATA / CLOCK — JST 6W

TO CONNECTION FRONT — SEE SHEET SB-EO-006

C130 — DISP 7SEG 4-11 SHEILD / DISP 7SEG 4-11 DATA / DISP 7SEG 4 CLK / DISP 7SEG 5 CLK / DISP 7SEG 6 CLK / DISP 7SEG 10 CLK / GND (F1) / GND (F2) / GND (F3) / GND (F4) / GND (F5) / COIN 1 / COIN 1 METER / +12V J2 FUSE 3 / GND — YLP 15
C128 — DISP 7SEG 4-11 SHEILD / DISP 7SEG 4-11 DATA / DISP 7SEG 7 CLK / DISP 7SEG 8 CLK / DISP 7SEG 9 CLK / DISP 7SEG 11 CLK / GND (F6) / GND (F6) / GND (F7) / GND (F7) / GND (F17) / COIN 2 / COIN 2 METER / +12V J2 FUSE 3 / GND — YLP 15

C129 — +12V DC (F1) / +12V DC (F2) / +12V DC (F3) / +12V DC (F4) / +12V DC (F5) / EARTH / DBA ENABLE / TICKET 1 NOTCH / TICKET 1 DRIVE — YLR 12
C127 — +12V DC (F6) / +12V DC (F6) / +12V DC (F7) / +12V DC (F7) / +12V DC (F17) / EARTH / DBA ENABLE / TICKET 2 NOTCH / TICKET 2 DRIVE — YLR 12

C82 — TICKET 1 NOTCH (CS) / GND (CS1) / TICKET 1 DRIVE (CS) — PLUG 4W
C247 — TICKET 2 NOTCH (CS) / GND (CS2) / TICKET 2 DRIVE (CS) — PLUG 4W

EARTH

Title: HYPERpitch
Page Size: A3 Revision: 13
Design Date: 14-AUGUST-2018
Engineer: KIM S
Sheet 7 of 16
FileName: SB-EO-007 Control Display Player.SchDoc
LAI Games — www.laigames.com — LAI GAMES

COIN DOOR STANDARD

C161
TO COIN DOOR CONNECTION

1
2
3
4
5
6
7
8
9
10
11
12

COIN 1
COIN 2
DGND
GND

+12V DC

YLR 12

COIN SW

DOOR
LIGHTS

⚠ 5

C163

GND
COIN 1
+12 VDC
GND
COIN 2
+12 VDC

1
2
3
4
5
6

TO COIN DOOR SELECTOR

Receptacle Housing 6W

⚠ 5

C162

1
2
3
4

L
E
N
E

VLR 4

C164

1
2
3
4
5
6
7
8
9

L
E
N

COIN 2
DGND

E

TO BILL ACCEPTOR

9 CIR UNIV M-N-L CAP

⚠ 9

** NOTE **
=========

FOR NEW JERSEY LOCATIONS, SEE SHEETS SB-EO-015 AND
SB-EO-016 FOR DOOR OPTIONS TO REPLACE THE STANDARD COIN
DOOR CONNECTION

EARTH

Title *HYPERpitch*

Page Size: **A4** Revision: 13

Design Date: 14-AUGUST-2018   Sheet 8 of 16

Engineer: KIM S   FileName: SB-EO-008 Coin Door Standard.SchDoc

LAI Games
www.laigames.com

LAI GAMES

LED SPEAKER PLAYER 1

Led Strip RGB

LED SPEAKER PLAYER 2

Led Strip RGB

C167 C168
12V   12V-16
RED   RED-16
GREEN   GREEN-16
BLUE   BLUE-16
1 2 3 4   1 2 3 4
YLR 4 YLP 4

C169 C170
12V-16   12V
RED-16   RED
GREEN-16   GREEN
BLUE-16   BLUE
1 2 3 4   1 2 3 4
YLP 4 YLR 4

SPEAKER PLAYER 1

SPEAKER PLAYER 2

SPK +   WOOFER +
SPK -   WOOFER -

WOOFER +   SPK +
WOOFER -   SPK -

SPEAKER

SPEAKER

TWEETER +   TWEETER+
TWEETER -   TWEETER -

TWEETER+   TWEETER +
TWEETER -   TWEETER -

TWEETER

TWEETER

KY-661 CROSSOVER

INPUT TWEETER WOOFER

+ - + - + -

CROSSOVER KY-661

INPUT TWEETER WOOFER

SPK L+
SPK L-

SPK L+
SPK L-

CROSSOVER KY-661

TO CPU & AMPLIFIER

SEE SHEET SB-EM-003

C165 C166
PLAYER 1 BTN   P1 BTN
PLAYER 2 BTN   P2 BTN
DGND   DGND
PLAYER 1 BTN LAMP   P1 BTN LAMP
PLAYER 2 BTN LAMP   P2 BTN LAMP
+12V J2 FUSE 1   +12V J2 FUSE 1
SPK L+   SPK L+
SPK L-   SPK L-
SPK R+   SPK R+
SPK R-   SPK R-
12V-16   12V-16
RED-16   RED-16
GREEN-16   GREEN-16
BLUE-16   BLUE-16
EARTH   EARTH
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
YLP 15   YLR 15

PANEL   SPK1   SPK2   LOCK

BTN   BTN

SOLO   VERSUS

LAMP   5   LAMP

Title HYPERpitch

LAI Games

Page Size: A4   Revision: 13

Design Date: 14-AUGUST-2018   Sheet 9 of 16
Engineer: KIM S   FileName: SB-EO-009 Player Panel.SchDoc

LAI GAMES

TO MARQUEE
SEE SHEET SB-EO-011

C248 1 3 4 YLR 4

+12V DC (F9)
+12V DC (F13)
GND
GND

TO HEADER
SEE SHEET SB-EO-011

C175 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 YLP 15

DISP_7SEG_1-3_SHIELD
DISP_7SEG_1-3_DATA
DISP_7SEG_1_CLK
DISP_7SEG_2_CLK
DISP_7SEG_3_CLK
SPEED,SCORE,ACCURACY LIGHT
BEAT LIGHT
WIN,TICKET,CREDIT LIGHT
+12V DC (F13)
RED-16
GREEN-16
BLUE-16
+12V DC (F12)
GND (F10)

C171 C172

DISP_7SEG_1-3_SHIELD	1	1	DISP_7SEG_1-3_SHIELD
DISP_7SEG_1-3_DATA	2	2	DISP_7SEG_1-3_DATA
DISP_7SEG_1_CLK	3	3	DISP_7SEG_1_CLK
DISP_7SEG_2_CLK	4	4	DISP_7SEG_2_CLK
DISP_7SEG_3_CLK	5	5	DISP_7SEG_3_CLK
SPEED,SCORE,ACCURACY LIGHT	6	6	SPEED,SCORE,ACCURACY LIGHT
BEAT LIGHT	7	7	BEAT LIGHT
WIN,TICKET,CREDIT LIGHT	8	8	WIN,TICKET,CREDIT LIGHT
+12V DC (F13)	9	9	+12V DC (F13)
RED-16	10	10	RED-16
GREEN-16	11	11	GREEN-16
BLUE-16	12	12	BLUE-16
FRONT SENSOR	13	13	FRONT SENSOR
CONTROL PCB FB213B	14	14	CONTROL PCB FB213B
EARTH	15	15	EARTH

YLR 15   YLP 15

TO RGB DRIVER
SEE SHEET SB-EO-005

TO CPU & AMPLIFIER
SEE SHEET SB-EO-003

TO POWER SUPPLY
SEE SHEET SB-EO-001

TO POWER FUSE PCB
SEE SHEET SB-EO-002

C173 C174

+12V DC (F12)	1	1	+12V DC (F12)
+12V DC (F10)	2	2	+12V DC (F10)
+12V DC (F9)	3	3	+12V DC (F9)
+12V DC (F14)	4	4	+12V DC (F14)
+12V DC (F16)	5	5	+12V DC (F16)
+12V DC (F16)	6	6	+12V DC (F16)
GND (F10)	7	7	GND (F10)
GND	8	8	GND
GND	9	9	GND
GND	10	10	GND
GND (F16)	11	11	GND (F16)
	12	12	

YLR 12   YLP 12

XHP 4 J2 4 3 2 1
XHP 6 6 5 4 3 2 1 J4
XHP 6 6 5 4 3 2 1 J1
XHP 4 J2

XHP 3 J2 3 2 1
XHP 3
XHP 3

SENSE_FRONT XHP 4 XHP 4 4 3 2 1
GND
+12V DC
C207 J1 FB213A

+12V DC XHP 3 XHP 3 3 2 1
GND
C208 J1 FB213B

SENSE_FRONT XHP 4 XHP 4 4 3 2 1
GND
+12V DC
C205 J2 FB213A

+12V DC XHP 3 XHP 3 3 2 1
GND
C206 J2 FB213B

XHP 6 6 5 4 3 2 1 J4
XHP 6 6 5 4 3 2 1 J1

FRONT SENSOR XHP 4 XHP 4 4 3 2 1
GND (F16)
+12V DC (F16)
C203 J1 FB213A

+12V DC (F16) XHP 3 XHP 3 3 2 1
CONTROL PCB FB213B
C204 J1 FB213B

Title HYPERpitch
Page Size: A3   Revision: 13
Design Date: 14-AUGUST-2018   Sheet 10 of 16
Engineer: KIM S   FileName: SB-EO-010 Extension Header & Front Sensor.SchDoc

LAI Games
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Title: HYPERpitch

Page Size: A3   Revision: 13

Design Date: 14-AUGUST-2018   Sheet 11 of 16
Engineer: KIM S   FileName: SB-EO-011 Header 7Segment & Marquee.SchDoc

LAI Games
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LEFT MARQUEE
RIGHT MARQUEE

"HYPER PITCH"
Led Strip RGB (WHITE LIGHT)

BEAT

SCORE

WIN TICKETS

TO EXTENSION HEADER
SEE SHEET SB-EO-010

84

REGION LIGHT

C211 C212
12V-15	1	1	12V
RED-15	2	2	RED
GREEN-15	3	3	GREEN
BLUE-15	4	4	BLUE

YLP 4   YLR 4

C213 C214
12V-14	1	1	12V
RED-14	2	2	RED
GREEN-14	3	3	GREEN
BLUE-14	4	4	BLUE

YLP 4   YLR 4

C215 C216
12V-13	1	1	12V
RED-13	2	2	RED
GREEN-13	3	3	GREEN
BLUE-13	4	4	BLUE

YLP 4   YLR 4

C217 C218
12V-12	1	1	12V
RED-12	2	2	RED
GREEN-12	3	3	GREEN
BLUE-12	4	4	BLUE

YLP 4   YLR 4

C219 C220
12V-11	1	1	12V
RED-11	2	2	RED
GREEN-11	3	3	GREEN
BLUE-11	4	4	BLUE

YLP 4   YLR 4

C298 C297
12V-11	1	1	12V-11
RED-11	2	2	RED-11
GREEN-11	3	3	GREEN-11
BLUE-11	4	4	BLUE-11
12V-12	5	5	12V-12
RED-12	6	6	RED-12
GREEN-12	7	7	GREEN-12
BLUE-12	8	8	BLUE-12
12V-13	9	9	12V-13
RED-13	10	10	RED-13
GREEN-13	11	11	GREEN-13
BLUE-13	12	12	BLUE-13
12V-14	13	13	12V-14
RED-14	14	14	RED-14
GREEN-14	15	15	GREEN-14

YLP 15   YLR 15

C300 C299
BLUE-14	1	1	BLUE-14
12V-15	2	2	12V-15
RED-15	3	3	RED-15
GREEN-15	4	4	GREEN-15
BLUE-15	5	5	BLUE-15
RS485_A	6	6	RS485_A
RS485_B	7	7	RS485_B
GND (SHIELD)	8	8	GND (SHIELD)
CONTROL PCBFB213B	9	9	CONTROL PCBFB213B
ANY DETECT	10	10	ANY DETECT
GND SHIELD 1	11	11	GND SHIELD 1
EARTH	12	12	EARTH
GND (F8)	13	13	GND (F8)
+12V DC (F8)	14	14	+12V DC (F8)
	15	15	

YLR 15   YLP 15

TO RGB DRIVER
SEE SHEET SB-EO-005

C222 C223
12V-11	1	1	12V-1
RED-11	2	2	RED-11
GREEN-11	3	3	GREEN-11
BLUE-11	4	4	BLUE-11
12V-12	5	5	12V-2
RED-12	6	6	RED-12
GREEN-12	7	7	GREEN-12
BLUE-12	8	8	BLUE-12
12V-13	9	9	12V-3
RED-13	10	10	RED-13
GREEN-13	11	11	GREEN-13
BLUE-13	12	12	BLUE-13
12V-14	13	13	12V-4
RED-14	14	14	RED-14
GREEN-14	15	15	GREEN-14
BLUE-14	16	16	BLUE-14
12V-15	17	17	12V-5
RED-15	18	18	RED-15
GREEN-15	19	19	GREEN-15
BLUE-15	20	20	BLUE-15
	21	21	

YLR 21   YLP 21

TO CPU & AMPLIFIER
SEE SHEET SB-EO-003

TO POWER FUSE PCB
SEE SHEET SB-EO-002

C224 C225
RS485_A	1	1	RS485_A
RS485_B	2	2	RS485_B
GND (SHIELD)	3	3	GND (SHIELD)
	4	4	
SUBWOOFER +	5	5	SUBWOOFER +
SUBWOOFER -	6	6	SUBWOOFER -
GATE MOTOR +	7	7	GATE MOTOR +
GATE MOTOR -	8	8	GATE MOTOR -
GND (F20)	9	9	GND (F20)
GND (F8)	10	10	GND (F8)
+12V DC (F20)	11	11	+12V DC (F20)
+12V DC (F8)	12	12	+12V DC (F8)

YLP 12   YLR 12

C226 C227
CONTROL PCBFB213B	1	1	CONTROL PCBFB213B
BALL DISP SENSE	2	2	BALL DISP SENSE
ANY DETECT	3	3	ANY DETECT
GND SHIELD 1	4	4	GND SHIELD 1

YLP 4   YLR 4

C221
CONTROL PCBFB213B	1
CONTROL PCBFB213B	2
GND (F8)	3
GND (F8)	4
+12V DC (F8)	5
+12V DC (F8)	6
+12V DC (F8)	7
+12V DC (F8)	8

YLR 8

TO BACK SENSOR X,Y
SEE SHEET SB-EO-013

C237 C238
| GATE MOTOR + | 1 | 1 | +12V DC |
| GATE MOTOR - | 2 | 2 | GND |

YLP 2   YLR 2

VIBRATION MOTOR
12V DC   GND   M

C235 C236
| GATE MOTOR + | 1 | 1 | +12V DC |
| GATE MOTOR - | 2 | 2 | GND |

YLP 2   YLR 2

BALL GATE MOTOR
12V DC   GND   M

C228 C229
GATE MOTOR +	1	1	GATE MOTOR +
GATE MOTOR -	2	2	GATE MOTOR -
+12V DC (F20)	3	3	+12V DC (F20)
BALL DISP SENSE	4	4	BALL DISP SENSE
GND (F20)	5	5	GND (F20)
EARTH	6	6	EARTH

YLP 6   YLR 6

C232
+12V DC (F20)	1
BALL DISP SENSE	2
GND (F20)	3

VHR 3W

SINGLE SENSOR FB84A
+12 VDC	1
DATA	2
GND	3

BAFB84A

C233
| ANODA | 1 |
| KATODA | 2 |

ANODA
KATODA

VHR 2W

C234
| ANODA | 1 |
| KATODA | 2 |

ANODA
KATODA

VHR 2W

FB84R
BAFB84B

C230 C231
| SUBWOOFER + | 1 | 1 | SUBWOOFER + |
| SUBWOOFER - | 2 | 2 | SUBWOOFER - |

YLP 2   YLR 2

SUB WOOFER

EARTH

REGION LIGHT 5   REGION LIGHT 4   REGION LIGHT 3   REGION LIGHT 2   REGION LIGHT 1
Led Strip RGB

Title	HYPERpitch		LAI Games
Page Size: A3	Revision: 13		www.laigames.com
Design Date: 14-AUGUST-2018		Sheet 12 of 16	
Engineer: KIM S		FileName: SB-EO-012 Connection Region Light & BallGate.SchDoc	

Title: **HYPERpitch**

Page Size: A3   Revision: 13

Design Date: 14-AUGUST-2018   Sheet 13 of 16
Engineer: KIM S   FileName: SB-EO-013 Back Sensor X,Y.SchDoc
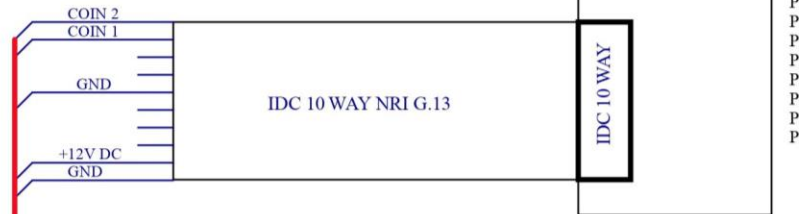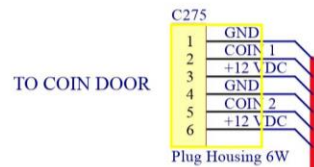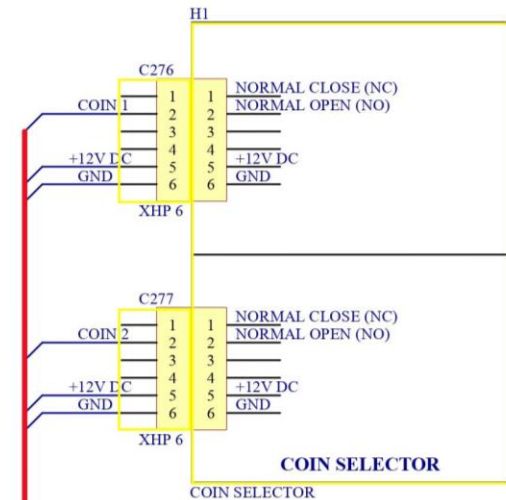
LAI Games
www.laigames.com

86

OPTIONAL NRI COIN MECH
ADD-ON HARNESS

USE THIS IN GAMES THAT HAVE NRI G.13 OR COMPATIBLE COIN MECHS
INSTALLED.
THIS ADD-ON HARNESS PLUGS INTO EXISTING CONNECTOR ON THE COIN
DOOR.

FOR OPTIONAL IDC NRI G.13

NOTE:-
PIN 1 = BLACK
PIN 2 = YELLOW
PIN 3 =
PIN 4 =
PIN 5 =
PIN 6 = BLACK
PIN 7 =
PIN 8 =
PIN 9 = COIN 1
PIN 10 = COIN 2

COIN 2
COIN 1
GND
+12V DC
GND

IDC 10 WAY NRI G.13

IDC 10 WAY

C275
1 GND
2 COIN 1
3 +12 VDC
4 GND
5 COIN 2
6 +12 VDC

TO COIN DOOR

Plug Housing 6W

H1

C276
COIN 1   1   1   NORMAL CLOSE (NC)
          2   2   NORMAL OPEN (NO)
          3   3
+12V DC   4   4   +12V DC
GND   5   5   GND
          6   6

XHP 6

C277
COIN 2   1   1   NORMAL CLOSE (NC)
          2   2   NORMAL OPEN (NO)
          3   3
+12V DC   4   4   +12V DC
GND   5   5   GND
          6   6

XHP 6

COIN SELECTOR

COIN SELECTOR

Title *HYPERpitch*

Page Size: A4   Revision:13

Design Date: 14-AUGUST-2018
Engineer: KIM S

Sheet 14 of 16
FileName: SB-EO-014 Coin Selector (NRI).SchDoc

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LAI GAMES

87

OPTIONAL COIN HARNESS
FOR USE IN NEW JERSEY

THIS REPLACES THE STANDARD COIN DOOR ON SHEET SB-EO-008
USE THIS IN LOCATIONS THAT NEED ENABLE CONTROL OF COIN MECHS SUCH AS
NEW JERSEY

COIN SW

C286
COIN 1
COIN 2
DGND
GND
+12V DC
DBA ENABLE
YLR 12

TO COIN DOOR CONNECTION

COIN 1
COIN 2
DGND
GND
DOOR LIGHTS
12V RELAY
12V RELAY

C287
GND
COIN 1
12V RELAY
GND
COIN 2
12V RELAY
Receptacle Housing 6W

TO COIN DOOR SELECTOR

C288
1
2
3
4
E
VLR 4

EARTH

12V

12V
GND
DBA ENABLE

PCB21
1 RELAY MODULE
DC+
DC-
IN
NC
COM
NO
L *** H
Relay 1Ch

12V
12V RELAY

ENSURE JUMPER IS IN "L" POSITION

Title HYPERpitch

Page Size: A4   Revision:13

Design Date: 14-AUGUST-2018   Sheet 15of 16
Engineer: KIM S   FileName: SB-EO-015 NJ Coin.SchDoc

LAI Games
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LAI GAMES

88

OPTIONAL DBA HARNESS FOR USE IN NEW JERSEY

THIS REPLACES THE STANDARD COIN DOOR ON SHEET SB-EO-008
USE THIS IN LOCATIONS THAT NEED ENABLE CONTROL OF DBA SUCH AS NEW JERSEY
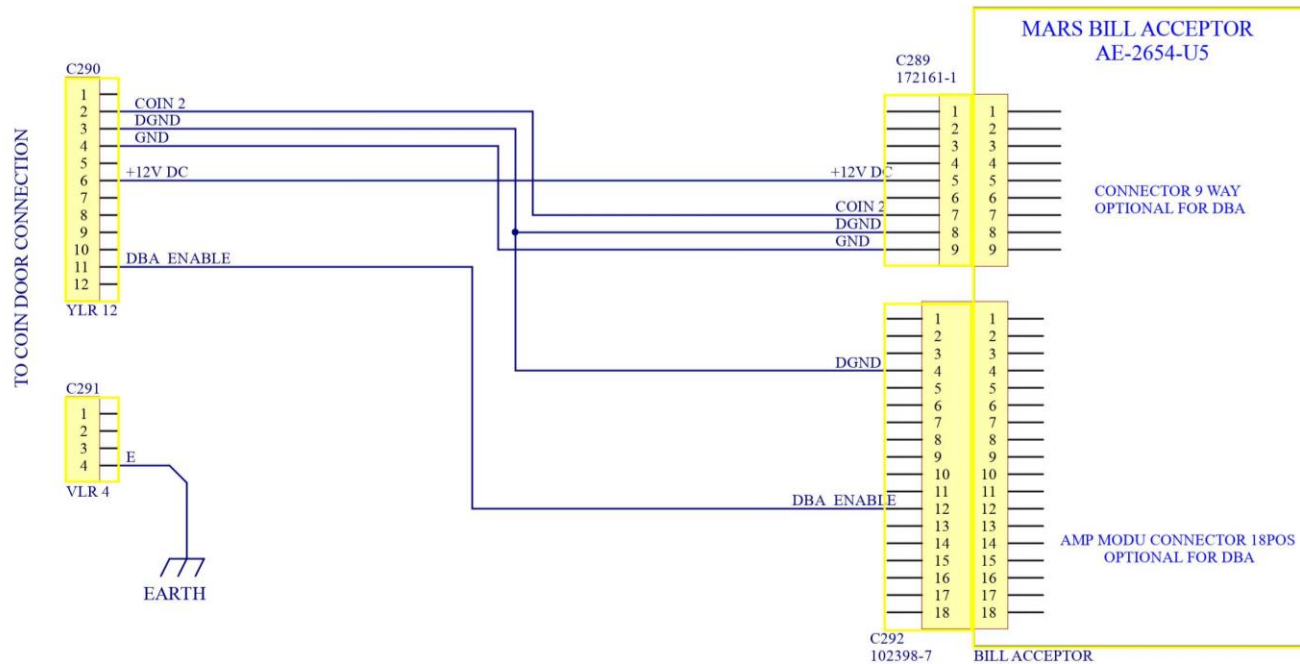
TO COIN DOOR CONNECTION

C290
1
2 COIN 2
3 DGND
4 GND
5
6 +12V DC
7
8
9
10 DBA ENABLE
11
12
YLR 12

C291
1
2
3
4 E
VLR 4

EARTH

MARS BILL ACCEPTOR
AE-2654-U5

C289
172161-1
1 1
2 2
3 3
4 4
5 5 +12V DC
6 6
7 7 COIN 2
8 8 DGND
9 9 GND

CONNECTOR 9 WAY
OPTIONAL FOR DBA

1 1
2 2
3 3 DGND
4 4
5 5
6 6
7 7
8 8
9 9
10 10
11 11 DBA ENABLE
12 12
13 13
14 14
15 15
16 16
17 17
18 18

C292
102398-7 BILL ACCEPTOR

AMP MODU CONNECTOR 18POS
OPTIONAL FOR DBA

Title **HYPERpitch**

Page Size: A4   Revision:13

Design Date: 14-AUGUST-2018   Sheet 16 of 16

Engineer: KIM S   FileName: SB-EO-016 NJ DBA.SchDoc

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MECHANICAL DRAWINGS

LONG CABINET MAIN ASSEMBLY

ITEM	DESCRIPTION	PART NUMBER	QTY
	PARTS LIST		
1	ASSY Front Cabinet	HP-ASSY-01-R0	1
2	Assy-Score Display LH	HP-ASSY-50-R0	1
3	Assy-Score Display RH	HP-ASSY-51-R0	1
4	ASSY-Display Arm LH	HP-ASSY-08-R0	1
5	ASSY-Display Arm RH	HP-ASSY-09-R0	1
6	ASSY-Front Rigid Frame	HP-ASSY-115-R0	1
7	ASSY-External Rigid Support	HP-ASSY-11-R0	2
8	ASSY-Rear Rigid Frame	HP-ASSY-116-R0	1
9	ASSY-ChaserLight_Front	HP-ASSY-107-R0	1
10	ASSY-Front Chaser Mid	HP-ASSY-110-R0	1
11	ASSY-Rear Chaser	HP-ASSY-111-R0	1
12	ASSY-Front Ball Protection	HP-ASSY-40-R0	1
13	ASSY-Side Cover 5	HP-ASSY-39-R0	2
14	ASSY-Rear MAIN Cabinet	HP-ASSY-160C-R0	1
15	ASSY-Ball direction 1	HP-ASSY-65-R0	1
16	Chaser Intermid Connect-1- COATED	HP-FC-040-R0	2
17	Assy-Light Box	HP-ASSY-114-R0	1
18	ASSY-Header Display	HP-ASSY-72-R0	1
19	ASSY-Hyper Pitch Header	HP-ASSY-78-R0	1
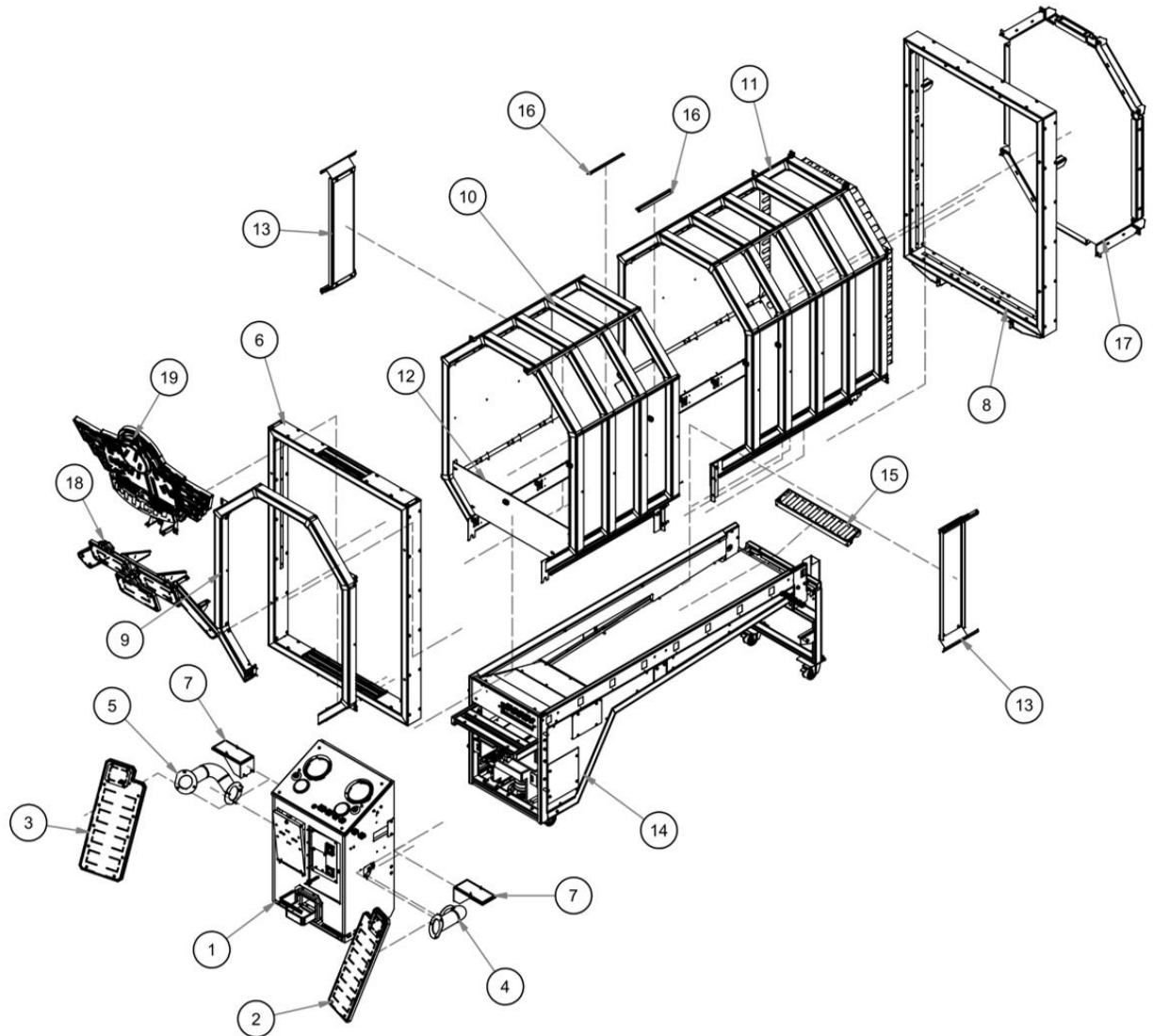
MECHANICAL DRAWING-SPLIT CABINET

ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASSY Front Cabinet	HP-ASSY-01-R11	1
2	Assy-Score Display LH	HP-ASSY-50-R5	1
3	Assy-Score Display RH	HP-ASSY-51-R5	1
4	ASSY-Display Arm LH	HP-ASSY-08-R1	1
5	ASSY-Display Arm RH	HP-ASSY-09-R1	1
6	ASSY-Front Rigid Frame	HP-ASSY-115-R2	1
7	ASSY-External Rigid Support	HP-ASSY-11-R0	2
8	ASSY-Rear Rigid Frame	HP-ASSY-116-R2	1
9	ASSY-ChaserLight_Front	HP-ASSY-107-R2	1
10	ASSY-Front Ball Protection	HP-ASSY-40-R3	1
11	ASSY-Side Cover 5	HP-ASSY-39-R0	2
12	ASSY-Rear MAIN Cabinet	HP-ASSY-160C-R10	1
13	ASSY-Ball direction 1	HP-ASSY-65-R0	1
14	Chaser Intermid Connect-1- COATED	HP-FC-040-R0	2
15	Assy-Light Box	HP-ASSY-114-R5	1
16	ASSY-Header Display	HP-ASSY-72-R3	1
17	ASSY-Hyper Pitch Header	HP-ASSY-78-R4	1
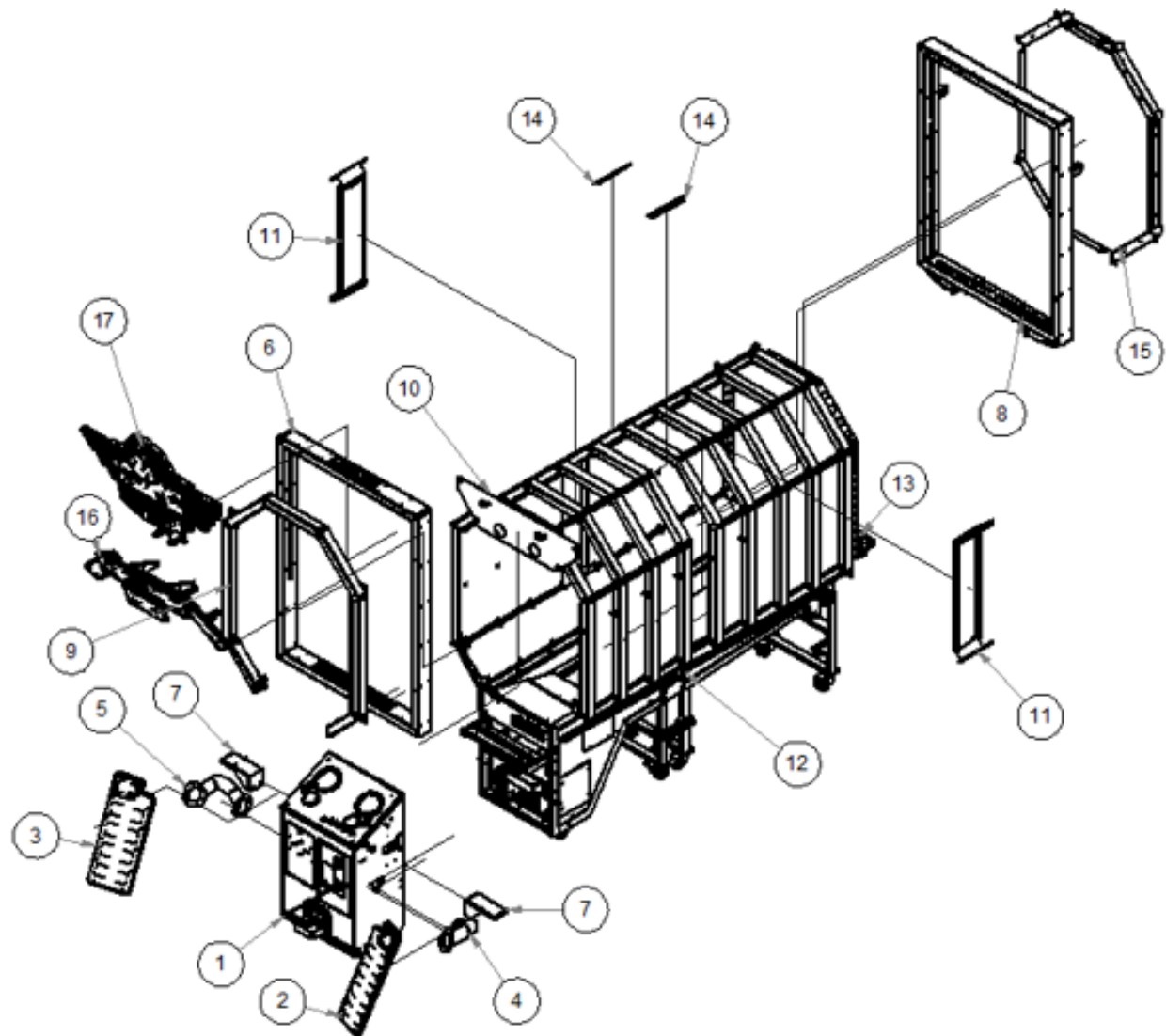
SPLIT CABINET REAR ASSEMBLY

REAR MAIN CABINET ASSEMBLY-SPLIT CABINET

ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASSY-Split Rear MAIN Cabinet	HP-ASSY-160A-R10	1
2	AS-Top Track Frame Cover LH	HP-AS-FW025-LH-R2	1
3	AS-Top Track Frame Cover RH	HP-AS-FW025-RH-R2	1
4	AS-Top Mid Track Frame Cover LH	HP-AS-FW085-LH-R0	1
5	AS-Top Mid Track Frame Cover RH	HP-AS-FW085-RH-R0	1
6	ASSY-Base Guide Ball 3	HP-ASSY-71-R2	1
7	ASSY-Pipe Front Reinforce 2	HP-ASSY-61-R0	1
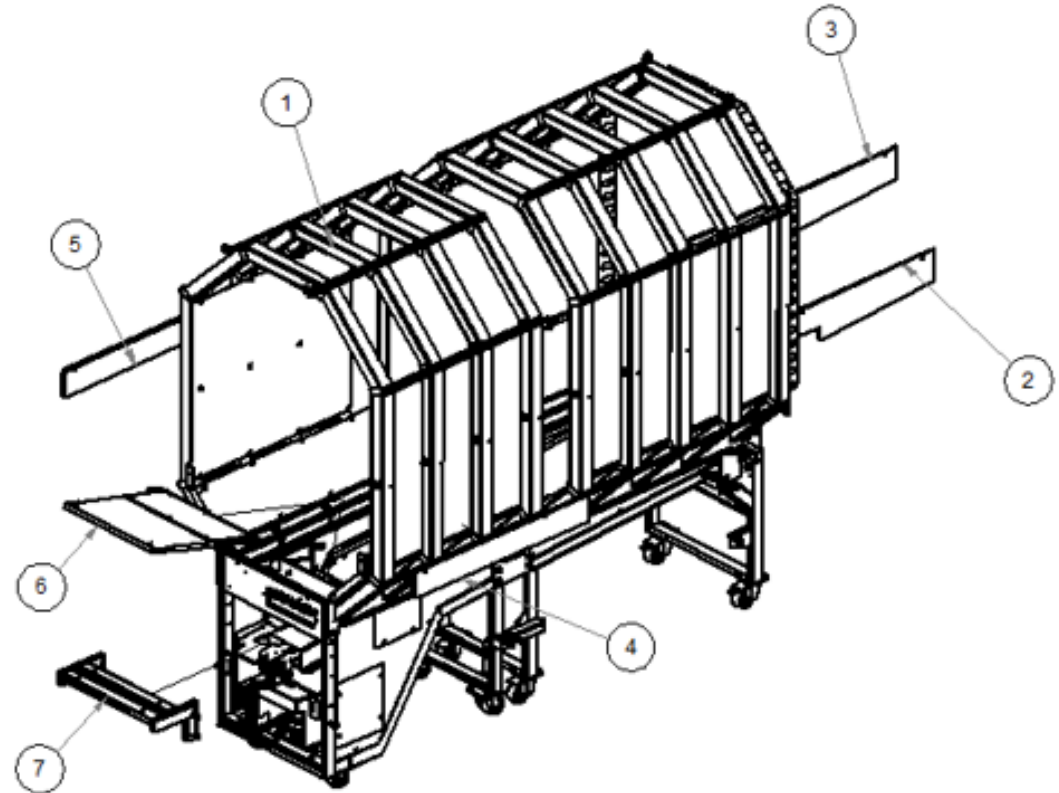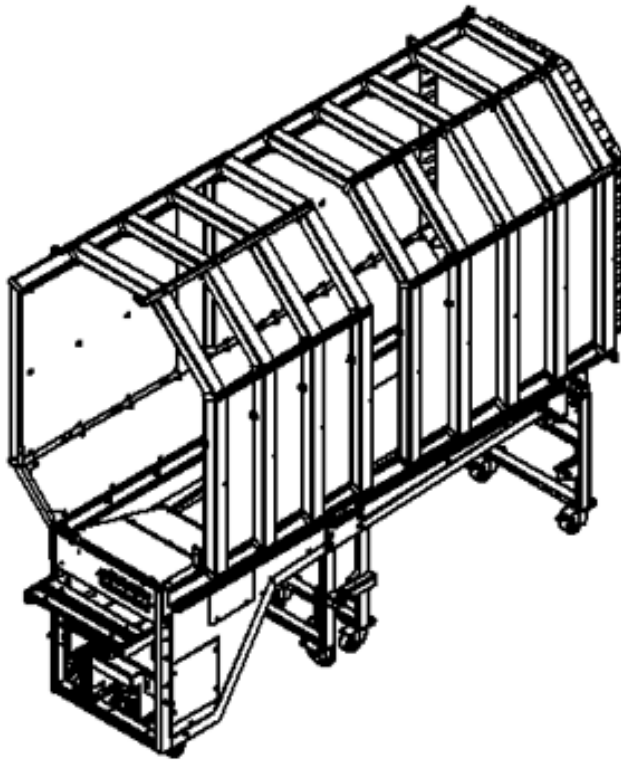
SPLIT CABINET REAR MAIN Y-SPLIT ASSEMBLY

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASSY-Mid Cabinet Frame	HP-ASSY-160D-R4	1
2	ASSY-Back Cabinet Frame	HP-ASSY-160E-R2	1
3	ASSY- DB Box Door	HP-ASSY-103-R4	1
4	ASSY-Door Rear Cabinet PCB Base 1	HP-ASSY-69-R2	1
5	ASSY-Cover Cable Target	HP-ASSY-86-R0	1
6	ASSY-Track Frame Joiner RH	HP-ASSY-194 RH-R0	1
7	ASSY-Track Frame Joiner LH	HP-ASSY-194 LH-R0	1

REAR CABINET FRAME ASSEMBLY-SPLIT CABINET
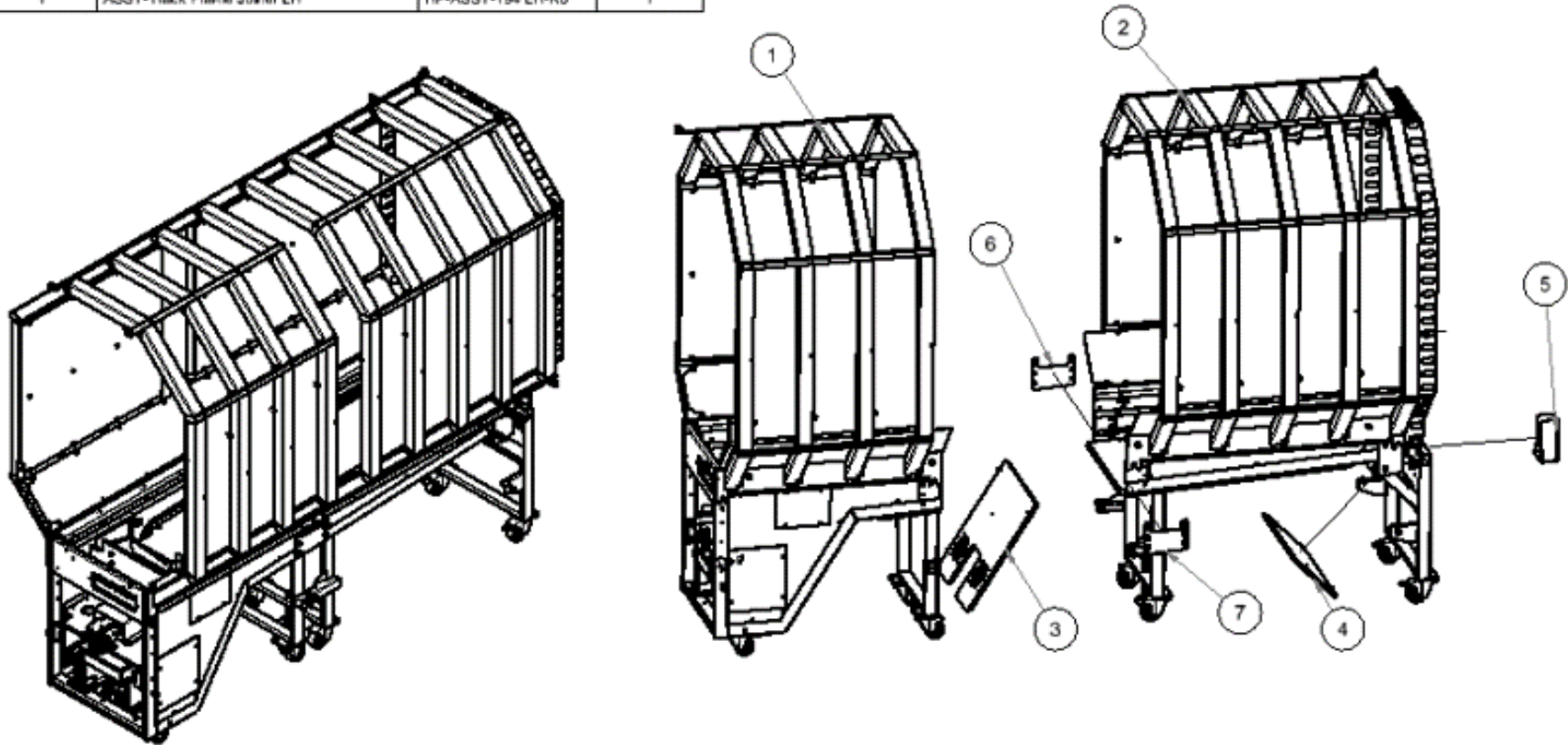
SPLIT CABINET MID FRAME ASSEMBLY

PARTS LIST				
ITEM	DESCRIPTION	PART NUMBER	QTY	REMARKS
1	ASSY-Front Foot Reinforce	HP-ASSY-101-R6	1	
2	Assy-Side Mid Cabinet LH	HP-ASSY-190 LH-R0	1	
3	Assy-Side Mid Cabinet RH	HP-ASSY-190 RH-R0	1	
4	ASSY-Motor Vibration Frame	HP-ASSY-66-R1	1	
5	ASSY- Motor Bracket Ball Gate	HP-ASSY-137-R5	1	
6	ASSY-Motor VibrationA	HP-ASSY-67-R1	1	
7	ASSY-Ball Divider	HP-ASSY-63-R2	1	
8	ASSY-Container dust	HP-ASSY-64-R1	1	
9	ASSY-Mid Cabinet Foot	HP-ASSY-184-R0	1	
10	ASSY-Mid Base Track	HP-ASSY-193-R0	1	Refer to order requirement
11	ASSY-Front Chaser Mid	HP-ASSY-110-R5	1	

MID CABINET FRAME ASSEMBLY-SPLIT CABINET
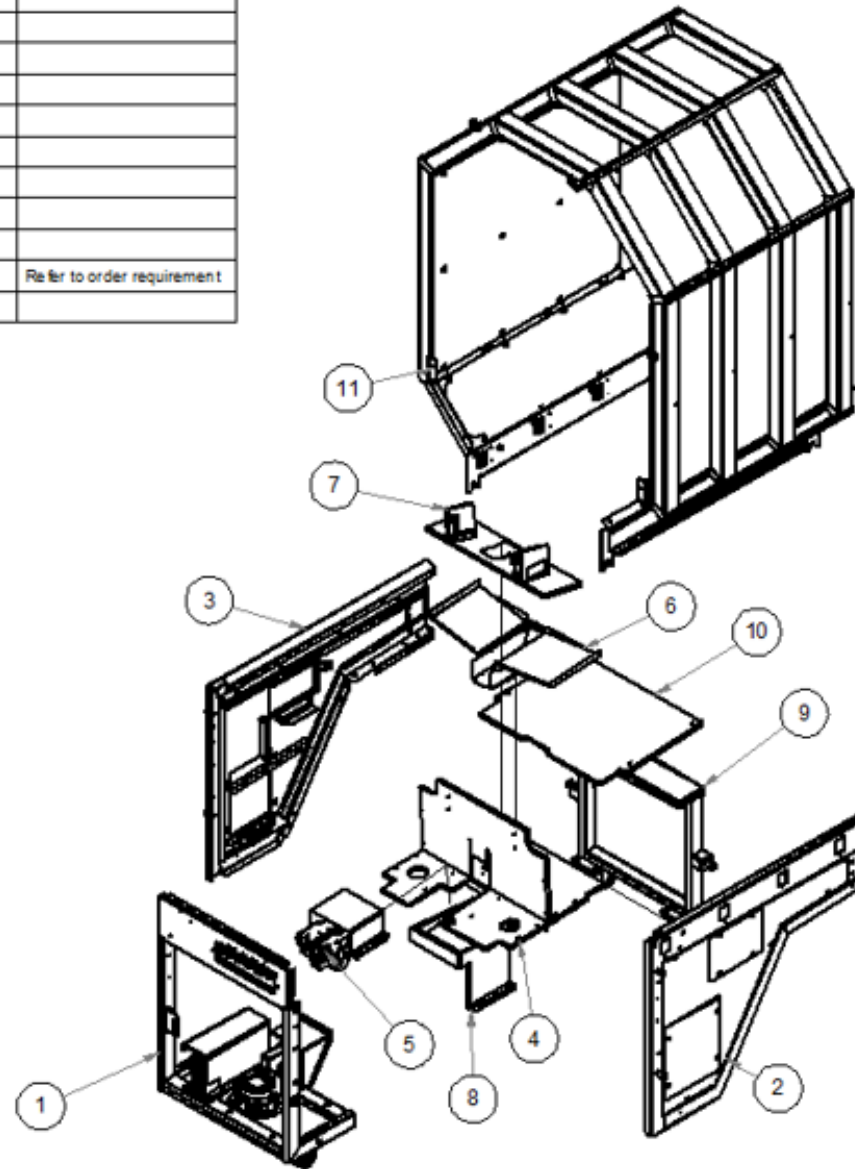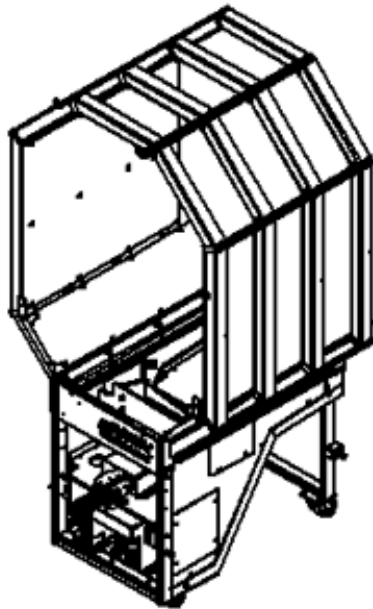
SPLIT CABINET REAR FRAME ASSEMBLY

BACK CABINET FRAME ASSEMBLY-SPLIT CABINET

ITEM	DESCRIPTION	PART NUMBER	QTY	REMARKS
1	ASSY-Rear Foot Reinforce	HP-ASSY-102-R5	1	
2	Assy-Side Rear Cabinet track LH	HP-ASSY-191 LH-R0	1	
3	Assy-Side Rear Cabinet track RH	HP-ASSY-191 RH-R0	1	
4	ASSY-Back Base Track	HP-ASSY-54-R4	1	Refer to order requirement
5	ASSY-Back Cabinet Foot	HP-ASSY-183-R1	1	
6	ASSY-Frame Bottom Support	HP-ASSY-60-R1	1	
7	ASSY-Door Rear Cabinet PCB Base 2	HP-ASSY-62-R1	1	
8	ASSY-Rear Chaser	HP-ASSY-111-R5	1	
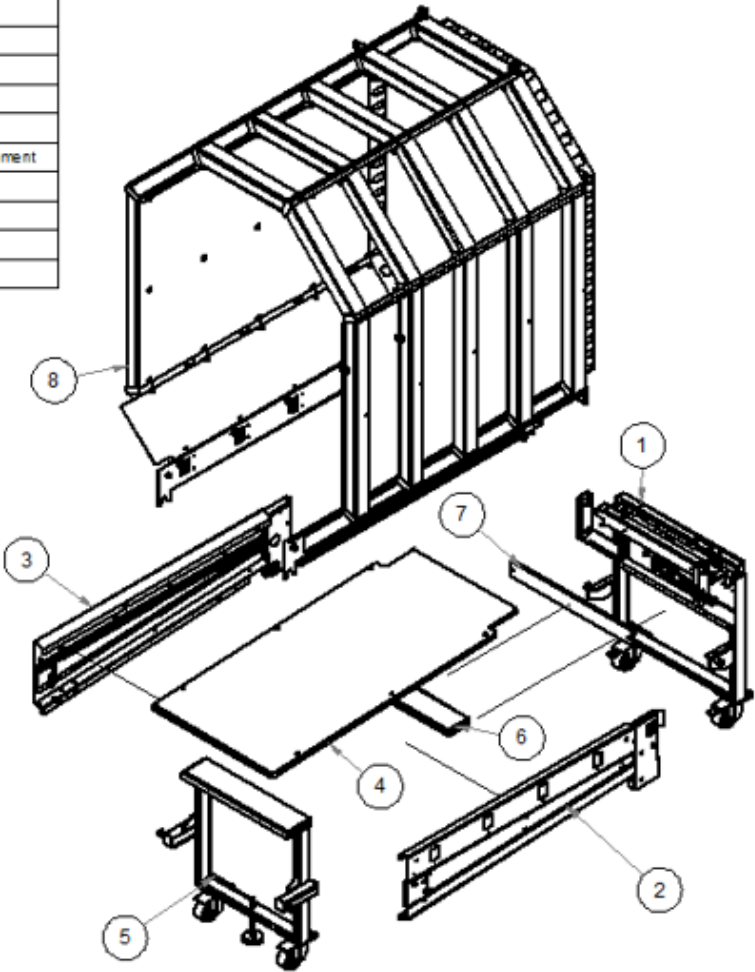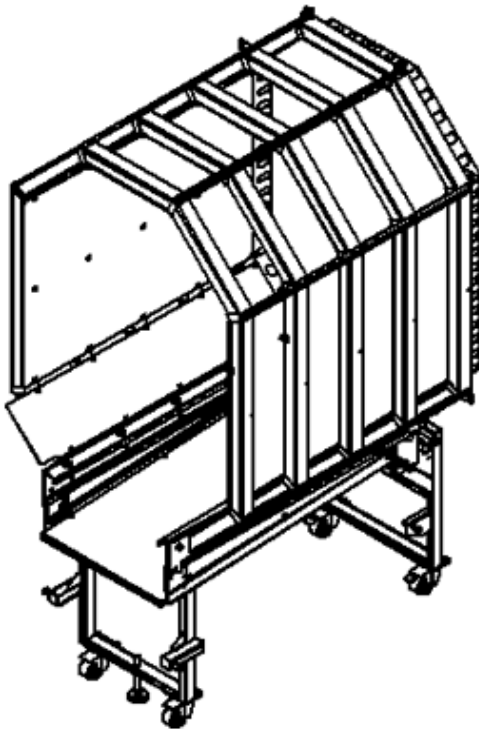
LONG CABINET REAR ASSEMBLY

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASSY- Rear Cabinet Frame	HP-ASSY-160A-R0	1
2	ASSY- DB Box Door	HP-ASSY-103-R0	1
3	ASSY-Container dust	HP-ASSY-64-R0	1
4	ASSY-Door Rear Cabinet PCB Base 1	HP-ASSY-69-R0	1
5	ASSY-Cover Cable Target	HP-ASSY-86-R0	1
6	ASSY-Base Guide Ball 3	HP-ASSY-71-R0	1
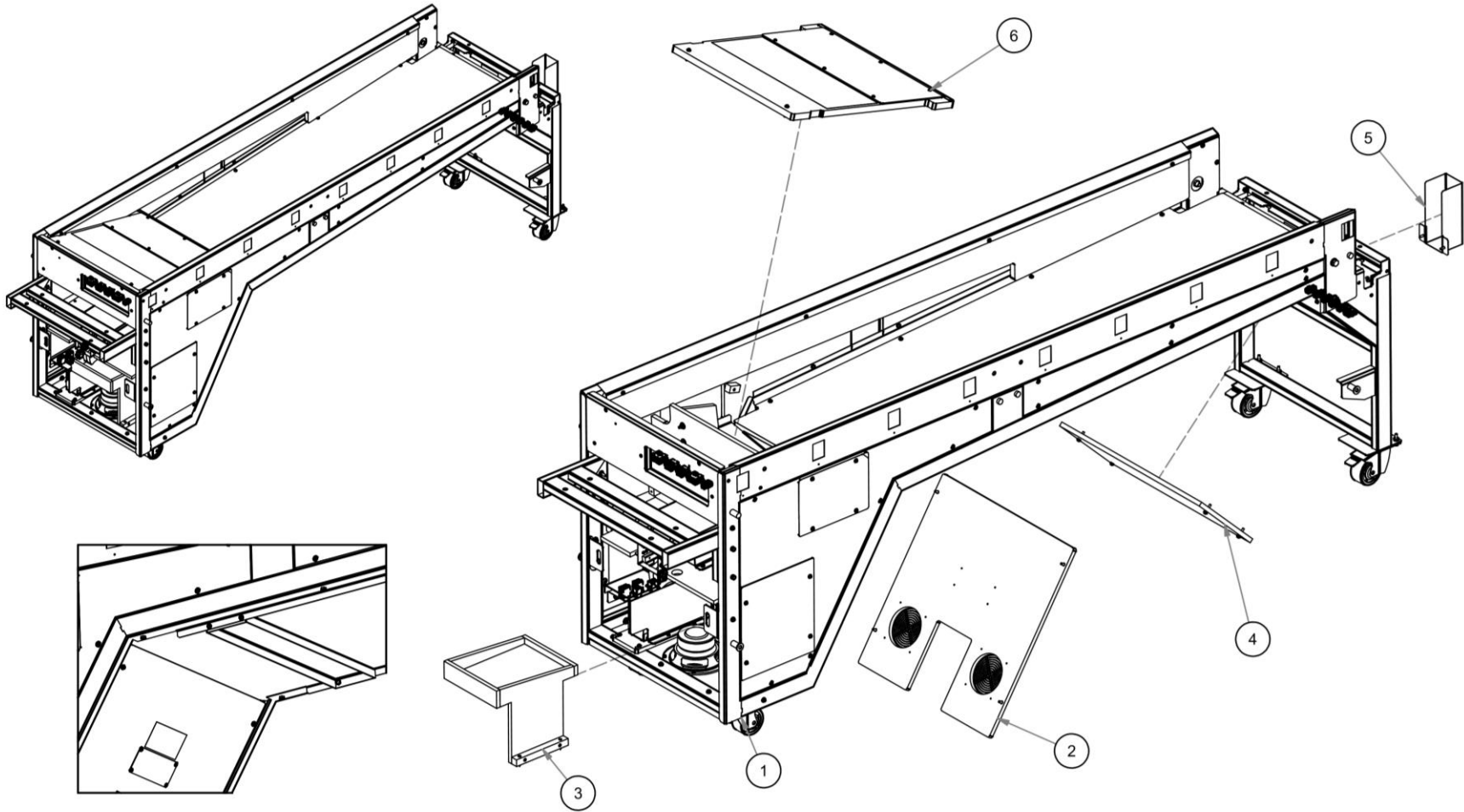
LONG CABINET REAR FRAME ASSEMBLY

ITEM	DESCRIPTION	PART NUMBER	QTY
	PARTS LIST		
1	ASSY-Front Foot Reinforce	HP-ASSY-101-R0	1
2	ASSY-Rear Foot Reinforce	HP-ASSY-102-R0	1
3	ASSY-Side Cabinet Track LH	HP-ASSY-100-LH-R0	1
4	ASSY-Side Cabinet Track RH	HP-ASSY-100-RH-R0	1
5	ASSY-Base Track	HP-ASSY-54-R0	1
6	ASSY-Frame Bottom Support	HP-ASSY-60-R0	3
7	ASSY-Pipe Front Reinforce 2	HP-ASSY-61-R0	1
8	ASSY-Door Rear Cabinet PCB Base 2	HP-ASSY-62-R0	1
9	ASSY-Motor Vibration Frame	HP-ASSY-66-R0	1
10	ASSY- Motor Bracket Ball Gate	HP-ASSY-136-R0	1
11	ASSY-Motor VibrationA	HP-ASSY-67-R0	1
12	ASSY-Ball Divider	HP-ASSY-063-R0	1
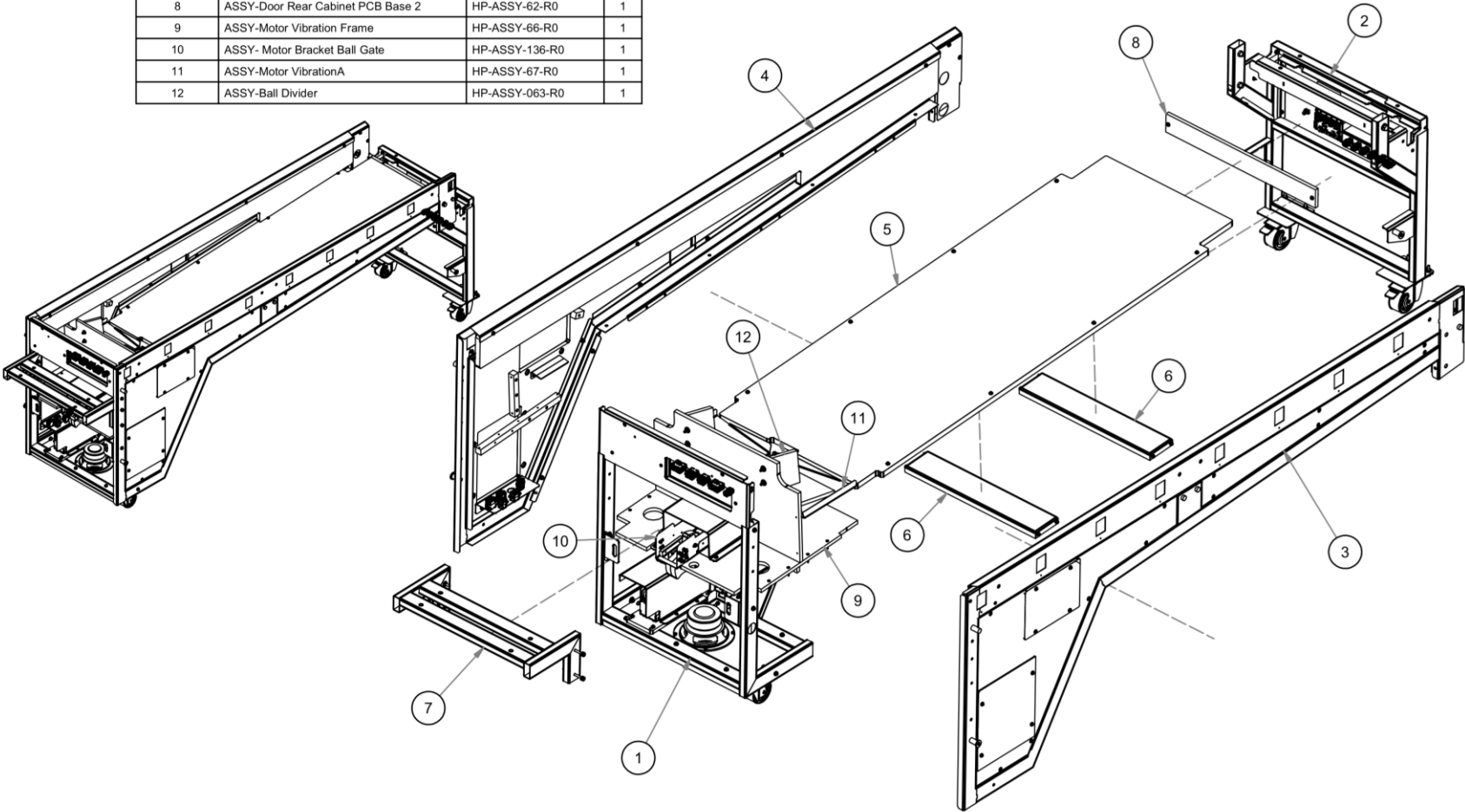
SPLIT CABINET REAR CHASER ASSEMBLY

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASSY-ChaserLight_Rear	HP-ASSY-109-R2	1
2	ASSY-ChaserLight_MID	HP-ASSY-108-R3	4
3	ASW-Rear Mounting Chaser LH- COATED	HP-FC-017-LH-R1	1
4	ASW-Rear Mounting Chaser RH- COATED	HP-FC-017-RH-R1	1
5	Rear Join Bracket Top- COATED	HP-FC-019A-R0	2
6	ASW-Rear Join Bracket Top LH- COATED	HP-FC-019-LH-R0	1
7	ASW-Rear Join Bracket Top RH- COATED	HP-FC-019-RH-R0	1
8	Rear Join Bracket Bottom LH- COATED	HP-FC-0139-LH-R0	1
9	Rear Join Bracket Bottom RH- COATED	HP-FC-0139-RH-R0	1
10	Plastic Side Cover 3	HP-FP-030-R1	2
11	Plastic Side Cover 4	HP-FP-031-R1	2
12	Ball Direction 2 LH- COATED	HP-FC-042-LH-R0	1
13	Ball Direction 2 RH- COATED	HP-FC-042-RH-R0	1
14	Button Head Socket Screw M4 x 10- Stainless	HF0403B	12
15	Hex Bolt M10 x 20- Stainless	HF0846A	4
16	Flat Washer M4- Stainless	HF1065B	12
17	Flat Washer M10- Stainless	HF1069A	4
18	Spring Lock Washer M4- Stainless	HF1075A	12
19	Spring Lock Washer M10- Stainless	HF1079A	4

REAR CHASER ASSEMBLY-SPLIT CABINET

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASSY-ChaserLight_Rear	HP-ASSY-109-R0	1
2	ASSY-ChaserLight_MID	HP-ASSY-108-R0	4
3	ASW-Rear Mounting Chaser LH- COATED	HP-FC-017-LH-R0	1
4	ASW-Rear Mounting Chaser RH- COATED	HP-FC-017-RH-R0	1
5	Rear Join Bracket Top- COATED	HP-FC-019A-R0	2
6	ASW-Rear Join Bracket Top LH- COATED	HP-FC-019-LH-R0	1
7	ASW-Rear Join Bracket Top RH- COATED	HP-FC-019-RH-R0	1
8	Rear Join Bracket Bottom LH- COATED	HP-FC-0139-LH-R0	1
9	Rear Join Bracket Bottom RH- COATED	HP-FC-0139-RH-R0	1
10	Plastic Side Cover 3	HP-FP-030-R0	2
11	Plastic Side Cover 4	HP-FP-031-R0	2
12	Ball Direction 2 LH- COATED	HP-FC-042-LH-R0	1
13	Ball Direction 2 RH- COATED	HP-FC-042-RH-R0	1
14	Button Head Socket Screw M4 x 10- Stainless	HF0403B	12
15	Hex Bolt M10 x 20- Stainless	HF0846A	4
16	Flat Washer M4- Stainless	HF1065B	12
17	Flat Washer M10- Stainless	HF1069A	4
18	Spring Lock Washer M4- Stainless	HF1075A	12
19	Spring Lock Washer M10- Stainless	HF1079A	4

REAR CHASER ASSEMBLY

SPLIT CABINET MID CHASER ASSEMBLY

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASSY-ChaserLight_MID	HP-ASSY-108-R3	4
2	ASW-Front mounting chaser RH- COATED	HP-FC-016-RH-R1	1
3	ASW-Front Mounting Chaser LH- COATED	HP-FC-016-LH-R1	1
4	ASW-Front Join Bracket-Top LH- COATED	HP-FC-018-LH-R0	1
5	ASW-Front Join Bracket-Top RH- COATED	HP-FC-018-RH-R0	1
6	Front Join Bracket 1- COATED	HP-FC-044-R0	2
7	Front Join Bracket 2-RH- COATED	HP-FC-045-RH-R0	1
8	Front Join Bracket 2-LH- COATED	HP-FC-045-LH-R0	1
9	AS-Bracket Front Ball Protection LH- COATED	HP-FC-046-LH-R1	1
10	AS-Bracket Front Ball Protection RH- COATED	HP-FC-046-RH-R1	1
11	Plastic Side Cover 1	HP-FP-028-R1	2
12	Plastic Side Cover 2	HP-FP-029-R1	2
13	Spring Lock Washer M10- Stainless	HF1079A	4
14	Flat Washer M10- Stainless	HF1069A	4
15	Hex Bolt M10 x 20- Stainless	HF0846A	4

FRONT MID CHASER ASSEMBLY-SPLIT CABINET
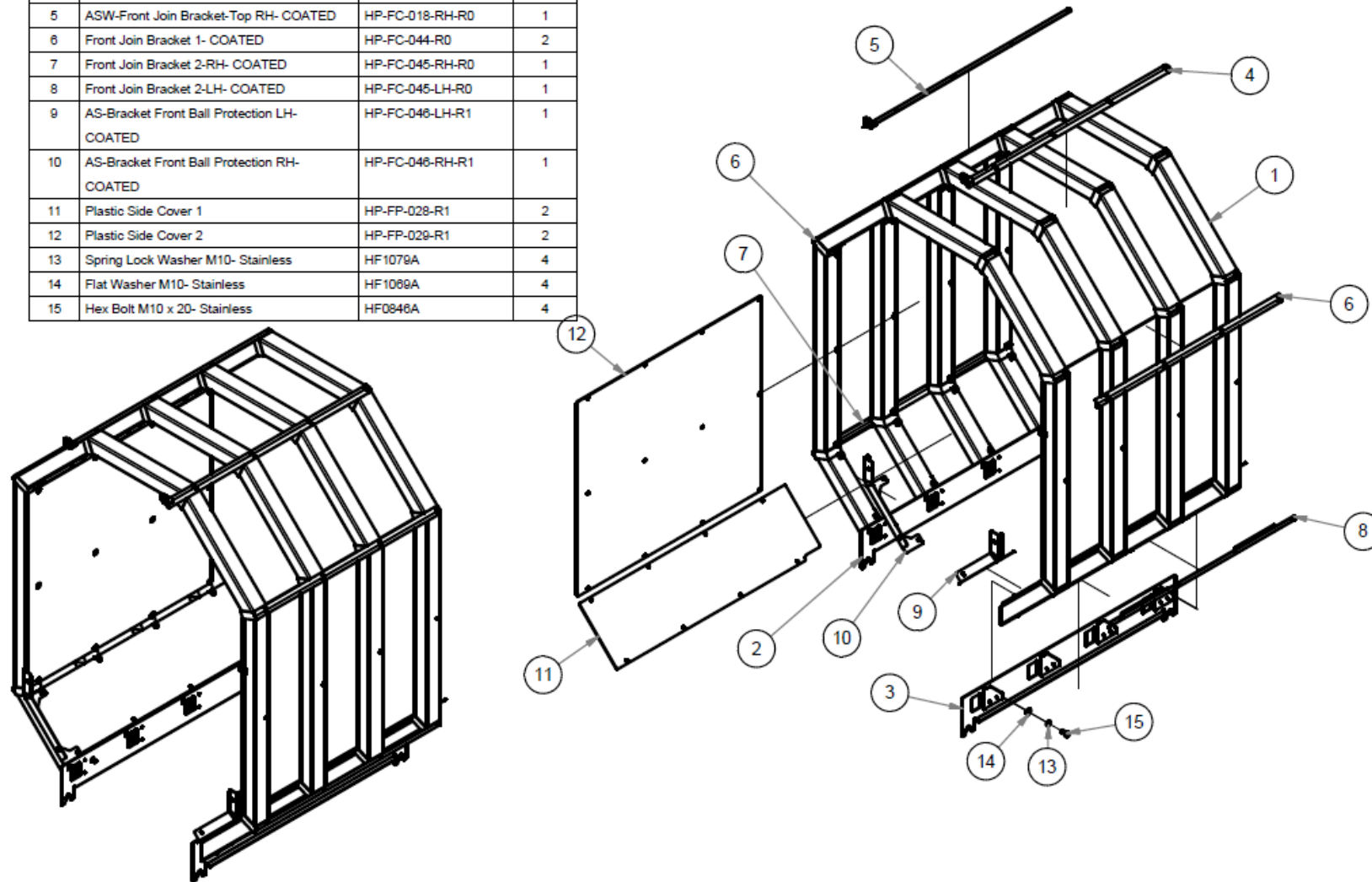
LONG CABINET MID CHASER ASSEMBLY

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASSY-ChaserLight_MID	HP-ASSY-108-R0	4
2	ASW-Front mounting chaser RH- COATED	HP-FC-016-LH-R0	1
3	ASW-Front Mounting Chaser LH- COATED	HP-FC-016-LH-R0	1
4	ASW-Front Join Bracket-Top LH- COATED	HP-FC-018-LH-R0	1
5	ASW-Front Join Bracket-Top RH- COATED	HP-FC-018-RH-R0	1
6	Front Join Bracket 1- COATED	HP-FC-044-R0	2
7	Front Join Bracket 2-RH- COATED	HP-FC-045-RH-R0	1
8	Front Join Bracket 2-LH- COATED	HP-FC-045-LH-R0	1
9	AS-Bracket Front Ball Protection LH- COATED	HP-FC-046-LH-R0	1
10	AS-Bracket Front Ball Protection RH- COATED	HP-FC-046-RH-R0	1
11	Plastic Side Cover 1	HP-FP-028-R0	2
12	Plastic Side Cover 2	HP-FP-029-R0	2
13	Spring Lock Washer M10- Stainless	HF1079A	8
14	Flat Washer M10- Stainless	HF1069A	8
15	Hex Bolt M10 x 20- Stainless	HF0846A	4
16	Hex Bolt M10 x 45- Stainless	HF0851B	4
17	HEX NUT M10	HF1009	4

FRONT CHASER-MID ASSEMBLY
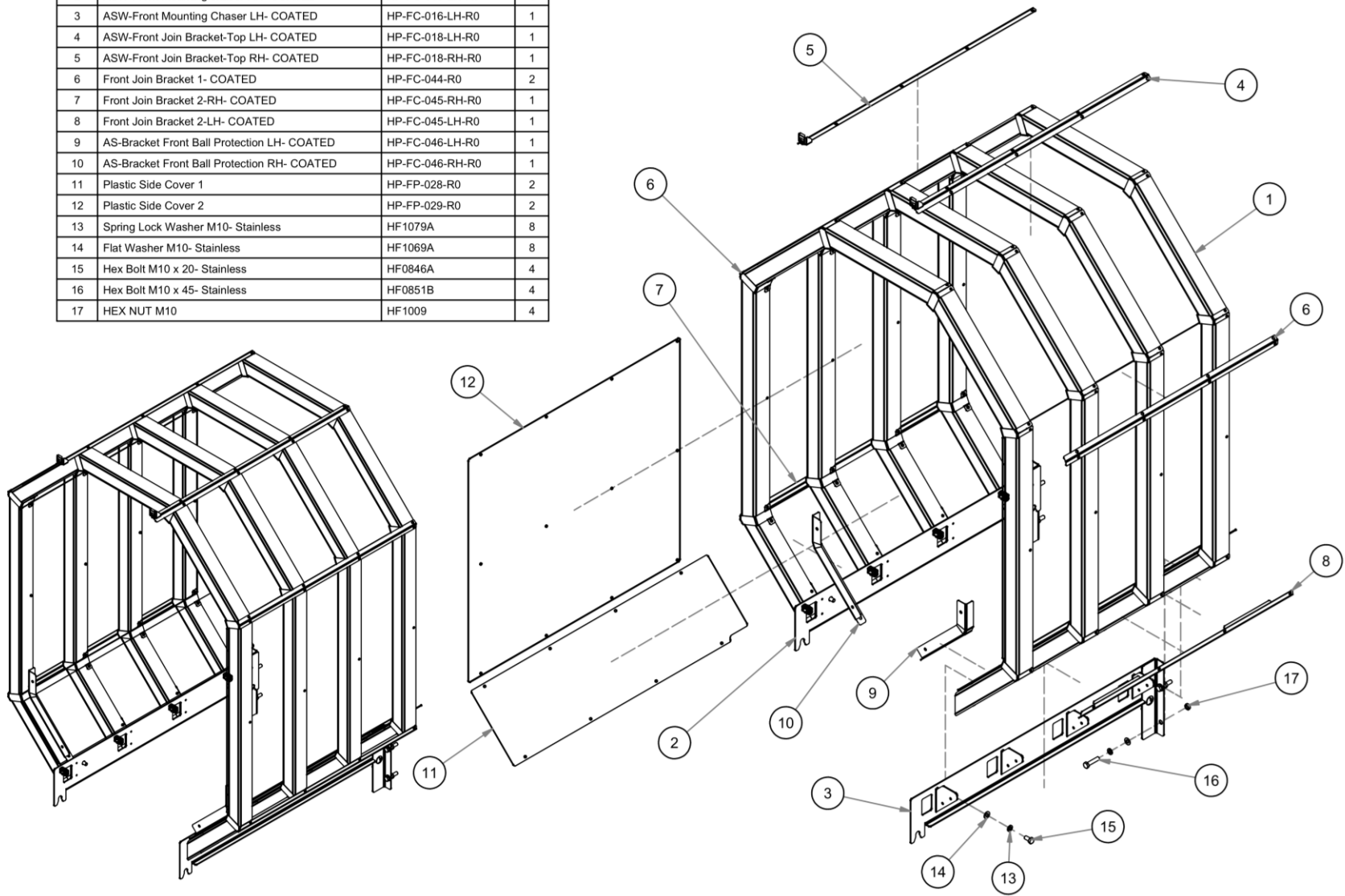
FRONT CHASER ASSEMBLY

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASW-ChaserLight_Bracket_Front- COATED	HP-FC-013-R1	1
2	ChaseLight Plastic Case_TOP	HP-FP-024-R0	1
3	ChaseLight Plastic Case 2	HP-FP-025-R0	2
4	ChaseLight Plastic Case 3-LH	HP-FP-026-LH-R0	1
5	ChaseLight Plastic Case 3-RH	HP-FP-026-RH-R0	1
6	ChaseLight Plastic Case 4-LH	HP-FP-027-LH-R0	1
7	ChaseLight Plastic Case 4-RH	HP-FP-027-RH-R0	1
8	Plastic Corner Connect 1- COATED	HP-FC-043-R0	6
9	Flat Head Phillips Screw M4 x 15- Stainless	HF0465C	32
10	Button Head Socket Screw M5 x 25- Stainless	HF0507C	4
11	Button Head Socket Screw M5 x 15- Stainless	HF0505B	8
12	Spring Lock Washer M5- Stainless	HF1076A	12
13	Flat Washer M5- Stainless	HF1066A	8
14	Flange Nut M5-Stainless	HF1026A	1
15	Front Chaser_Extension Mounting Plate LH- COATED	HP-FC-051-LH-R0	1
16	Front Chaser_Extension Mounting Plate RH- COATED	HP-FC-051-RH-R0	1
17	Flat Washer M6 ISO 7093 (Big)- Stainless	HF1067C	4

CHASER LIGHT FRONT-ASSEMBLY

TYPICAL CONNECTION FOR ALL ACRYLICS
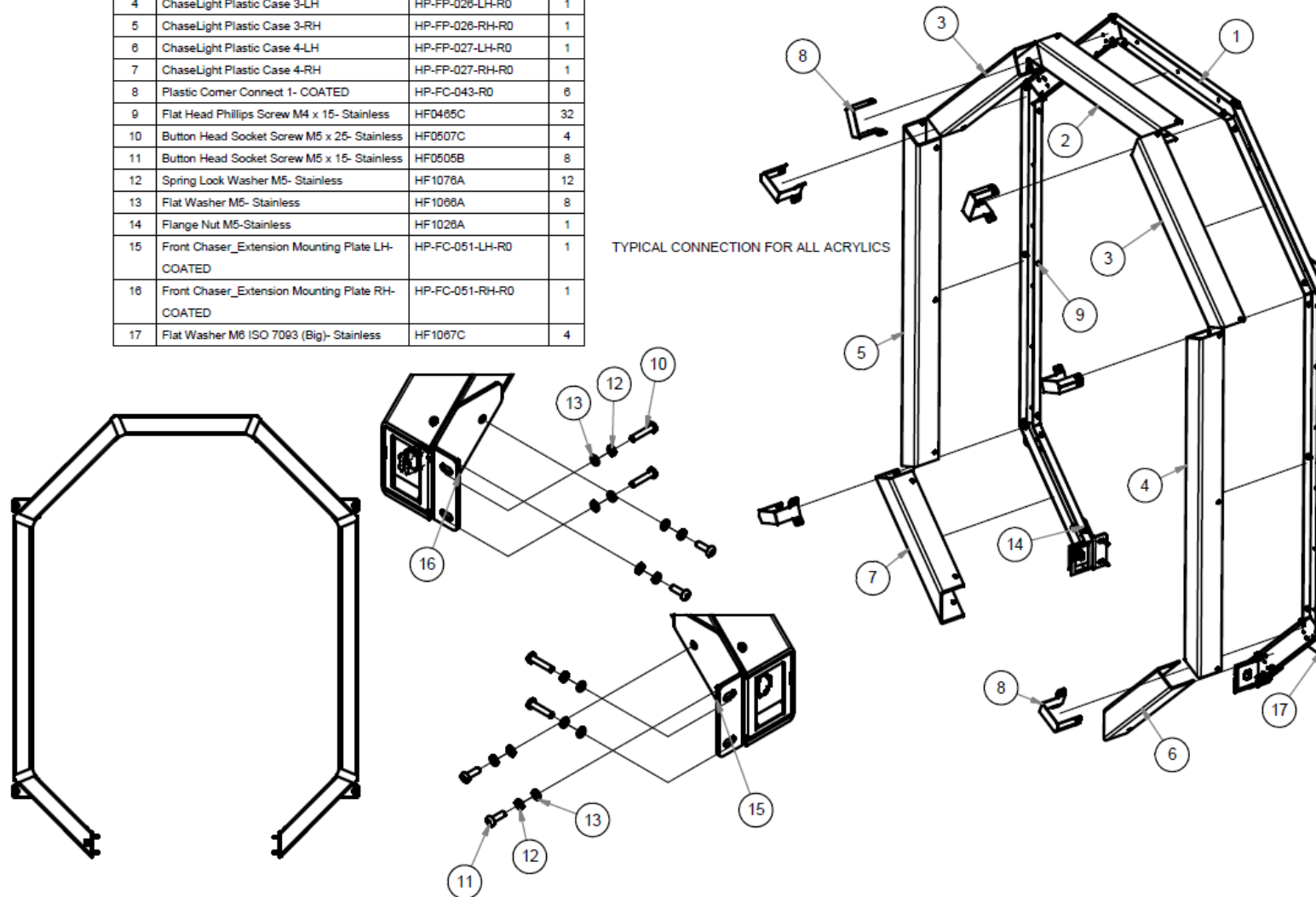
FRONT BALL PROTECTION AND CHASER MIDDLE SIDE COVER ASSEMBLIES

FRONT BALL PROTECTION ASSEMBLY

	PARTS LIST		
ITEM	DESCRIPTION	PART NUMBER	QTY
1	AS-Front Ball Protection- STICKER	HP-AS-PS025-R2	1
2	Button Head Socket Screw M5 x 15- Stainless	HF0505B	4
3	Spring Lock Washer M5- Stainless	HF1076A	4
4	Flat Washer M6 ISO 7093 (Big)- Stainless	HF1067C	4
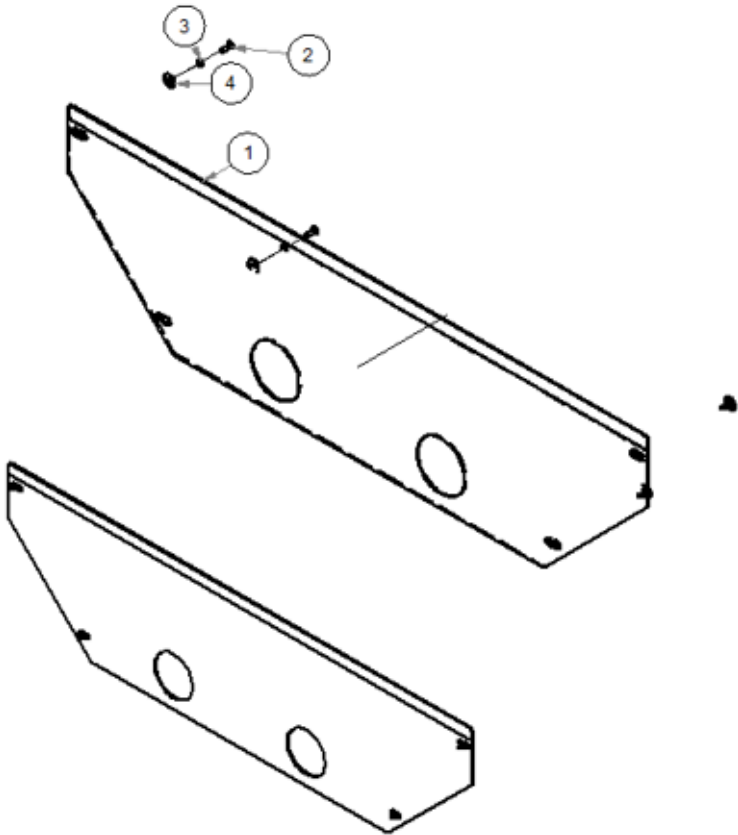
CHASER MIDDLE COVER ASSEMBLY

	PARTS LIST		
ITEM	DESCRIPTION	PART NUMBER	QTY
1	Chaser Intermid Connect-2A RH - COATED	HP-FC-039-RH-R0	1
2	Chaser Intermid Connect-2A LH - COATED	HP-FC-039-LH-R0	1
3	Side Cover 5	HP-FP-032-R0	1
4	Button Head Socket Screw M5 x 15- Stainless	HF0505B	4
5	Spring Lock Washer M5- Stainless	HF1076A	4
6	Flat Washer M5- Stainless	HF1066A	4
7	Dome NUT M5- Stainless	HF3053A	4
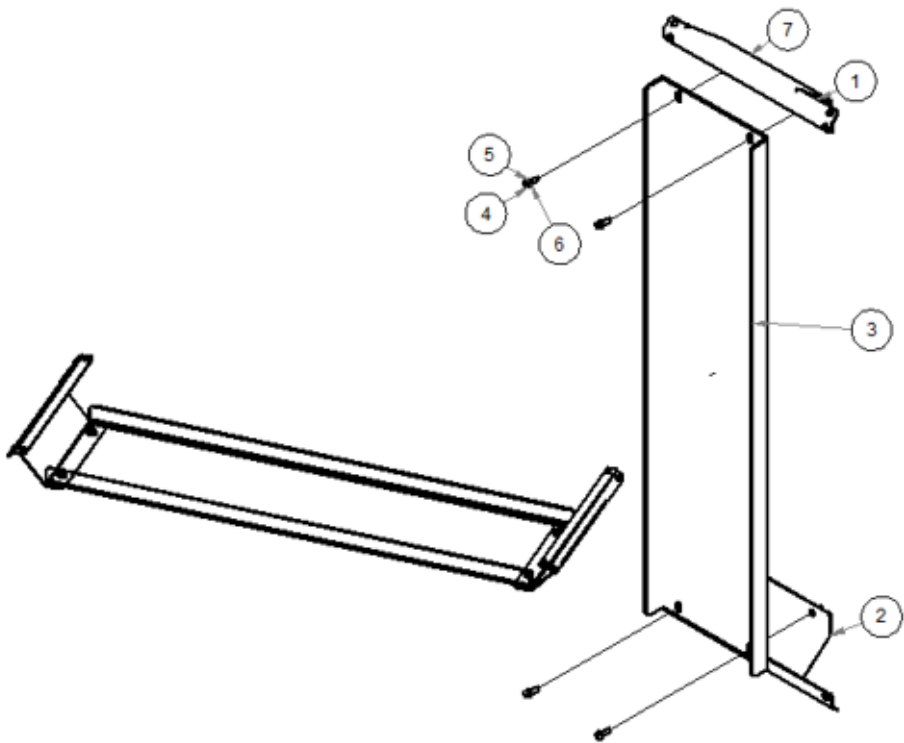
FRONT RIGID FRAME ASSEMBLY

ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASW-Front Pipe Rigid Frame- COATED	HP-FC-011-R0	1
2	ASSY-Front Vertical Transmitter	HP-ASSY-152A-FR-R0	1
3	ASSY-Front Vertical Receiver	HP-ASSY-152B-FR-R0	1
4	Front Cover Horizontal 2- COATED	HP-FC-057-R0	2
5	Sensor Flat Cover 1	HP-FP-014-R0	2
6	Sensor Top Front Cover	HP-FP-015-R0	1
7	Front Top Rigid Frame Cover	HP-FP-013-R0	2
8	Flat Washer M4- Stainless	HF1065B	44
9	Spring Lock Washer M4- Stainless	HF1075A	44
10	Button Head Socket Screw M4 x15- Stainless	HF0405B	44
11	Spring Lock Washer M5- Stainless	HF1076A	2
12	Flat Washer M5- Stainless	HF1066A	2
13	Button Head Socket Screw M5 x 20- Stainless	HF0506B	2
14	Hex Bolt M6 x75- Stainless	HF0657A	4
15	Spring Lock Washer M6- Stainless	HF1077A	4
16	Flat Washer M6- Stainless	HF1067D	4
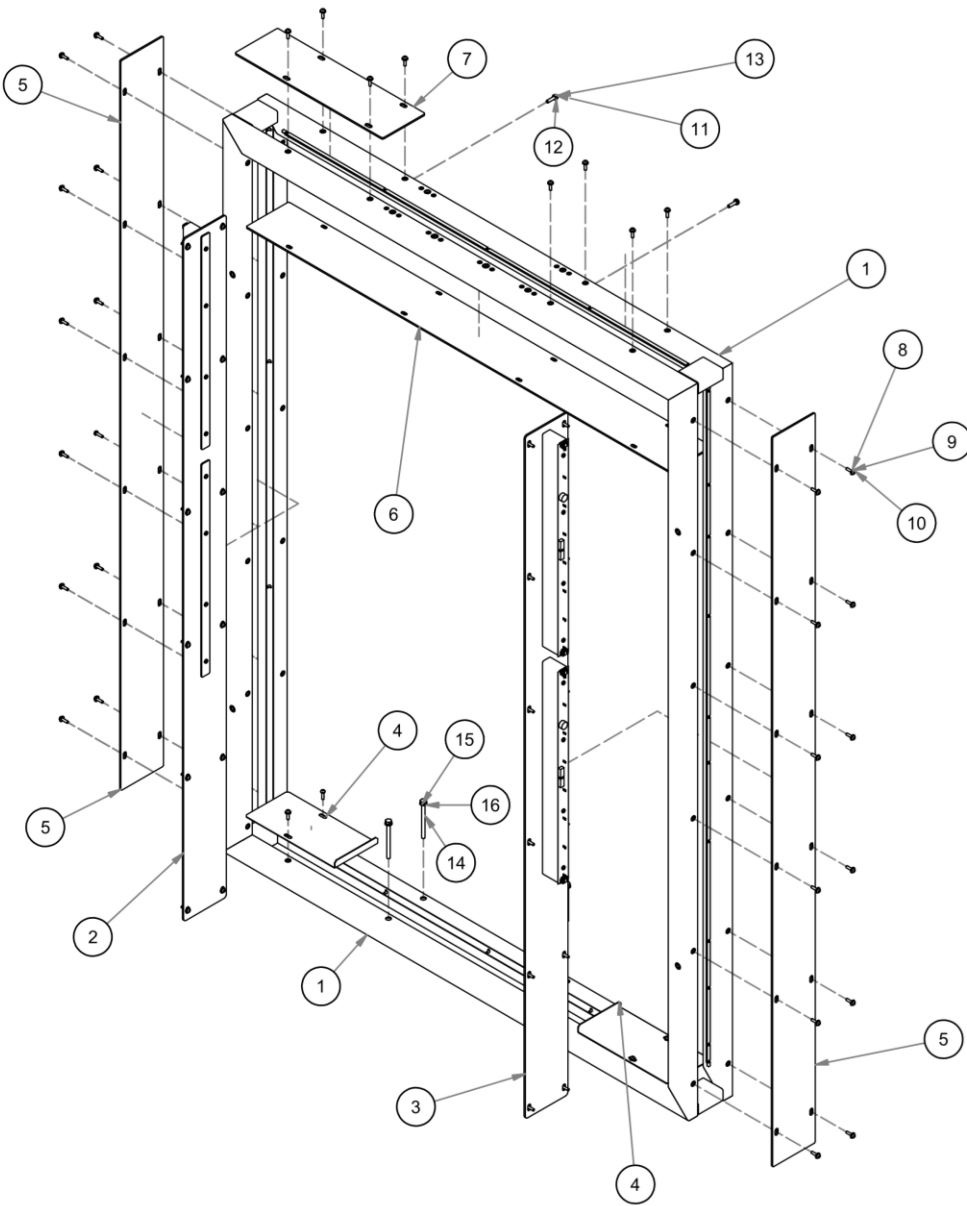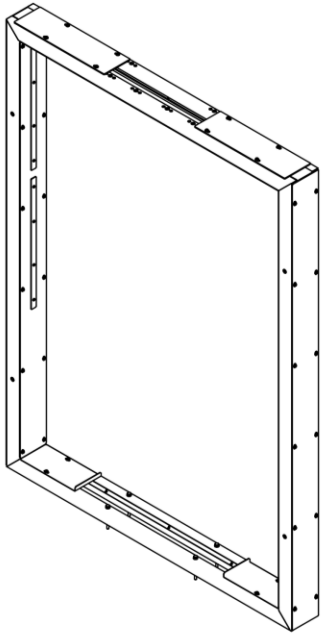
REAR RIGID FRAME ASSEMBLY

PARTS LIST

ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASSY-Vertical Receiver Rear	HP-ASSY-152D-REAR-R0	1
2	ASSY-Horizontal Receiver Rear	HP-ASSY-154--R0	1
3	ASSY-Vertical Transmitter Rear	HP-ASSY-152C-REAR-R0	1
4	ASSY-Horizontal Transmitter Rear	HP-ASSY-153-R0	1
5	ASW-Rear Pipe Rigid Frame- COATED	HP-FC-012-R0	1
6	Cover Rear Sensor Bottom- COATED	HP-FC-050-R0	2
7	Hex Bolt M6 x75- Stainless	HF0657A	4
8	Spring Lock Washer M6- Stainless	HF1077A	4
9	Flat Washer M6- Stainless	HF1067D	4
10	Spring Lock Washer M5- Stainless	HF1076A	10
11	Flat Washer M5- Stainless	HF1066A	10
12	Button Head Socket Screw M5 x 20- Stainless	HF0506B	10
13	Sensor Flat Cover 1	HP-FP-014-R0	2
14	Sensor Flat Cover 2	HP-FP-023-R0	1
15	Button Head Socket Screw M4 x15- Stainless	HF0405B	36
16	Spring Lock Washer M4- Stainless	HF1075A	36
17	Flat Washer M4- Stainless	HF1065B	36
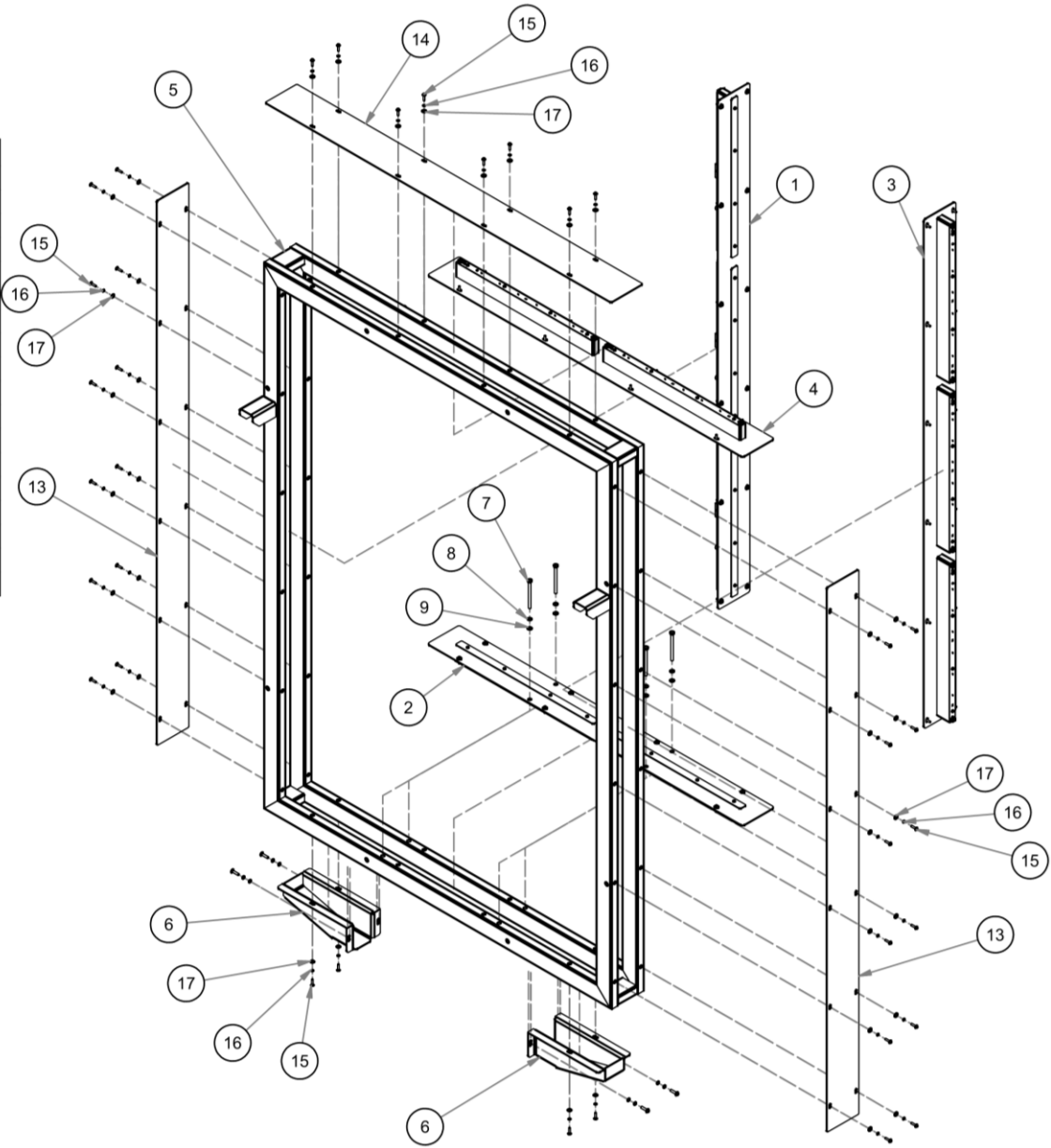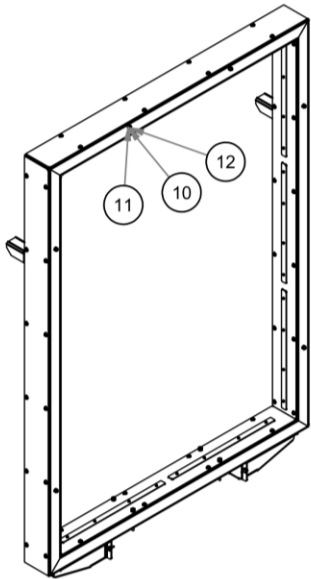
VERTICAL RECEIVER REAR ASSEMBLY

VERTICAL RECEIVER REAR ASSEMBLY

PARTS LIST

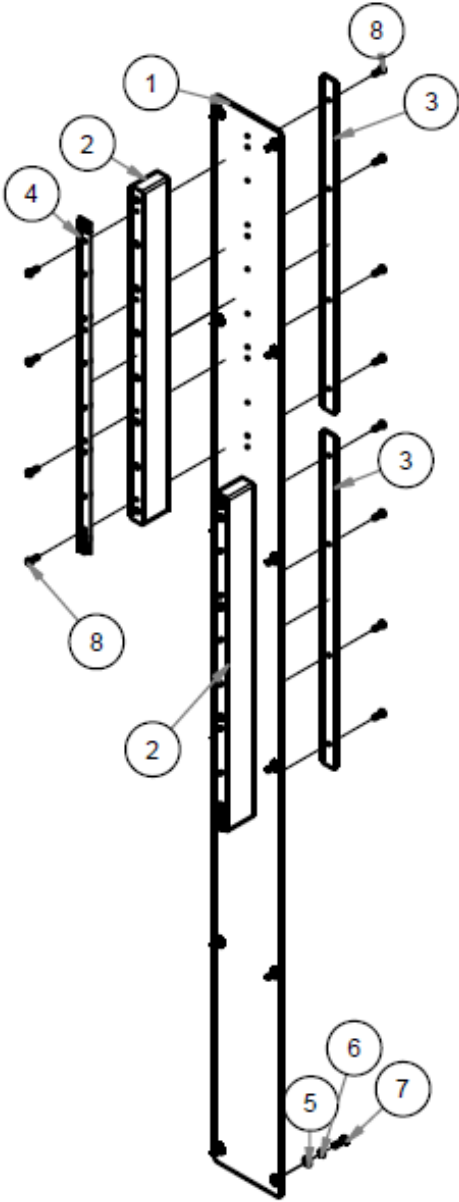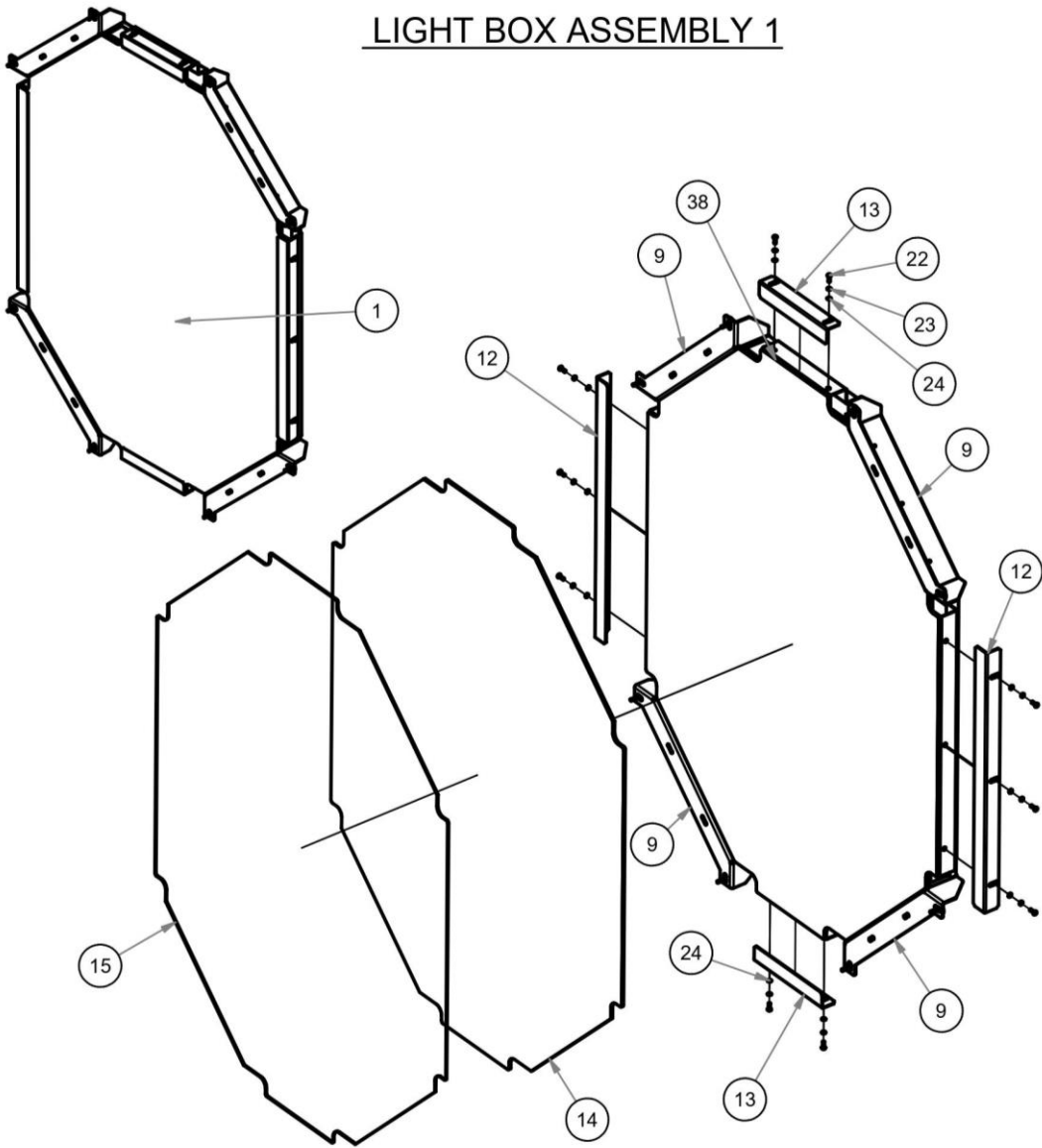| ITEM	DESCRIPTION	PART NUMBER	QTY
1	Spacer Block	HP-FP-017-R0	3
2	Vertical Sensor Bracket	HP-FP-016-R0	1
3	Spacer Block Cover 1	HP-FP-018-R0	3
4	PCB FB213A IR Receiver	FB213A	3
5	Flat Washer M4- Stainless	HF1065B	12
6	Spring Lock Washer M4- Stainless	HF1075A	12
7	Button Head Socket Screw M4 x15- Stainless	HF0405B	12
8	Pan Head Phillips Screw #6x1/2"- Stainless	HF4642A	24
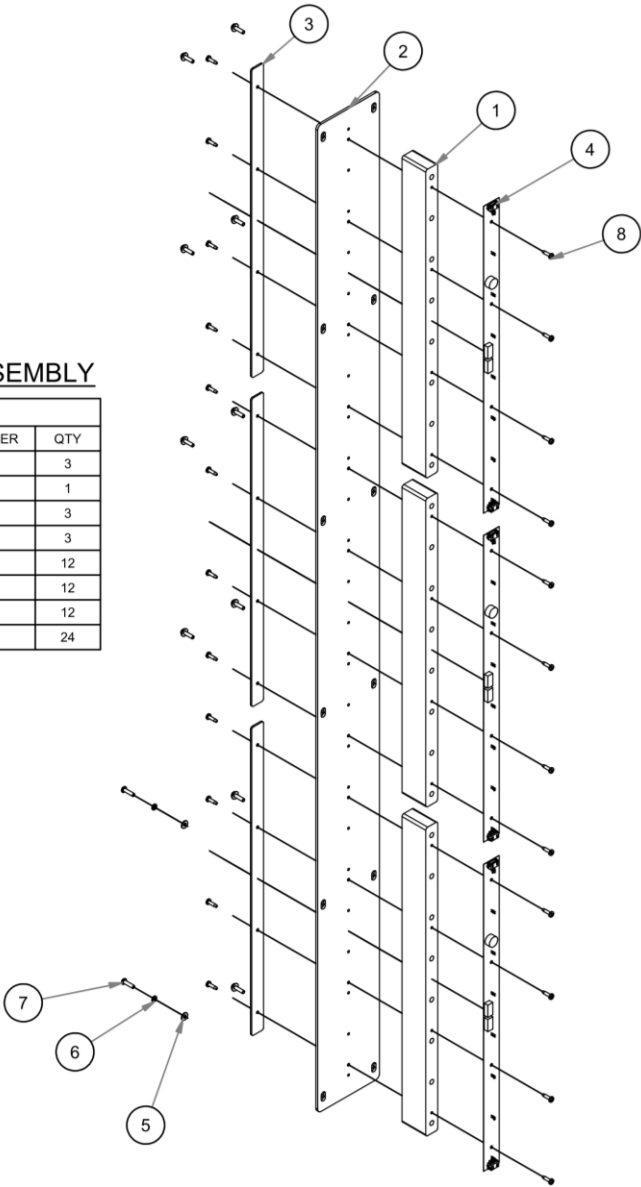
VERTICAL TRANSMITTER REAR ASSEMBLY

VERTICAL TRANSMITTER REAR ASSEMBLY

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	Spacer Block	HP-FP-017-R0	3
2	Vertical Sensor Bracket	HP-FP-016-R0	1
3	Spacer Block Cover 1	HP-FP-018-R0	3
4	PCB FB213B IR Transmitter	FB213B	3
5	Button Head Socket Screw M4 x15- Stainless	HF0405B	12
6	Spring Lock Washer M4- Stainless	HF1075A	12
7	Flat Washer M4- Stainless	HF1065B	12
8	Pan Head Phillips Screw #6x1/2"- Stainless	HF4642A	24
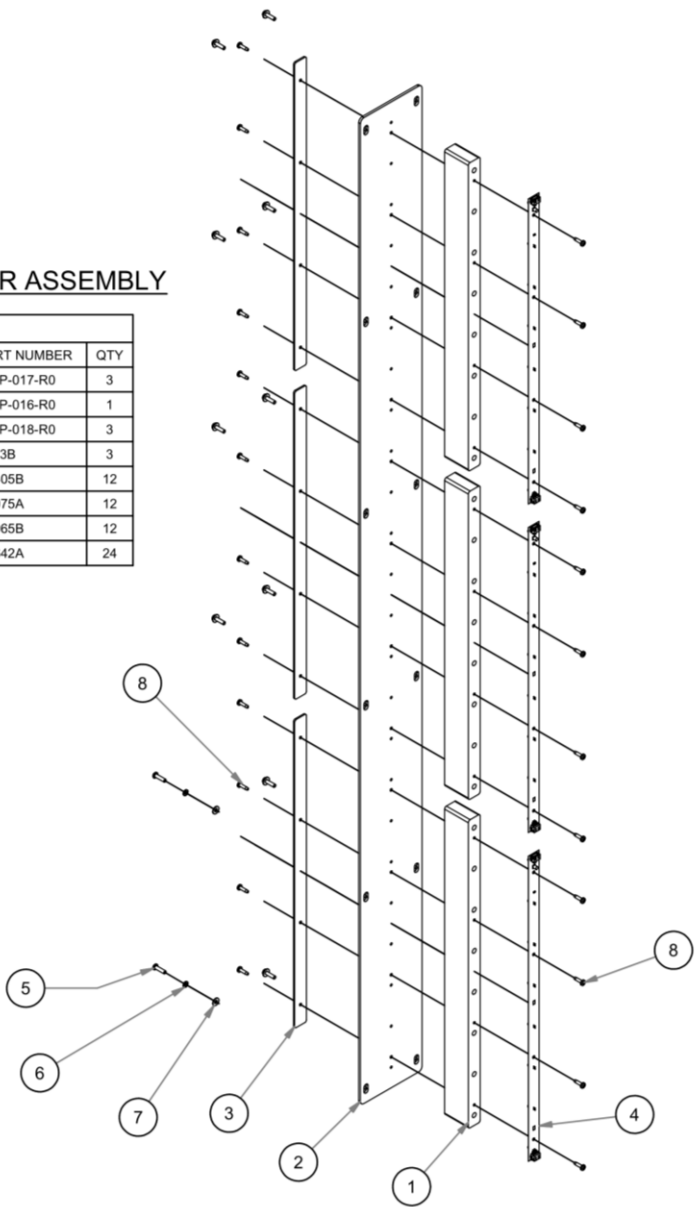
HORIZONTAL TRANSMITTER REAR ASSEMBLY

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	Spacer Block	HP-FP-017-R0	2
2	Spacer Block Cover 1	HP-FP-018-R0	2
3	Top Horizontal Rear Sensor Bracket	HP-FP-021-R0	1
4	Pan Head Phillips Screw #6x1/2"- Stainless	HF4642A	16
5	PCBA, FB213B IR Transmitter	FB213B	2
6	Flat Washer M4- Stainless	HF1065B	8
7	Spring Lock Washer M4- Stainless	HF1075A	8
8	Button Head Socket Screw M4 x15- Stainless	HF0405B	8

HORIZONTAL TRANSMITTER REAR-ASSEMBLY
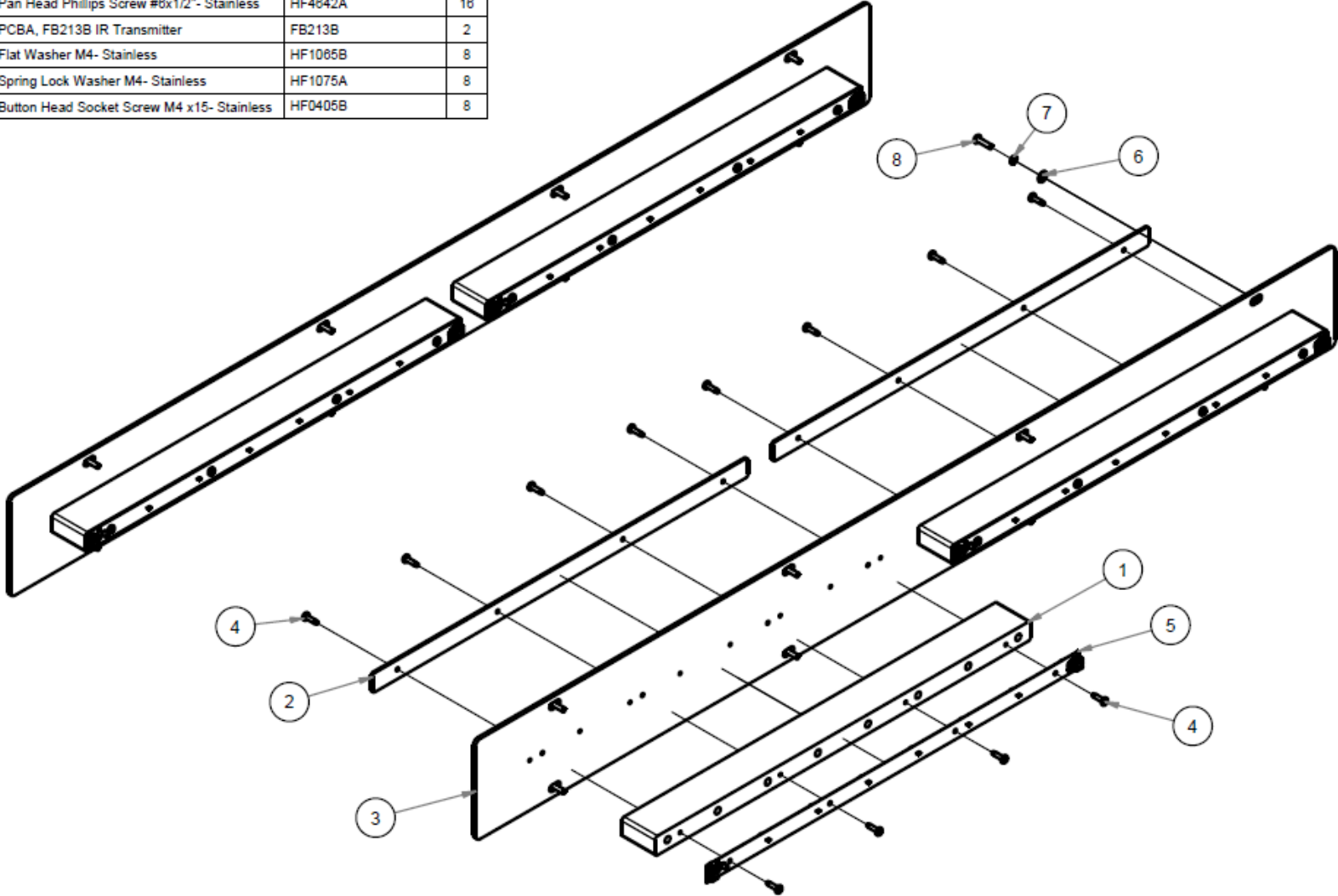
HORIZONTAL RECEIVER REAR ASSEMBLY

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	Spacer Block	HP-FP-017-R0	2
2	Spacer Block Cover 1	HP-FP-018-R0	2
3	Bottom Horizontal Rear Sensor Bracket	HP-FP-022-R0	1
4	PCB FB213A IR Receiver	FB213A	2
5	Pan Head Phillips Screw #6x1/2"- Stainless	HF4642A	16
6	Flat Washer M4- Stainless	HF1065B	8
7	Spring Lock Washer M4- Stainless	HF1075A	8
8	Button Head Socket Screw M4 x15- Stainless	HF0405B	8

HORIZONTAL RECEIVER-REAR ASSEMBLY
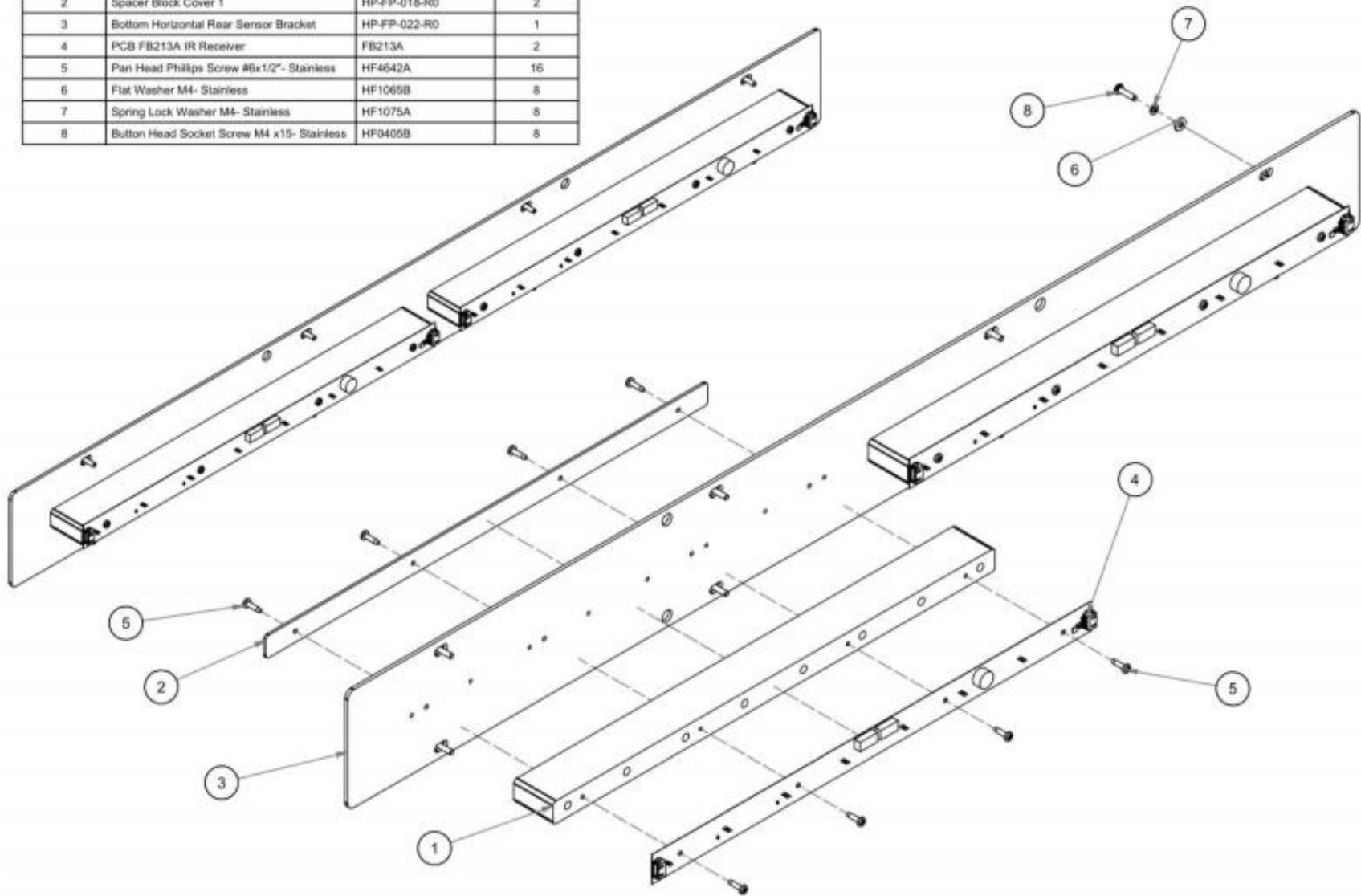
PARTS LIST

ITEM	DESCRIPTION	PART NUMBER	QTY
1	Vertical Sensor Bracket Front	HP-FP-062-R0	1
2	Spacer Block	HP-FP-017-R0	2
3	Spacer Block Cover 1	HP-FP-018-R0	2
4	PCBA, FB213A IR Receiver	FB213A	2
5	Flat Washer M4- Stainless	HF1065B	12
6	Spring Lock Washer M4- Stainless	HF1075A	12
7	Button Head Socket Screw M4 x15- Stainless	HF0405B	12
8	Pan Head Phillips Screw #6x1/2"- Stainless	HF4642A	16
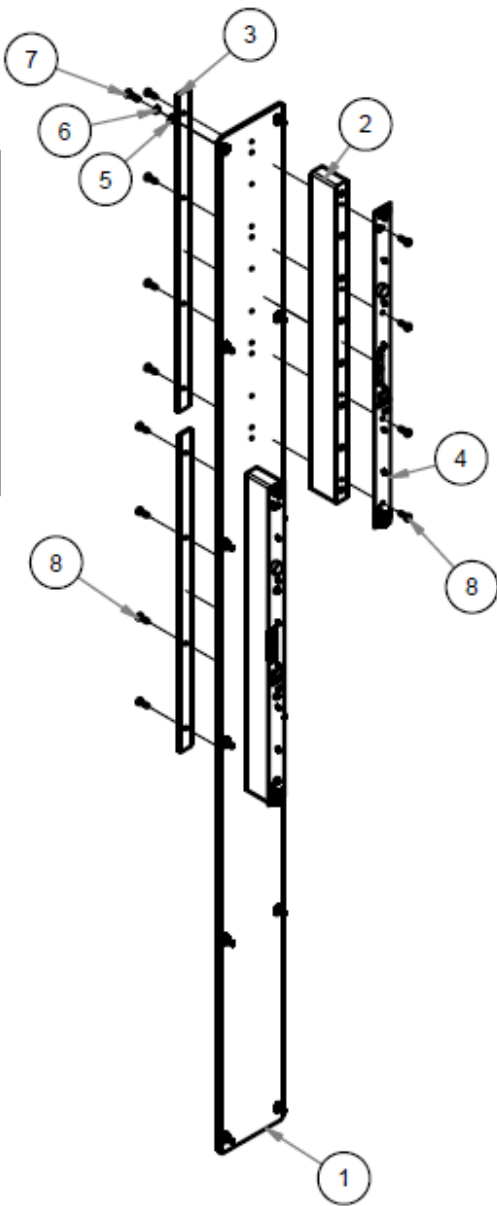
FRONT VERTICAL TRANSMITTER ASSEMBLY

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	Vertical Sensor Bracket Front	HP-FP-062-R0	1
2	Spacer Block	HP-FP-017-R0	2
3	Spacer Block Cover 1	HP-FP-018-R0	2
4	PCBA, FB213B IR Transmitter	FB213B	2
5	Flat Washer M4- Stainless	HF1065B	12
6	Spring Lock Washer M4- Stainless	HF1075A	12
7	Button Head Socket Screw M4 x15- Stainless	HF0405B	12
8	Pan Head Phillips Screw #6x1/2"- Stainless	HF4642A	16

LIGHT BOX ASSEMBLY 1

ITEM	DESCRIPTION	PART NUMBER	QTY	REMARKS
	PARTS LIST			
1	BackBoard Panel	HP-FW-037-R2	1	
2	L Channel A1- COATED	HP-FC-077-R0	1	
3	L Channel A2- COATED	HP-FC-114-R0	1	
4	L Channel B1- COATED	HP-FC-078-R0	1	
5	L Channel B2- COATED	HP-FC-115-R0	1	
6	L Channel C- COATED	HP-FC-079-R0	1	
7	L Channel D- COATED	HP-FC-080-R0	1	
8	L Channel E- COATED	HP-FC-081-R0	1	
9	Target Holder- COATED	HP-FC-082-R1	4	
10	AS-Bracket 6 Light Box- COATED	HP-FC-083-R1	2	
11	AS-Bracket 7 Light Box- COATED	HP-FC-084-R1	2	
12	Bracket Slot Light Box #3- COATED	HP-FC-085-R0	2	
13	Bracket Slot Light Box #4- COATED	HP-FC-086-R0	2	
14	AS-Target- SILKSCREEN	HP-SS-FP039-R0	1	Refer to order requirement
15	Cover Target	HP-FP-040-R1	1	
16	Pan Head Phillips Screw #8x1/2" - Stainless	HF4902B	42	
17	Knock Down Bolt M6x35- Stainless	HF0689B	18	
18	Flat Washer M6- Stainless	HF1067D	18	
19	Flat Washer M6 ISO 7093 (Big)- Stainless	HF1067C	8	
20	Lock Nut M6- Stainless	HF1017A	18	
21	Button Head Socket Screw M5 x 30- Stainless	HF0508C	8	
22	Button Head Socket Screw M5 x 15- Stainless	HF0505B	10	
23	Spring Lock Washer M5- Stainless	HF1076A	18	
24	Flat Washer M5- Stainless	HF1066A	10	
25	Cable Tie Mount Screw Saddle HC-1	EP0012	6	
26	Cable Tie_10cm	EP0001	6	
27	Flat Head Phillips Screw #6 x 1/2"- Stainless	HF4602A	6	
28	Rubber Edging-LightBox Edge (0.08 Meters)	HM2996B	8	
29	Rubber Edging-Channel B (3.3 Meters)	HM2996B	1	
30	Rubber Edging-Channel D (1.6 Meters)	HM2996B	1	
31	Rubber Edging-Channel E (0.7 Meters)	HM2996B	1	
32	Rubber Edging-Entry1 (0.075 Meters)	HM2996B	5	
33	Rubber Edging-Channel C (2.4 Meters)	HM2996B	1	
34	Flat Washer M10 Big- Stainless	HF1069B	8	
35	LED Plastic Clip 2	THIS ITEM COMES FREE WITH EVERY LED LIGHT STRIP PURCHASE	117	
36	Pan Head Phillips Screw #6x3/8"- Stainless	HF4641A	117	
37	Target Corner- STICKER	HP-PS-035-RX	40	
38	AS-Target KMH Version- SILKSCREEN	HP-SS-FP110-R0	1	Refer to order requirement

LIGHT BOX ASSEMBLY 1

LIGHT BOX ASSEMBLY 2

LIGHT BOX ASSEMBLY 2

A-A (1 : 4)

113
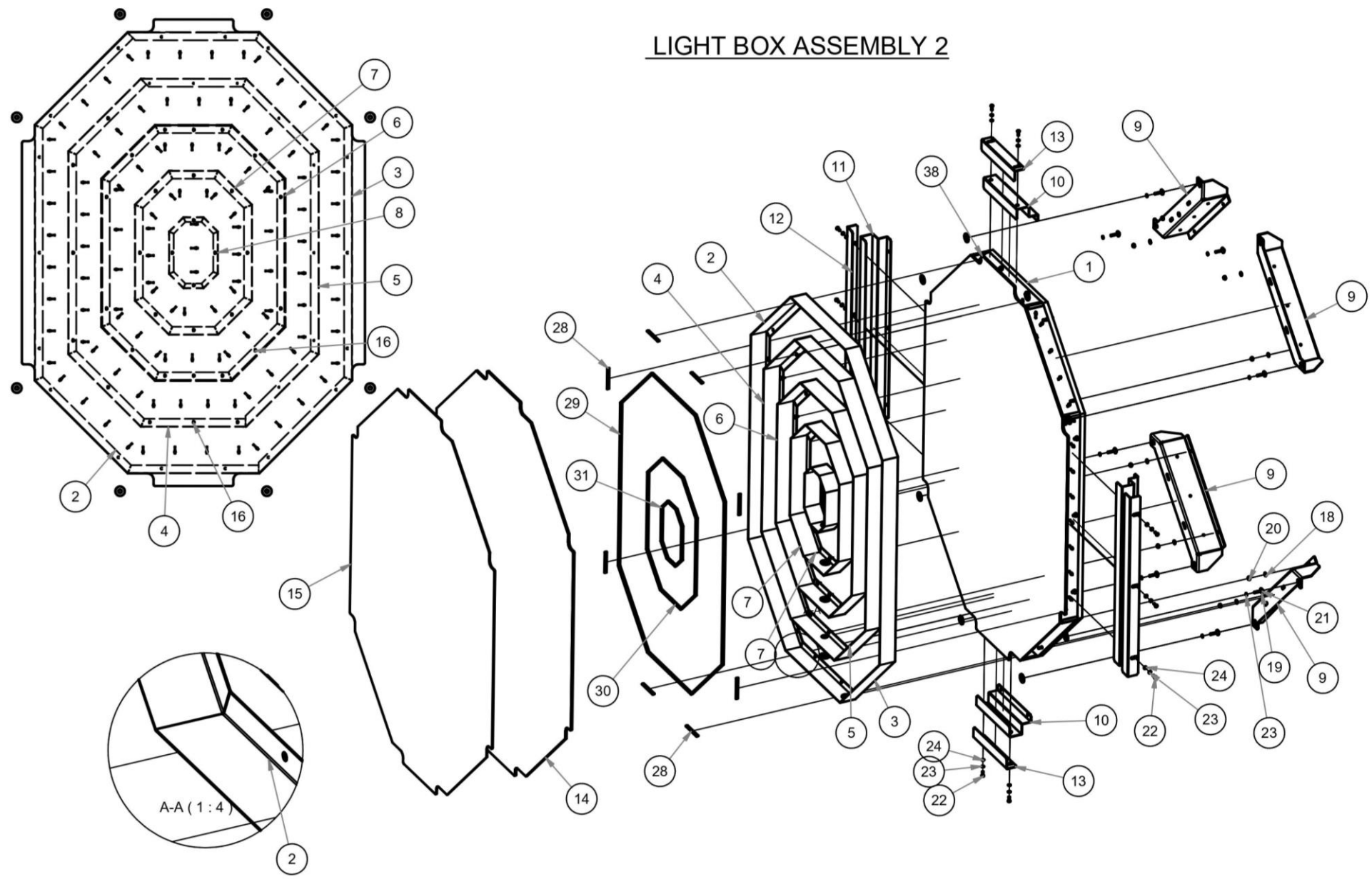
CABINET FRAME ASSEMBLY

CABINET FRAME-ASSEMBLY

ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASSY-Cabinet Panel-Base	HP-ASSY-03-R2	1
2	ASSY-Cabinet Panel-Side LH	HP-ASSY-04-R2	1
3	ASSY-Cabinet Panel-Side RH	HP-ASSY-05-R2	1
4	ASSY-Cabinet Panel-Door	HP-ASSY-06-R1	1
5	AS-Cabinet Panel-Top Support	HP-AS-FW009-R2	1
6	ASSY-Wood Front Tunnel	HP-ASSY-18-R3	1
7	ASSY-Cabinet Panel-Rear Top Support	HP-ASSY-19-R1	1
8	Front Cabinet Side Cover	HP-FP-003-R0	2
9	Flat Head Phillips Screw #6x1-1/4"	HF4605	6
10	Hex Bolt M10 x 45- Stainless	HF0851B	2
11	Spring Lock Washer M10- Stainless	HF1079A	4
12	Flat Washer M10- Stainless	HF1069A	4
13	Cable Tie_10cm	EP0001	13
14	Hex Bolt M10 x 30- Stainless	HF0848A	2
15	Spring Lock Washer M5- Stainless	HF1076A	4
16	Flat Washer M5- Stainless	HF1066A	4
17	Button Head Socket Screw M5 x 25- Stainless	HF0507C	4
18	Cable Tie Mount Screw Saddle HC-1	EP0012	3
19	Flat Head Phillips Screw #6 x 1/2"- Stainless	HF4602A	3
20	Cabinet Corner Guard	HM3462	2
21	Pan Head Phillips Screw #6x1/2"- Stainless	HF4642A	4
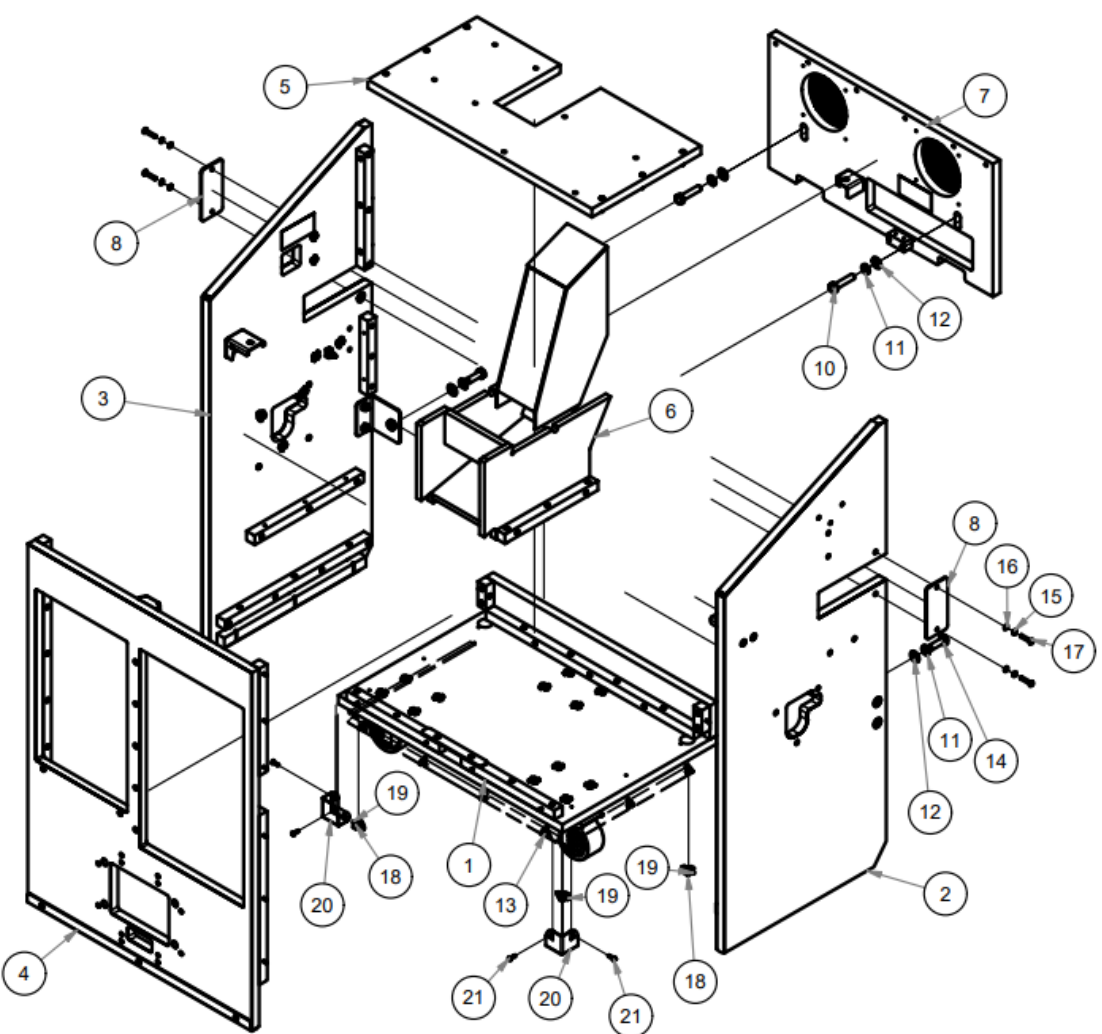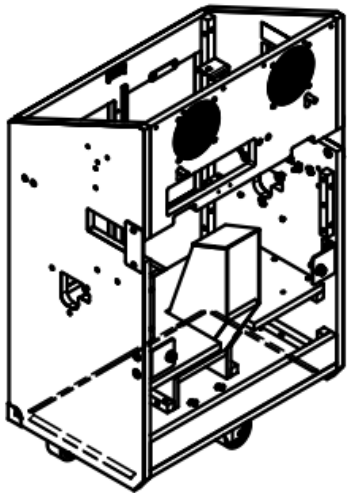
FRONT CABINET-ASSEMBLY

PARTS LIST				
ITEM	DESCRIPTION	PART NUMBER	QTY	REMARKS
1	ASSY-Cabinet Frame	HP-ASSY-02-R5	1	
2	ASSY-Cash Box	HP-ASSY-13-R2	1	
3	ASSY-Ticket Holder	HP-ASSY-85-R1	2	Refer to order requirement
4	ASSY-HP Coin Door	HP-ASSY-14-R4	1	
5	ASSY-HP Ticket Door	HP-ASSY-17-R2	1	Refer to order requirement
6	ASSY-Ball Hopper	HP-ASSY-10-R2	1	
7	ASSY-Connector Panel Main	HP-ASSY-20-R1	1	
8	ASSY-PCB Base & Operator Panel	HP-ASSY-25-R4	1	
9	ASSY-Cabinet Top Cover	HP-ASSY-12-R4	1	
10	ASSY-Strut Bracket	HP-ASSY-37-R1	1	
11	Safety Cover	HP-FW-073-R1	1	
12	ASSY-HP BlankTicket Door	HP-ASSY-182-R0	1	Refer to order requirement
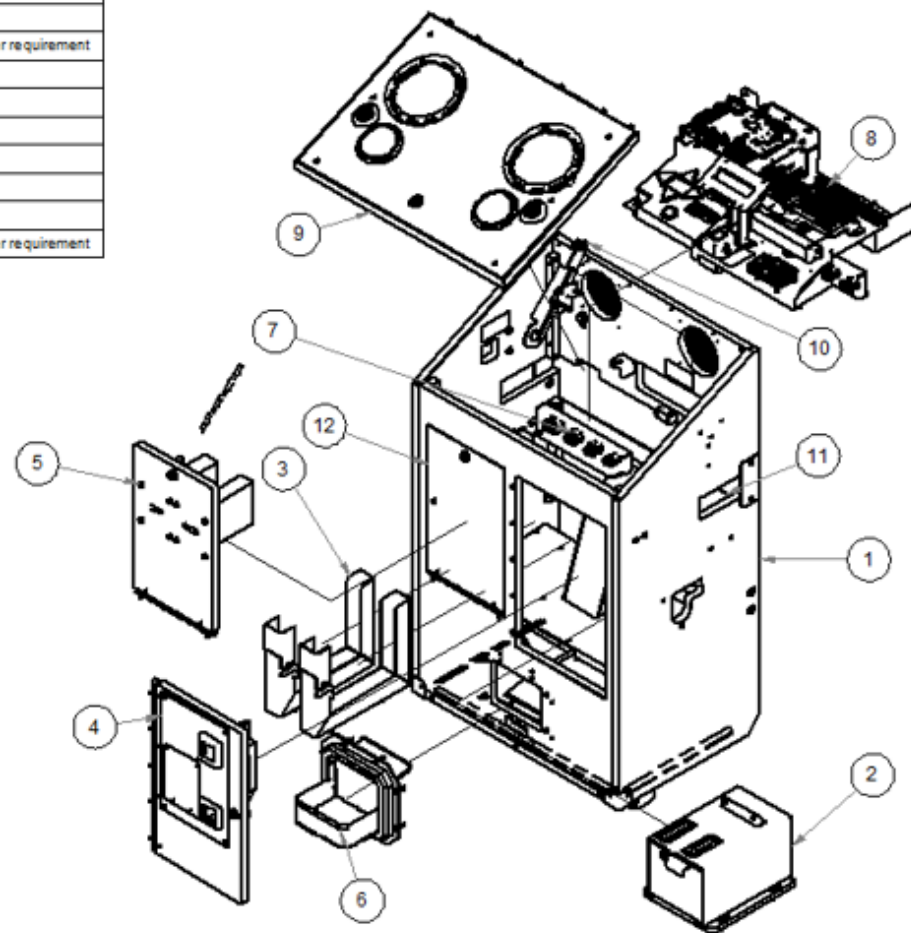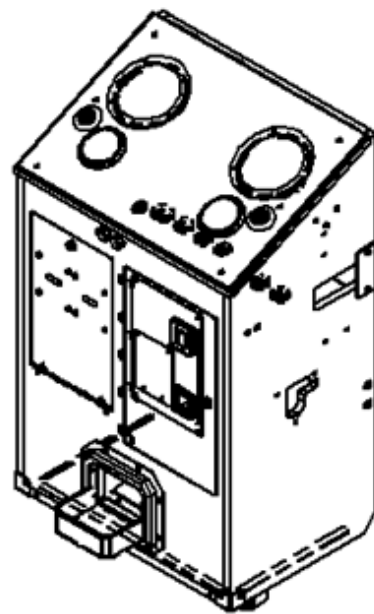
CABINET TOP COVER ASEMBLY

CABINET TOP COVER ASSEMBLY

ITEM	DESCRIPTION	PART NUMBER	QTY
1	AS-Cabinet Top Cover- STICKER	HP-AS-PS008-R0	1
2	Hinge Top Cover	HP-FM-064-R0	1
3	Cabinet Cover Faceplate	HP-FP-005-R0	1
4	ASSY-Speaker	HP-ASSY-41-R0	2
5	ASSY-Tweeter	HP-ASSY-42-R0	2
6	ASSY-Speaker CrossOver	HP-ASSY-28-R0	2
8	Cam Lock	HM0004	1
9	Top Door Cam- COATED	HP-FC-067-R0	1
10	Grounding Plate- COATED	HP-FC-066-R0	1
11	Button Head Socket Screw M4 x12- Black	HF0404	6
12	Button Head Socket Screw M5 x 30- Stainless	HF0508C	6
13	Flange Nut M5-Stainless	HF1026A	12
14	Safety Label [GROUNDING]- STICKER	Sticker is a taken from a set under P/N XX-PS-032-RX, consist of assorted safety labels eg.. Warning, Danger, Caution & grounding	3
15	AS-Big Dome PushButton-Clear LED Model 401-SINGLE P	HP-AS-107-R0	1
16	AS-Big Dome PushButton-Clear LED Model 401- DOUBLE P	HP-AS-108-R0	1
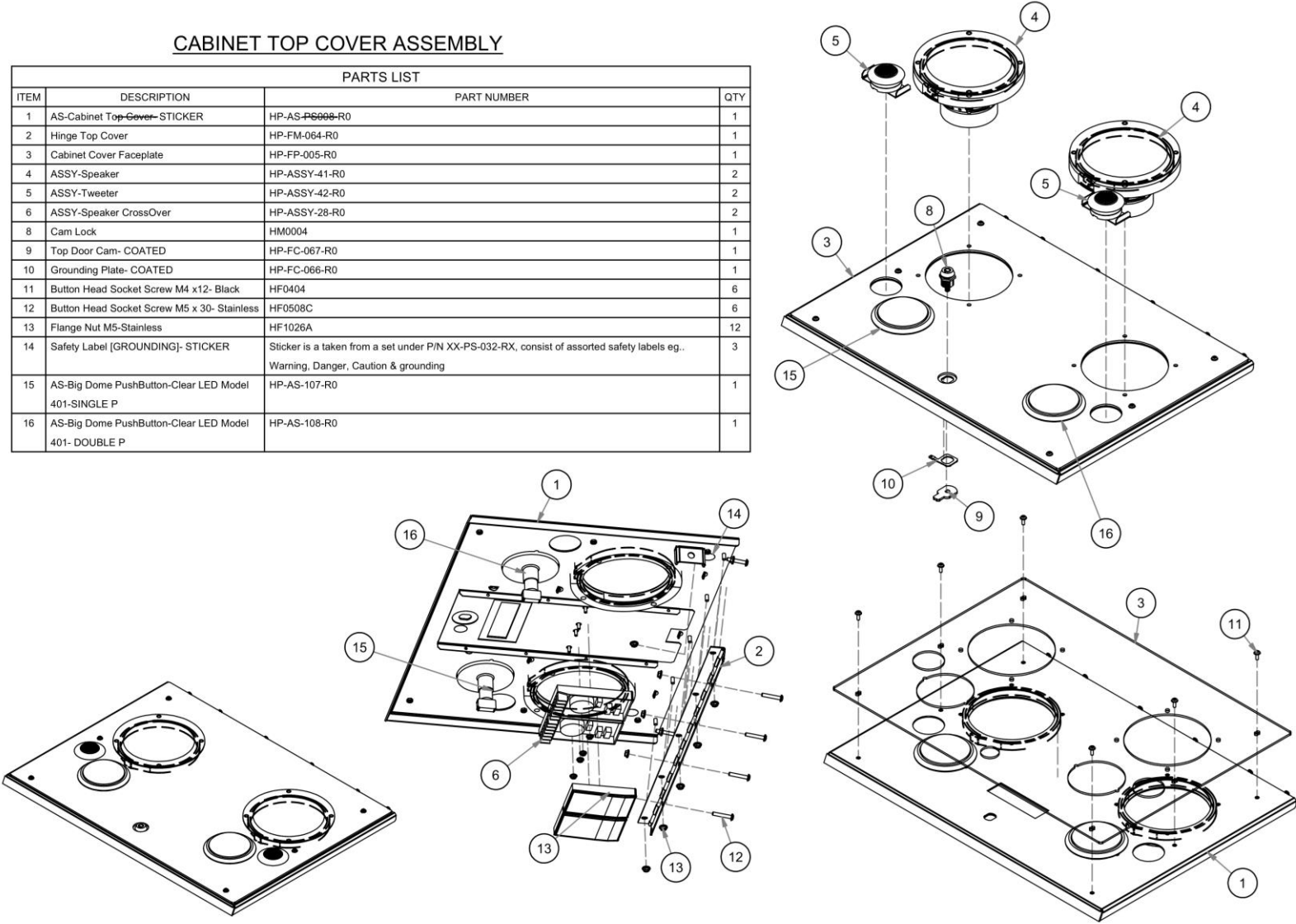
NOISE FILTER, SPEAKER, SPEAKER CROSSOVER AND TWEETER ASSEMBLIES

NOISE FILTER ASSEMBLY

PARTS LIST

ITEM	DESCRIPTION	PART NUMBER	QTY
1	AS-Noise Filter Bracket- COATED	HP-FC-071-R0	1
2	Audio isolation transformer	EA0839	1
3	Flange Nut M4- Stainless	HF1025A	2
4	Tessa Tape 749 - Noise Filter (.040 Meters)	HM2210A	1
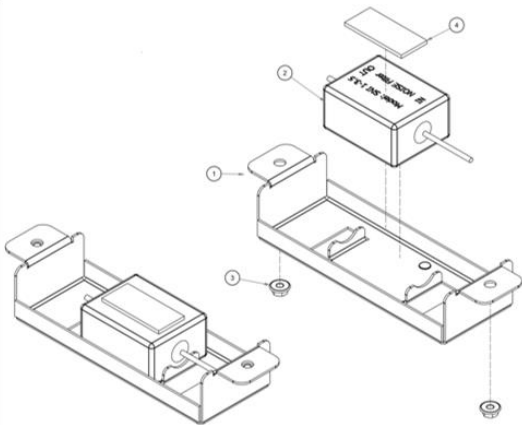
SPEAKER ASSEMBLY

PARTS LIST

ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASW-Speaker Cover- COATED	HP-FC-009-R0	1
2	Speaker KYue KY-661 6.5" 2-Way 4 Ohm120 Watt Black	Part is a taken from a set under manufacturer p/n KY661 , consist of SPEAKER (2 pc), Tweeter (2 pc) and Crossovers (2 pcs)	1
3	Speaker Spacer LH	HP-FW-070-LH-R0	1
4	Speaker Spacer RH	HP-FW-070-RH-R0	1
5	Speaker LED Cover	HP-FP-006-R0	1
6	Flange Nut M5-Stainless	HF1026A	4
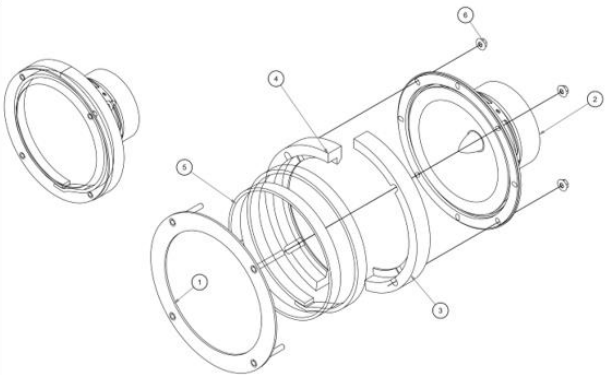
SPEAKER CROSSOVER ASSEMBLY

PARTS LIST

ITEM	DESCRIPTION	PART NUMBER	QTY
1	Speaker_CrossOver_KY-661	Part is a taken from a set under manufacturer p/n KY661 , consist of SPEAKER (2 pc), Tweeter (2 pc) and Crossovers (2 pcs)	1
2	Flange Nut M4- Stainless	HF1025A	2
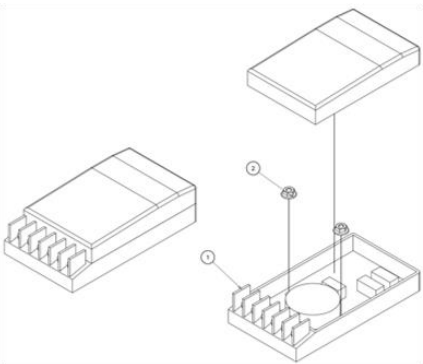
TWEETER ASSEMBLY

PARTS LIST

ITEM	DESCRIPTION	PART NUMBER	QTY
1	Tweeter bracket- COATED	HP-FC-068-R0	1
2	Tweeter_KY-661	Part is a taken from a set under manufacturer p/n KY661 , consist of SPEAKER (2 pc), Tweeter (2 pc) and Crossovers (2 pcs)	1
3	Button Head Socket Screw M4 x 10- Stainless	HF0403B	2
4	Spring Lock Washer M4- Stainless	HF1075A	2
5	Flat Washer M4- Stainless	HF1065B	2
6	Flange Nut M4- Stainless	HF1025A	2

117
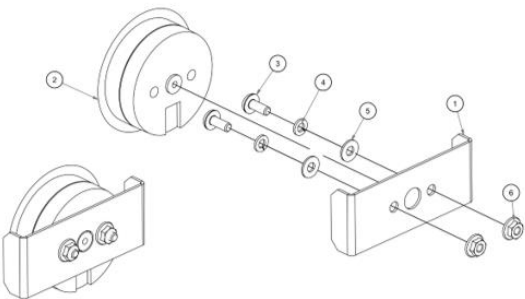
BALL HOOPER ASSEMBLY

PARTS LIST

ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASW-Ball Hopper- COATED	HP-FC-001-R2	1
2	Ball Chute LED Cover	HP-FP-001-R0	1
3	Rubber Edging-Ball hopper (0.366 Meters)	HM2996B	1
4	Flange Nut M4- Stainless	HF1025A	1
5	Screw, Thread Forming M3x8, Countersunk Head 3.08KRST30TC1D		11
6	Spring Lock Washer M5- Stainless	HF1076A	8
7	Flat Washer M5- Stainless	HF1066A	8
8	Button Head Socket Screw M5 x 25- Stainless	HF0507C	8

DB BOX ASSEMBLY

PARTS LIST

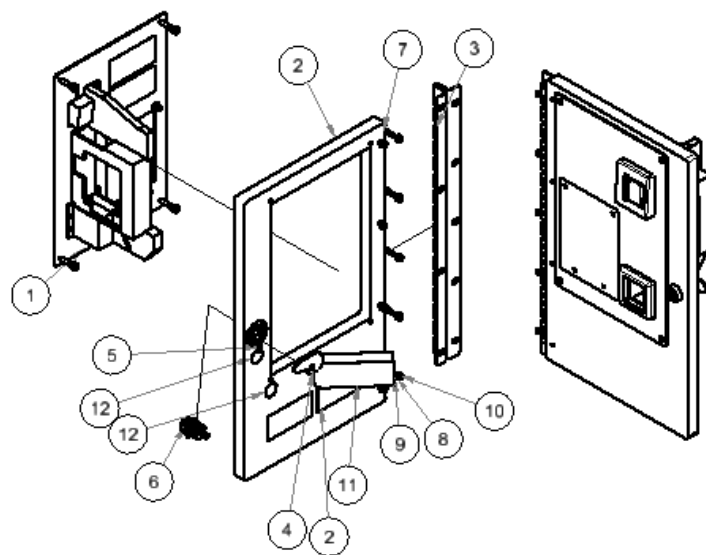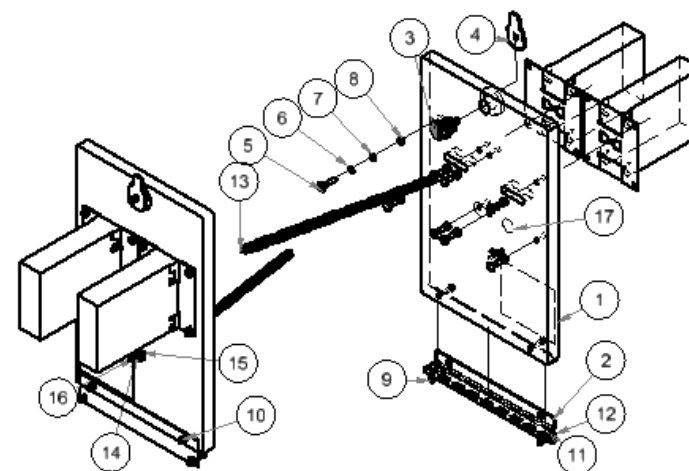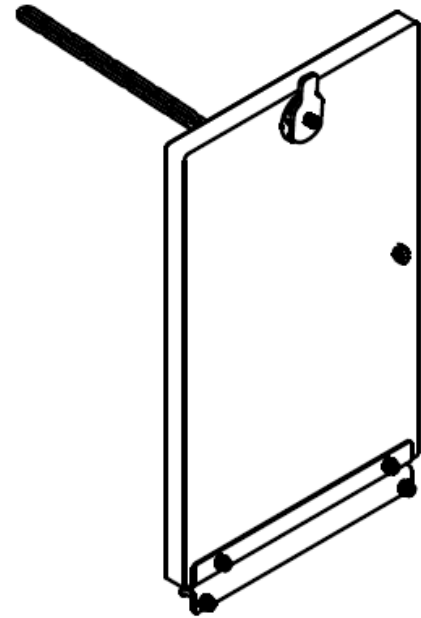| ITEM	DESCRIPTION	PART NUMBER	QTY
1	AS-DB Housing Box- COATED	HP-FC-038-R1	1
2	Passive Filter Of EMI Suppression High Low Corp Model : 06SS6-B2AS-QBB	EA0649A	1
3	Binding Post Tin Plated-Green 3760-5	EA1356	1
4	Flange Nut M3-Stainless	HF1024A	3
5	Flange Nut M5-Stainless	HF1026A	2
6	Spring Lock Washer M5- Stainless	HF1076A	2
7	Flat Washer M5- Stainless	HF1066A	2
8	Button Head Socket Screw M5 x 15- Stainless	HF0505B	2
9	Pan Head Phillip Screw M3 x 12- Stainless	HF0344A	2
10	AS-DB Box Holder- COATED	HP-FC-036-R0	1
11	Tessa Tape 749 - DB Box 1 (0.179 Meters)	HM2210A	2
12	Tessa Tape 749 - DB Box 2 (0.145 Meters)	HM2210A	1
13	Safety Label [GROUNDING]- STICKER	Sticker is a taken from a set under P/N HP-PS-032-RX, consist of assorted safety labels eg.. Warning, Danger, Caution & grounding	4
14	CHOOSE ONLY 1 TYPE-Main Fuses (Fuse 6A for 110-120VAC REGION)(Fuse 3A for 220-240VAC REGION)		1
15	Main Fuse Label- STICKER	Part is a taken from a set under P/N HP-PS-026-RX, consist of 2 types of Fuse label options	1
16	Safety Label [CAUTION]- STICKER	Sticker is a taken from a set under P/N HP-PS-032-RX, consist of assorted safety labels eg.. Warning, Danger, Caution & grounding	1
17	Rubber grommet Ø 22 mm	HM0234	1
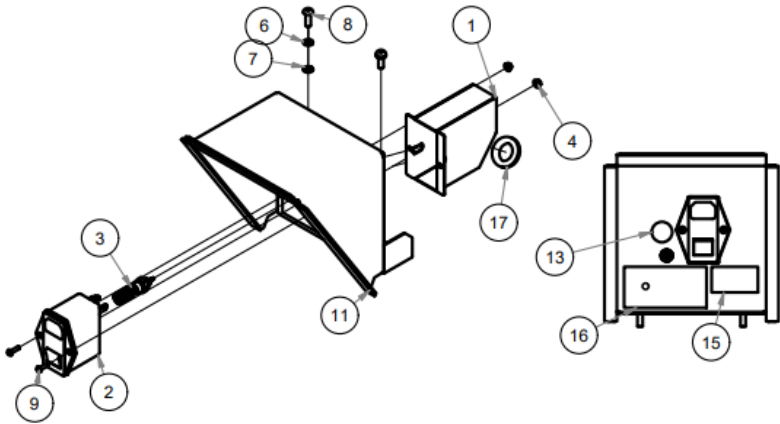
COIN DOOR AND TICKET DOOR ASSEMBLIES

COIN DOOR DOOR ASSEMBLY

ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASSY-HP Coin_DBA Panel	HP-ASSY-15-R1	1
2	AS-HP Coin Door- STICKER	HP-AS-FW002-R3	1
3	Hinge Coin Door	HP-FM-103-R0	1
4	Coin Door Cam- COATED	HP-FC-104-R0	1
5	Grounding Plate- COATED	HP-FC-066-R0	1
6	Camlock TC802-M	HM0004 (TC802-M)	1
7	Button Head Socket Screw M4 x 25- Stainless	HF0407C	9
8	Spring Lock Washer M4- Stainless	HF1075A	9
9	Flat Washer M4- Stainless	HF1065B	9
10	HEX Nut M4- Stainless	HF1005A	9
11	Safety Label [DBA 2]- STICKER	Sticker is a taken from a set under P/N HP-PS-032-RX, consist of assorted safety labels eg.. Warning, Danger, Caution & groundi	1
12	Safety Label [GROUNDING]- STICKER	Sticker is a taken from a set under P/N HP-PS-032-RX, consist of assorted safety labels eg.. Warning, Danger, Caution & grounding	2

TICKET DOOR ASSEMBLY

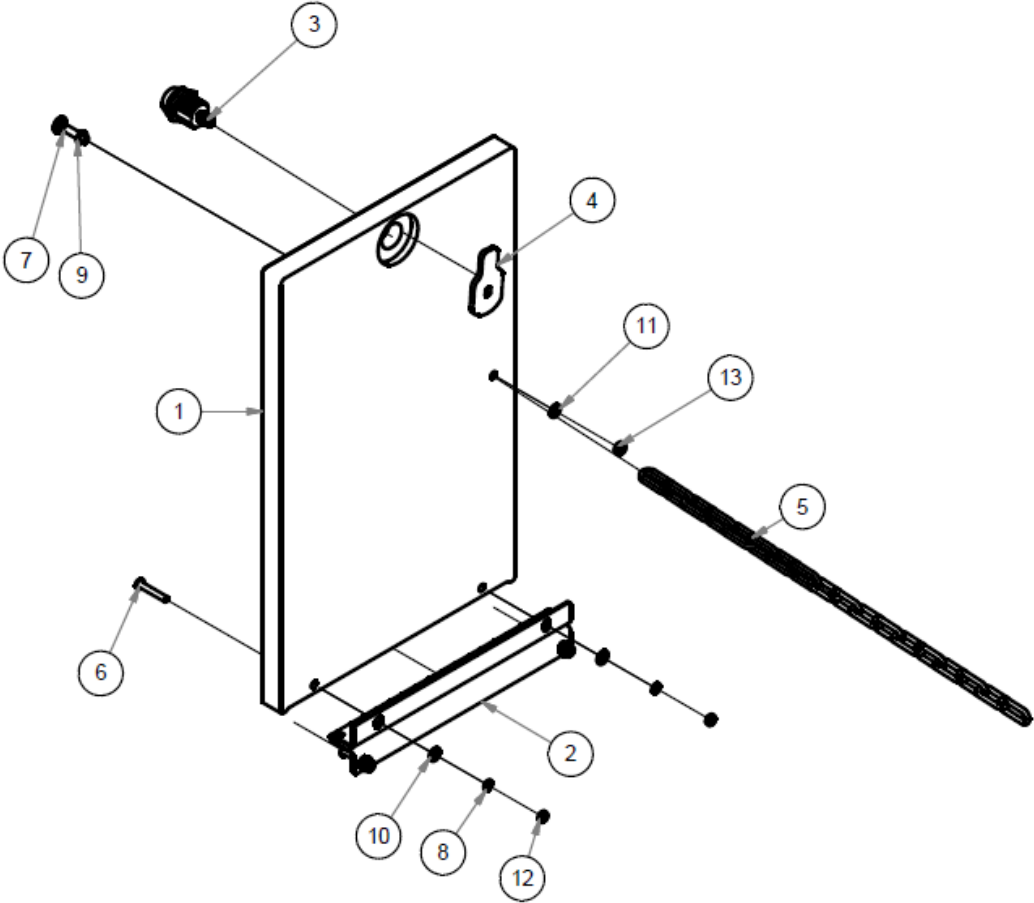| ITEM	DESCRIPTION	PART NUMBER	QTY
1	AS-HP Ticket Door Wood- STICKER	HP-AS-PS001-R2	1
2	Hinge Ticket Door	HP-FM-113-R0	1
3	Camlock TC802-M	HM0004 (TC802-M)	1
4	Ticket Door Cam- COATED	HP-FC-101-R0	1
5	Carriage Bolt M5 x 25- Stainless	HF6030A	8
6	Spring Lock Washer M5- Stainless	HF1076A	8
7	Flat Washer M5- Stainless	HF1086A	8
8	HEX Nut M5- Stainless	HF1006	8
9	Button Head Socket Screw M4 x 25- Stainless	HF0407C	4
10	Spring Lock Washer M4- Stainless	HF1075A	4
11	Flat Washer M4- Stainless	HF1065B	4
12	HEX Nut M4- Stainless	HF1005A	4
13	CHAIN (Diameter Wire 3.5 mm) 450 mm- Steel, Galvanize	HM1412	1
14	Flat Head Phillips Screw #6 x 1/2"- Stainless	HF4602A	1
15	Cable Tie Mount Screw Saddle HC-1	EP0012	1
16	Cable Tie_10cm	EP0001	1
17	Safety Label [GROUNDING]- STICKER	Sticker is a taken from a set under P/N HP-PS-032-RX, consist of assorted safety labels eg.. Warning, Danger, Caution & grounding	2
18	Ticket Dispenser (Optional)	EA 1103	2

119

BLANK TICKET DOOR ASSEMBLY

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	AS-HP BlankTicket Door - STICKER	HP-AS-PS046-R0	1
2	Hinge Ticket Door	HP-FM-113-R0	1
3	Camlock TC802-M	HM0004 (TC802-M)	1
4	Ticket Door Cam- COATED	HP-FC-101-R0	1
5	CHAIN (Diameter Wire 3.5 mm) 450 mm- Steel, Galvanize	HM1412	1
6	Button Head Socket Screw M4 x 25- Stainless	HF0407C	4
7	Carriage Bolt M5 x 25- Stainless	HF6030A	1
8	Spring Lock Washer M4- Stainless	HF1075A	4
9	Spring Lock Washer M5- Stainless	HF1076A	1
10	Flat Washer M4- Stainless	HF1065B	4
11	Flat Washer M5- Stainless	HF1066A	1
12	HEX Nut M4- Stainless	HF1005A	4
13	HEX Nut M5- Stainless	HF1006	1

BLANK TICKET DOOR ASSEMBLY

POWER SUPPLY AND REAR CABINET BASE ASSEMBLIES

POWER SUPPLY ASSEMBLY

PARTS LIST

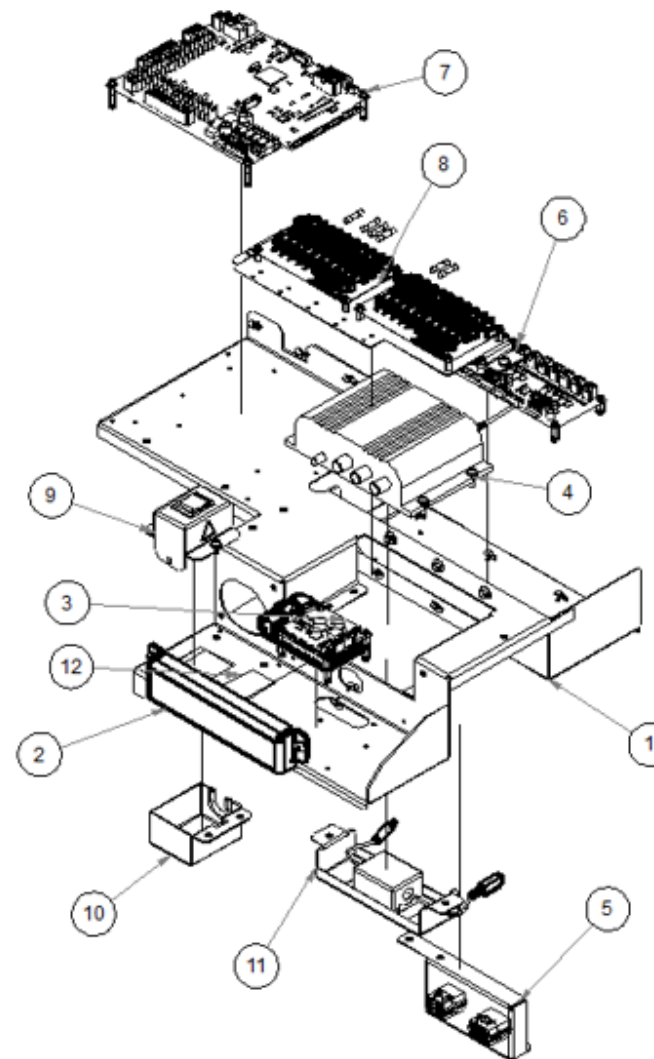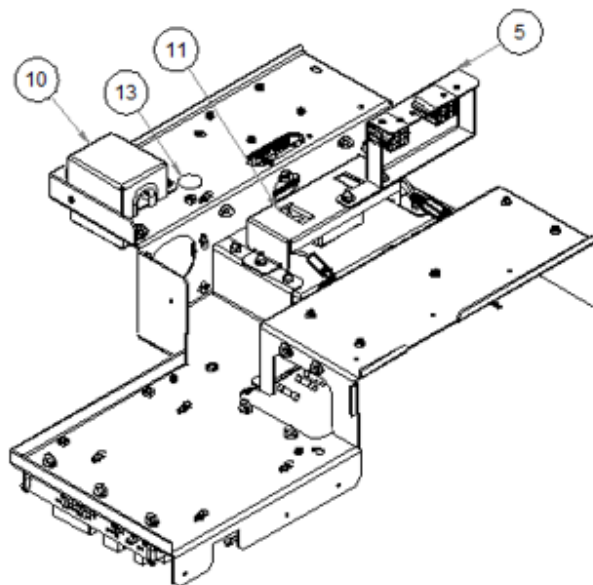| ITEM	DESCRIPTION	PART NUMBER	QTY
1	Power Supply Bracket	HP-FW-022-R2	1
2	CHOOSE ONLY 1 ALTERNATE SUPPLIER-Power Supply		1
2.1	ASSY-TDK-Lamda RWS600B-12 12V-50A	HP-ASSY-196-R0	1
2.2	ASSY-Mean well SE-600-12V, 50A	HP-ASSY-197-R0	1
3	HP Power Supply Cover	HP-FP-034-R1	1
4	Pan Head Phillips Screw #8x1/2" - Stainless	HF4902B	2
5	Safety Label [WARNING]- STICKER	Sticker is a taken from a set under P/N HP-PS-032-RX, consist of assorted safety labels eg., Warning, Danger, Caution & grounding	1
6	Safety Label [WARNING 2]- STICKER	Sticker is a taken from a set under P/N HP-PS-032-RX, consist of assorted safety labels eg., Warning, Danger, Caution & groundi	1
7	Spring Lock Washer M5- Stainless	HF1076A	4
8	Flat Washer M5- Stainless	HF1066A	4
9	Button Head Socket Screw M5 x 25- Stainless	HF0507C	4
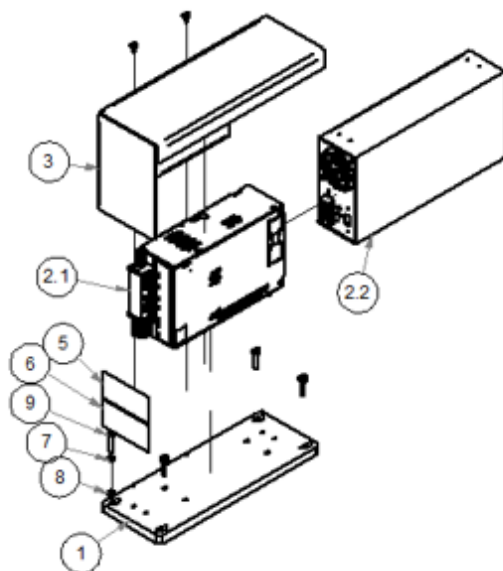
REAR CABINET BASE ASSEMBLY

PARTS LIST

ITEM	DESCRIPTION	PART NUMBER	QTY
1	AS-Rear Cabinet PCB Base	HP-AS-FW019-R1	1
2	ASSY-Connector bracket 3	HP-ASSY-129-R0	1
3	ASSY-PCB FB226 Target Controller	HP-ASSY-130-R1	1
4	Cable Tie Mount Screw Saddle HC-1	EP0012	5
5	Cable Tie_10cm	EP0001	5
6	Button Head Socket Screw M4 x 20- Stainless	HF0406B	4
7	Flat Head Phillips Screw #6 x 1/2"- Stainless	HF4602A	5
8	Spring Lock Washer M4- Stainless	HF1075A	4
9	Flat Washer M4- Stainless	HF1065B	4
10	PCB FB226 Label- STICKER	HP-PS-027-RX	1

REFERENCE ONLY
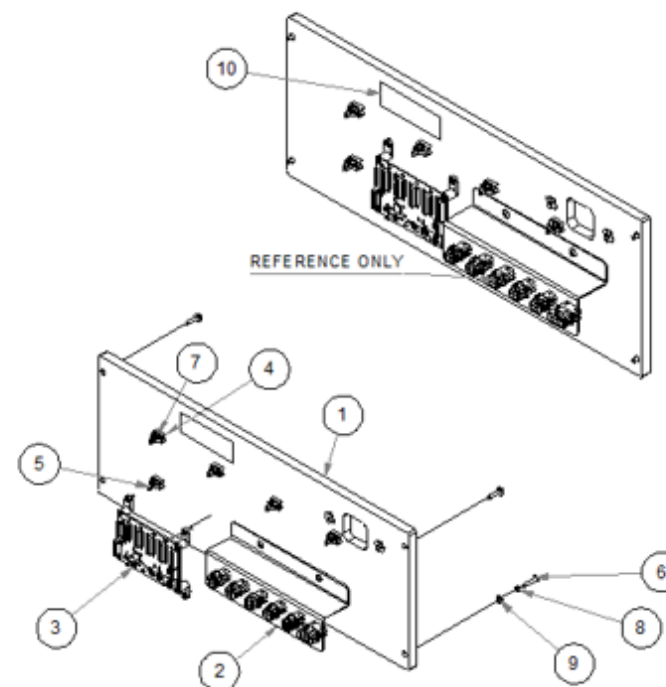
PCB BASE ASSEMBLY

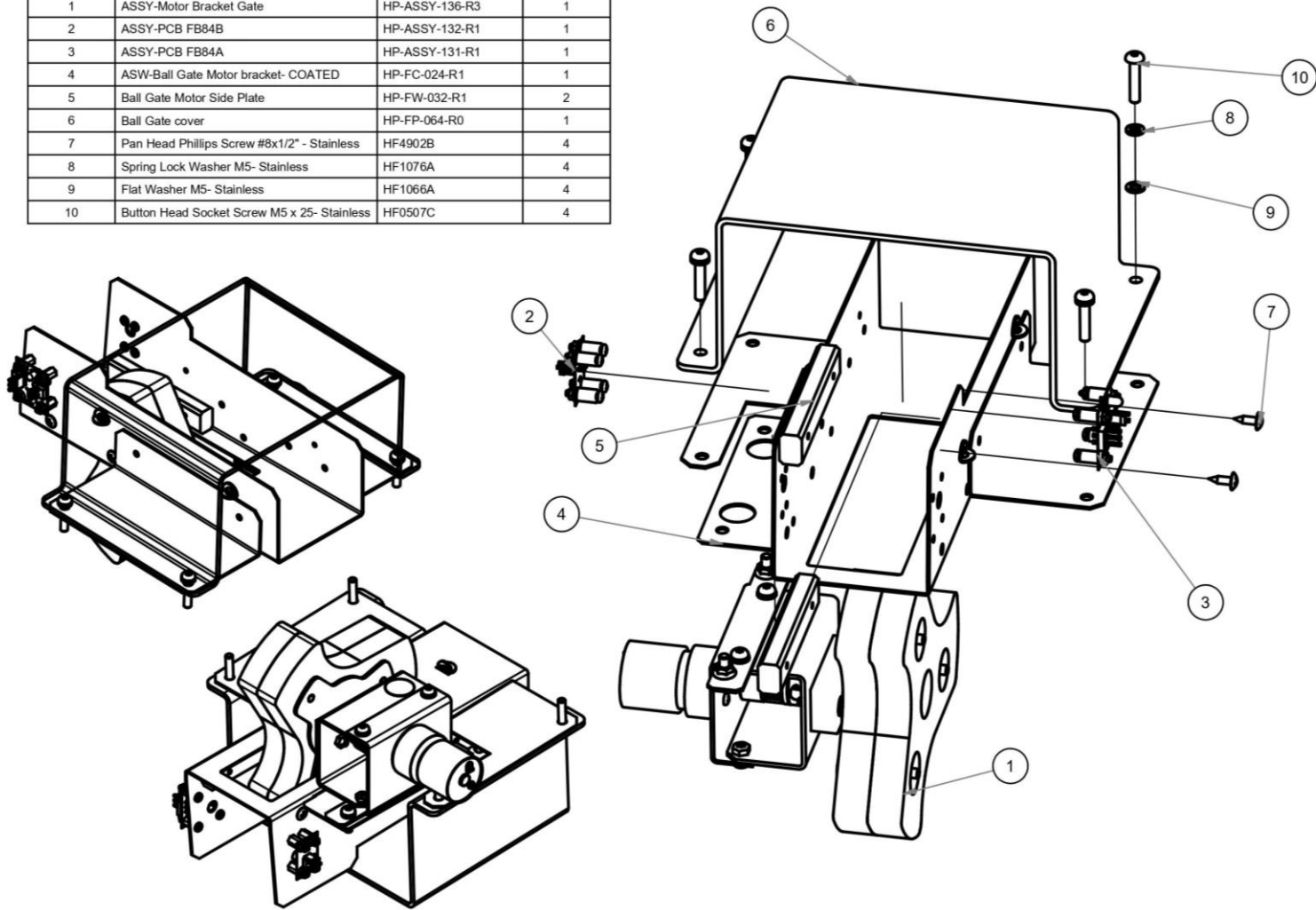| PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASW-PCB Base1 - PCB Base2 - COATED	HP-FC-005-R0	1
2	ASSY-Amplifier Stopper Bracket	HP-ASSY-21-R1	1
3	Assy-Mini Single Board Computer	HP-ASSY-29-R2	1
4	ASSY-Amplifier	HP-ASSY-30-R1	1
5	ASSY-Connector Panel-Rigid	HP-ASSY-31-R0	1
6	Assy-PCB FB 215 PWM RGB Board	HP-ASSY-32-R1	1
7	Assy-PCB FB 216 CPU I.O. Board	HP-ASSY-33-R1	1
8	Assy-PCB FB214 Fuse PCB	HP-ASSY-34-R1	1
9	ASSY-AC Switch	HP-ASSY-35-R1	1
10	ASSY-Switch Bracket Cover	HP-ASSY-36-R0	1
11	ASSY-Noise Filter	HP-ASSY-45-R0	1
12	Power Switch - STICKER	HP-PS-019-RX	1
13	Safety Label [GROUNDING] - STICKER	Sticker is a taken from a set under P/N HP-PS-032-RX, consist of assorted safety labels eg., Warning, Danger, Caution & grounding	1

BALLGATE MOTOR BRACKET ASSEMBLY

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASSY-Motor Bracket Gate	HP-ASSY-136-R3	1
2	ASSY-PCB FB84B	HP-ASSY-132-R1	1
3	ASSY-PCB FB84A	HP-ASSY-131-R1	1
4	ASW-Ball Gate Motor bracket- COATED	HP-FC-024-R1	1
5	Ball Gate Motor Side Plate	HP-FW-032-R1	2
6	Ball Gate cover	HP-FP-064-R0	1
7	Pan Head Phillips Screw #8x1/2" - Stainless	HF4902B	4
8	Spring Lock Washer M5- Stainless	HF1076A	4
9	Flat Washer M5- Stainless	HF1066A	4
10	Button Head Socket Screw M5 x 25- Stainless	HF0507C	4

MOTOR BRACKET BALLGATE ASSEMBLY

MOTOR BRACKET GATE ASSEMBLY

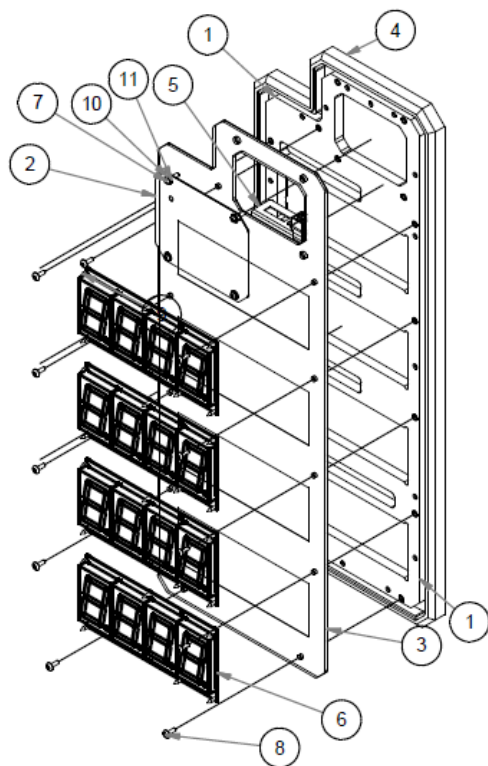| PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	Motor Bracket Gate 1- COATED	HP-FC-095-R0	1
2	AS-Motor Bracket Gate 2- COATED	HP-FC-096-R0	1
3	ASW-Wheel Bracket- COATED	HP-FC-097-R0	1
4	Wheel 1	HP-FW-030-R1	1
5	Wheel 2	HP-FW-031-R1	1
6	LB Shaft Bushing_T1	HP-FP-037-R0	1
7	Shaft Ball Gate 1	HP-FM-098-R0	1
8	Motor MS37C300-300 12VDC 10RPM(STEEL GEARS)	EA1747	1
9	Sleeve Bearing J4FM-1416-17	HM3348A	1
10	Button Head Socket Screw M4 x 20- Stainless	HF0406B	2
11	Button Head Socket Screw M4 x 10- Stainless	HF0403B	4
12	Spring Lock Washer M4- Stainless	HF1075A	6
13	Flat Washer M4- Stainless	HF1065B	6
14	Spring Lock Washer M5- Stainless	HF1076A	2
15	Flat Washer M5- Stainless	HF1066A	5
16	Flat Washer M6- Stainless	HF1067D	1
17	Lock Nut M6- Stainless	HF1017A	1
18	Lock Nut M5- Stainless	HF1016A	3
19	Flange Nut M5-Stainless	HF1026A	2
20	Button Head Socket Screw M5 x 15- Stainless	HF0505B	2
21	Pan Head Phillip Screw M3 x 6- Stainless	HF0361B	2
22	Safety Label [GROUNDING]- STICKER	Sticker is a taken from a set under P/N HP-PS-032-RX, consist of assorted safety labels eg.. Warning, Danger, Caution & grounding	1
23	JAW Coupling JM25CYL 6.2-6.2	HM3349	1

MOTOR BRACKET GATE ASSEMBLY
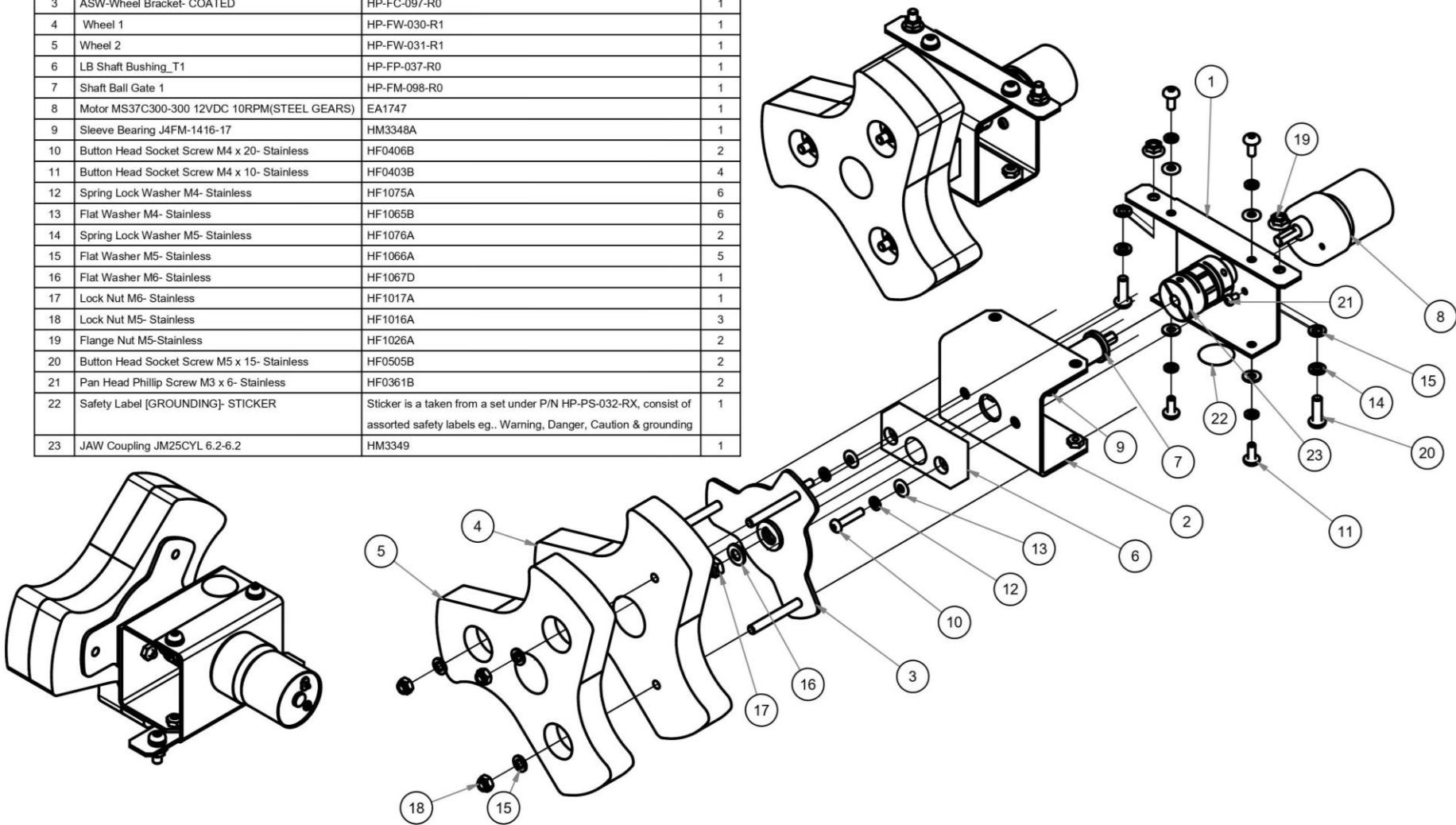
# RIGHT-HAND AND LEFT-HAND SCORE DISPLAY FRAME ASSEMBLIES

SCORE DISPLAY FRAME-LH ASSEMBLY

PARTS LIST

ITEM	DESCRIPTION	PART NUMBER	QTY
1	AS-SideDisplay Board LH	HP-AS-FW018-LH-R2	1
2	AS-Player 2- STICKER	HP-AS-PS045-R0	1
3	AS-Side Score Display Faceplate LH- SILKSCREEN	HP-SS-007-L-R0	1
4	Side Score BackPlate LH	HP-FP-008-LH-R0	1
5	ASSY-Side Display UCL	HP-ASSY-63-R0	1
6	PCBA, FB44 4-Digit 7 Segment 2.3in BLUE Display	FB44	4
7	Button Head Socket Screw M4 x15- Stainless	HF0405B	15
8	Button Head Socket Screw M4 x12- Black	HF0404	11
9	Pan Head Phillips Screw #8x1/2" - Stainless	HF4902B	24
10	Spring Lock Washer M4- Stainless	HF1075A	15
11	Flat Washer M4- Stainless	HF1065B	15

SCORE DISPLAY FRAME-RH ASSEMBLY

PARTS LIST

ITEM	DESCRIPTION	PART NUMBER	QTY
1	AS-SideDisplay Board RH	HP-AS-FW018-RH-R2	1
2	AS-Side Score Display Faceplate RH- SILKSCREEN	HP-SS-007-R-R0	1
3	AS-Player 1- STICKER	HP-AS-PS044-R0	1
4	ASSY-Side Display UCL	HP-ASSY-63-R0	1
5	Side Score BackPlate RH	HP-FP-008-RH-R0	1
6	Button Head Socket Screw M4 x12- Black	HF0404	11
7	Spring Lock Washer M4- Stainless	HF1075A	15
8	Flat Washer M4- Stainless	HF1065B	15
9	Button Head Socket Screw M4 x15- Stainless	HF0405B	15
10	PCBA, FB44R 4-Digit 7 Segment 2.3in RED Display	FB44R	4
11	Pan Head Phillips Screw #8x1/2" - Stainless	HF4902B	24

125
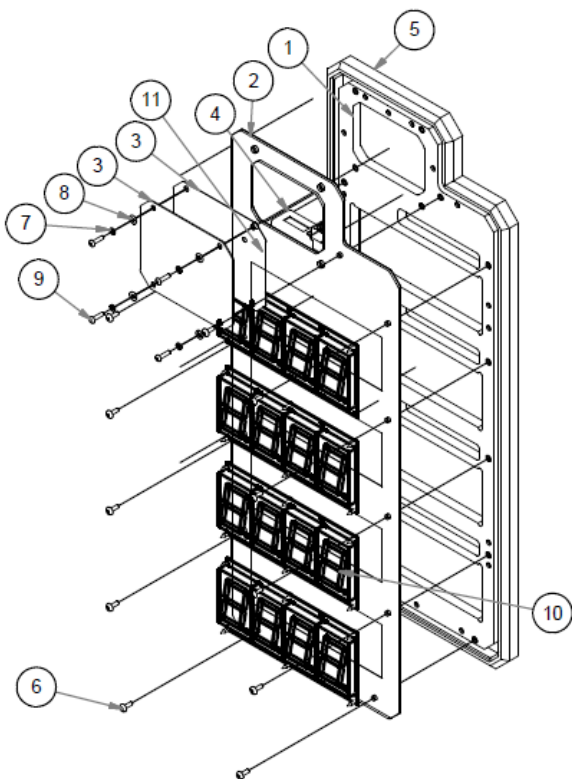
VIBRATION MOTOR ASSEMBLY

ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASW-Vibration Motor Bracket 1A - COATED	HP-FC-025-R0	1
2	RF-545 Double Head Vibrating Motor DC 12V 1800-2000RPM	EA1791	1
3	Rubber Pad (For Vibration Motor)(Size: 119 x 50 x 3mm)	HM3370A	1
4	Anti Vibration Mount Bobbin (Male-Female)(10x8mm body)(M4x10 Male & Female)	HM3134	4
5	1 3/4" Pipe Clip- Steel, Galvanized	HM2589	2
6	Flat Washer M5- Stainless	HF1066A	4
7	Lock Nut M5- Stainless	HF1016A	4
8	Flange Nut M4- Stainless	HF1025A	4
9	ASSY-Vibration Motor Bracket	HP-ASSY-68-R0	1

VIBRATION MOTOR ASSEMBLY

126

HEADER DISPLAY ASSEMBLY

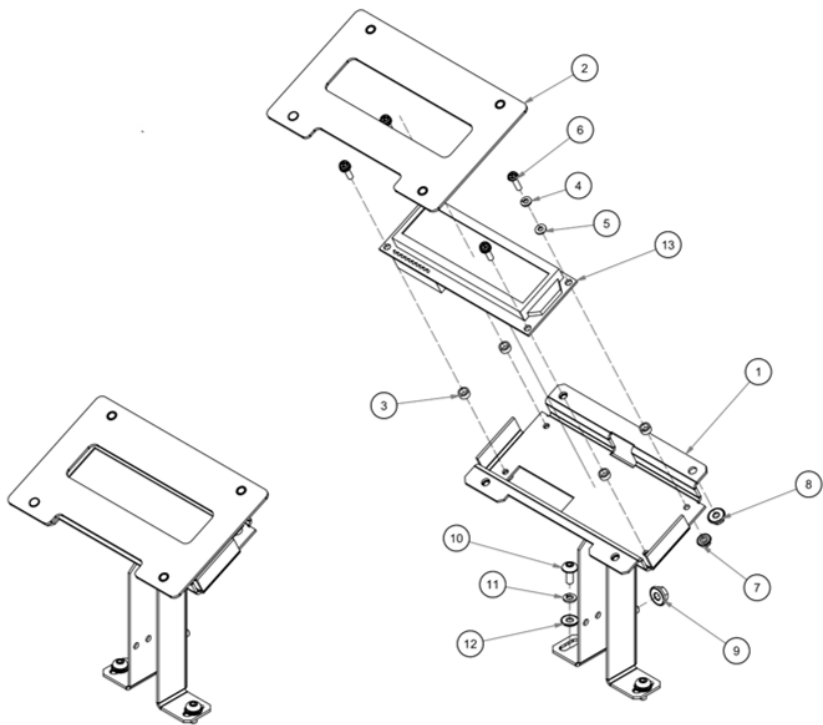| ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASW-Bracket Join Display- COATED	HP-FC-026-R0	1
2	ASSY-Display Panel Hi Score or Beat	HP-ASSY-73-R3	1
3	ASSY-Display Panel WinTicket	HP-ASSY-74-R2	1
4	ASSY-Display Panel Score	HP-ASSY-75-R2	1
5	ASSY-Display Panel Accuracy	HP-ASSY-76-R1	1
6	ASSY-X Panel	HP-ASSY-81-R1	1
7	ASSY-Display Panel Speed	HP-ASSY-77-R2	1
8	Hex Bolt M10 x 20- Stainless	HF0846A	4
9	Spring Lock Washer M10- Stainless	HF1079A	4
10	Flat Washer M10- Stainless	HF1069A	4
11	Safety Label [GROUNDING]- STICKER	Sticker is a taken from a set under P/N HP-PS-032-RX, consist of assorted safety labels eg.. Warning, Danger, Caution & grounding	1
12	Flange Nut M5-Stainless	HF1026A	1

## HEADER DISPLAY ASSEMBLY
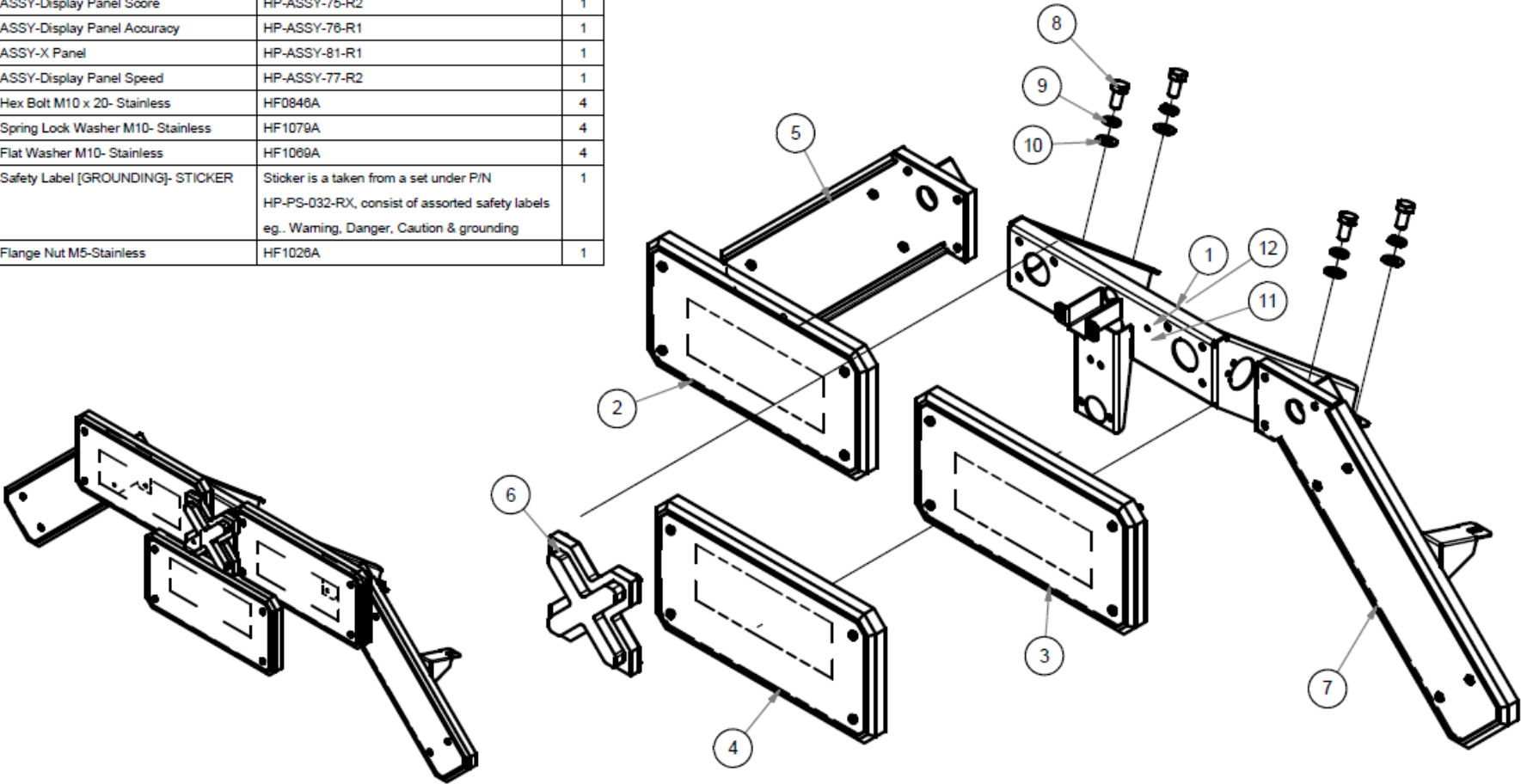
CREDIT AND SCORE DISPLAY ASSEMBLIES

CREDIT DISPLAY ASSEMBLY

PARTS LIST

ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASW-CreditDisplay Bracket- COATED	HP-FC-006-R0	1
2	AS-CreditDisplay Faceplate- COATED	HP-FC-075-R0	1
3	Round Spacer M4 x 3mm	EP0659	4
4	Spring Lock Washer M3- Stainless	HF1074A	4
5	Flat Washer M3- Stainless	HF1064B	4
6	Pan Head Phillip Screw M3 x 12- Stainless	HF0344A	4
7	Flange Nut M3-Stainless	HF1024A	4
8	Flange Nut M4- Stainless	HF1025A	4
9	Flange Nut M5-Stainless	HF1026A	1
10	Button Head Socket Screw M4 x 10- Stainless	HF0403B	2
11	Spring Lock Washer M4- Stainless	HF1075A	2
12	Flat Washer M4- Stainless	HF1065B	2
13	LCD Vitek VC1625-KBW-JC		1

DISPLAY PANEL-SCORE ASSEMBLY

PARTS LIST

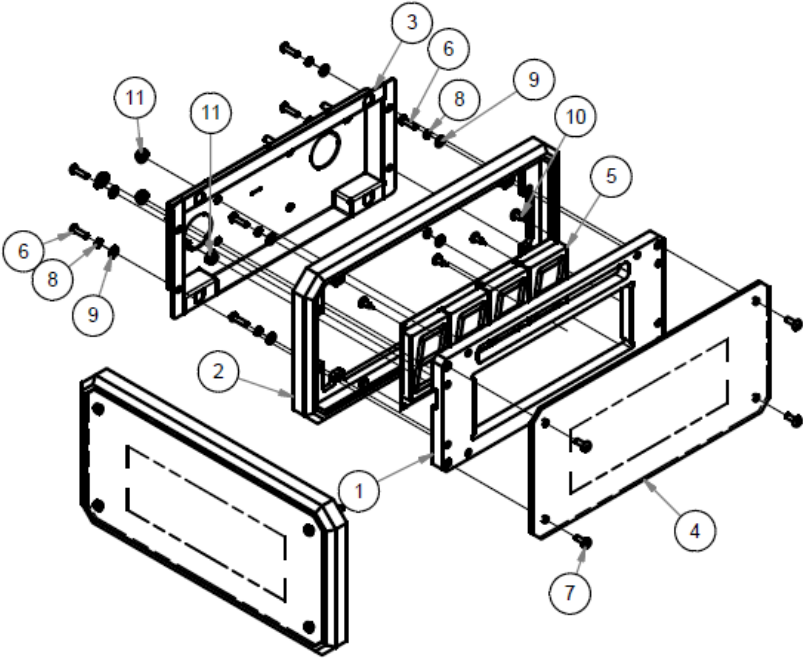| ITEM	DESCRIPTION	PART NUMBER	QTY
1	AS-Display Panel Board	HP-AS-039-R0	1
2	Display Back Panel	HP-FP-042-R0	1
3	ASW-Back Cover Win Ticket- COATED	HP-FC-089-R0	1
4	AS-Display Win Tickets- SILKSCREEN	HP-SS-FP044-R0	1
5	PCB FB44W 4 Digit 7 Segment 2.3in Disp-WHITE	FB44W	1
6	Button Head Socket Screw M4 x15- Stainless	HF0405B	8
7	Button Head Socket Screw M4 x12- Black	HF0404	4
8	Spring Lock Washer M4- Stainless	HF1075A	8
9	Flat Washer M4- Stainless	HF1065B	8
10	Pan Head Phillips Screw #8x1/2" - Stainless	HF4902B	8
11	Flange Nut M5-Stainless	HF1026A	4
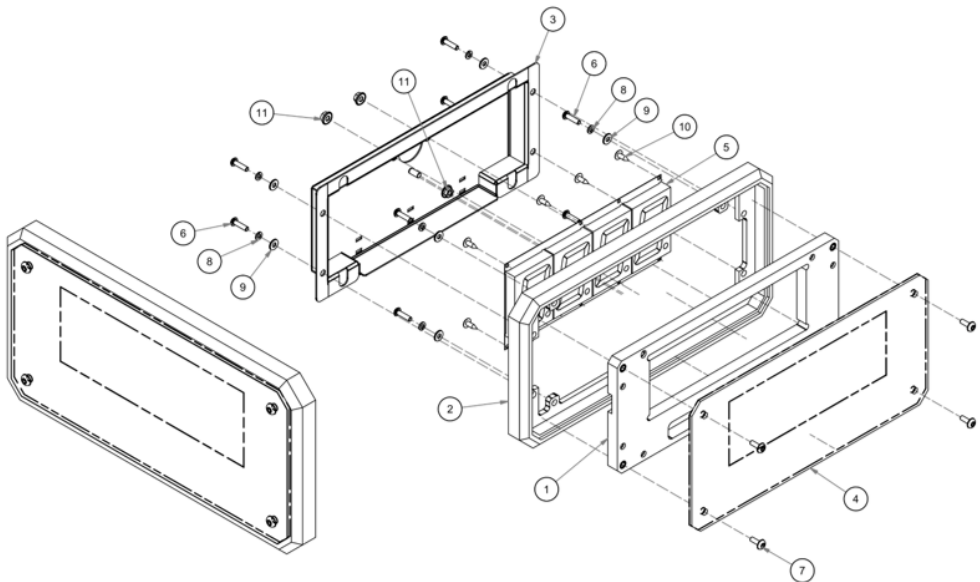
HIGH SCORE / BEAT AND WIN TICKET ASSEMBLIES

DISPLAY PANEL HI -SCORE OR BEAT ASSEMBLY

PARTS LIST

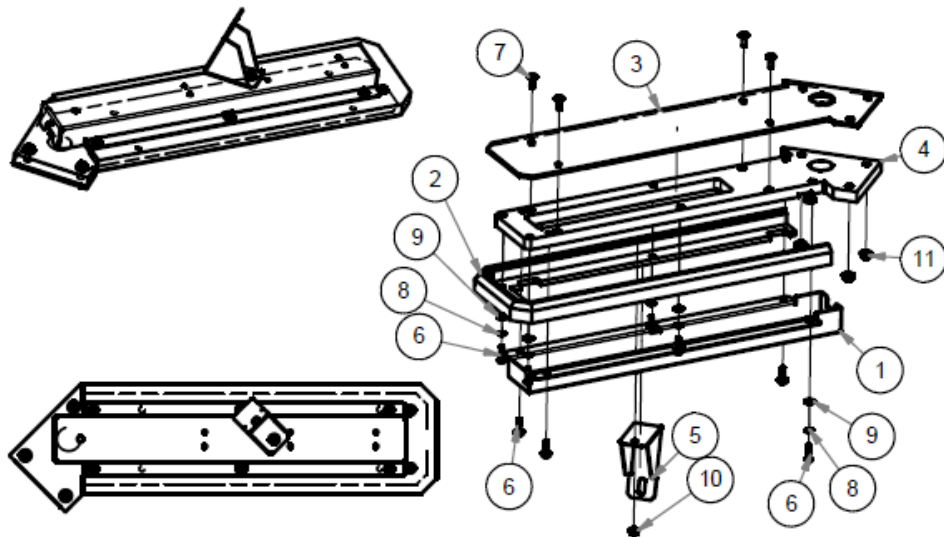| ITEM	DESCRIPTION	PART NUMBER	QTY	REMARKS
1	ASW-Back Cover Beat- COATED	HP-FC-088-R0	1	
2	AS-Display Panel Board	HP-AS-039-R1	1	
3	AS-Display Beat Header- SILKSCREEN	HP-SS-FP045-R0	1	Refer to order requirement
4	Display Back Panel	HP-FP-042-R0	1	
5	Flange Nut M5-Stainless	HF1026A	4	
6	Spring Lock Washer M4- Stainless	HF1075A	8	
7	Flat Washer M4- Stainless	HF1065B	8	
8	Button Head Socket Screw M4 x15- Stainless	HF0405B	8	
9	PCBA, FB44W 4-Digit 7 Segment 2.3in WHITE Display	FB44W	1	
10	Button Head Socket Screw M4 x12- Black	HF0404	4	
11	Pan Head Phillips Screw #8x1/2" - Stainless	HF4902B	8	
12	AS-High Score Header- SILKSCREEN	HP-SS-FP113-R0	1	Refer to order requirement
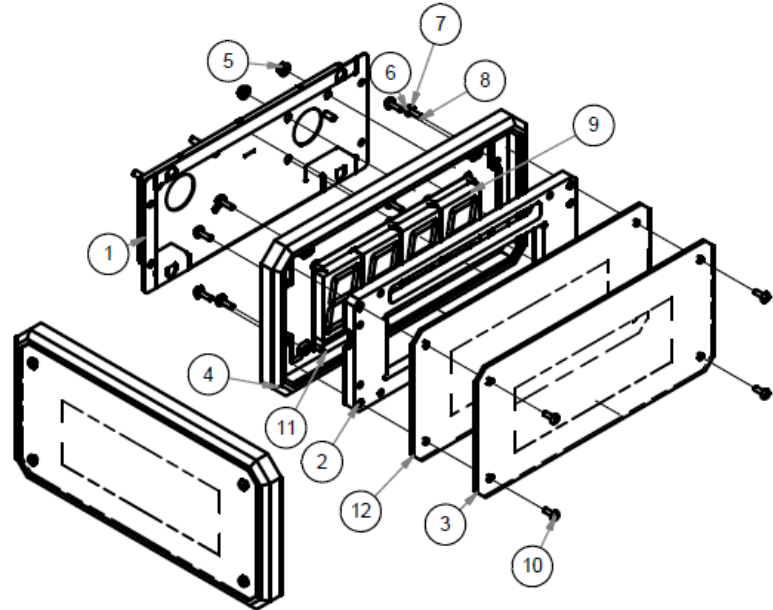
DISPLAY PANEL-WIN TICKET ASSEMBLY

PARTS LIST

ITEM	DESCRIPTION	PART NUMBER	QTY
1	AS-Display Panel Board	HP-AS-039-R1	1
2	Display Back Panel	HP-FP-042-R0	1
3	ASW-Back Cover Win Ticket- COATED	HP-FC-089-R0	1
4	AS-Display Win Tickets- SILKSCREEN	HP-SS-FP044-R0	1
5	PCBA, FB44W 4-Digit 7 Segment 2.3in WHITE Display	FB44W	1
6	Button Head Socket Screw M4 x15- Stainless	HF0405B	8
7	Button Head Socket Screw M4 x12- Black	HF0404	4
8	Spring Lock Washer M4- Stainless	HF1075A	8
9	Flat Washer M4- Stainless	HF1065B	8
10	Pan Head Phillips Screw #8x1/2" - Stainless	HF4902B	8
11	Flange Nut M5-Stainless	HF1026A	4

# ACCURACY AND SPEED DISPLAY PANEL ASSEMBLIES

DISPLAY PANEL ACCURACY ASSEMBLY

PARTS LIST

ITEM	DESCRIPTION	PART NUMBER	QTY
1	AS-Back Cover Side Display Header- COATED	HP-FCASW-090-R0	1
2	Side Display Back Panel	HP-FP-047-R0	1
3	AS-Display Accuracy- SILKSCREEN	HP-SS-FP050-R0	1
4	AS-Panel Side Display RH	HP-AS-FW041-RH-R1	1
5	Back Cover Side Display Bracket- COATED	HP-FC-117-R0	1
6	Button Head Socket Screw M4 x15- Stainless	HF0405B	8
7	Button Head Socket Screw M4 x12- Black	HF0404	4
8	Spring Lock Washer M4- Stainless	HF1075A	8
9	Flat Washer M4- Stainless	HF1065B	8
10	Flange Nut M4- Stainless	HF1025A	1
11	Flange Nut M5-Stainless	HF1026A	4

DISPLAY PANEL SPEED ASSEMBLY

PARTS LIST

| ITEM	DESCRIPTION	PART NUMBER	QTY	REMARKS
1	AS-Back Cover Side Display Header- COATED	HP-FCASW-090-R0	1	
2	Side Display Back Panel	HP-FP-047-R0	1	
3	AS-Display Speed_MPH- SILKSCREEN	HP-SS-FP049-R0	1	Refer to order requirement
4	AS-Panel Side Display LH	HP-AS-FW041-LH-R1	1	
5	Back Cover Side Display Bracket- COATED	HP-FC-117-R0	1	
6	Flange Nut M5-Stainless	HF1026A	4	
7	Spring Lock Washer M4- Stainless	HF1075A	8	
8	Flat Washer M4- Stainless	HF1065B	8	
9	Button Head Socket Screw M4 x15- Stainless	HF0405B	8	
10	Button Head Socket Screw M4 x12- Black	HF0404	4	
11	Flange Nut M4- Stainless	HF1025A	1	
12	AS-Display Speed_KMH- SILKSCREEN	HP-SS-FP111-R0	1	Refer to order requirement
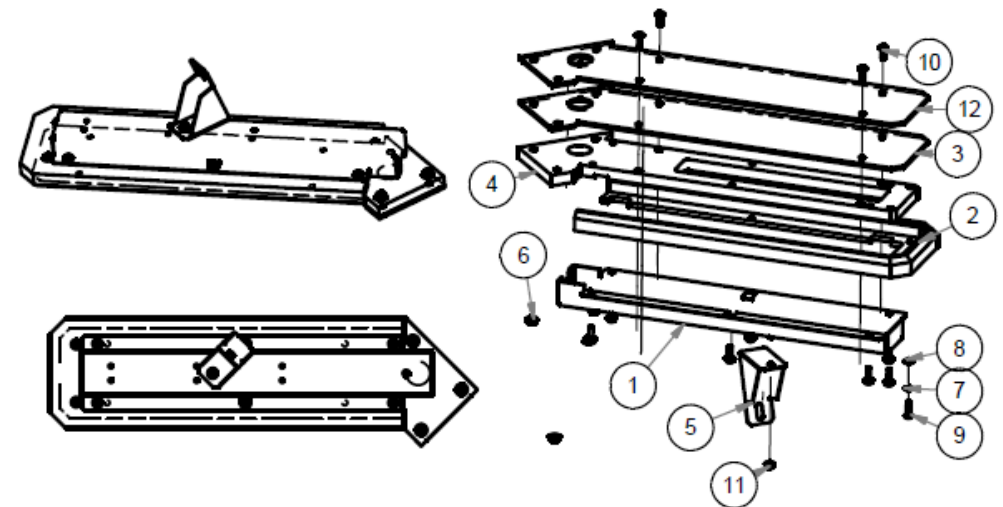
MARQUEE AND FRONT DISPLAY ASSEMBLIY

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASSY-Header Plastic MAIN	HP-ASSY-165-R0	1
2	ASSY-Acrylic Bracket Display	HP-ASSY-83-R1	1
3	Black Trim1	HP-FP-053-R0	1
4	Black Trim2	HP-FP-056-R0	2
5	Fastener Base	HP-FW-045-R1	1
6	Header Plastic Spacer 1	HP-FP-050-R0	5
7	Header Plastic Spacer 2	HP-FP-051-R0	2
8	Button Head Socket Screw M5 x 50- Black	HF0511A	5
9	Button Head Socket Screw M5 x 30- Stainless	HF0508C	2
13	Flange Nut M5-Stainless	HF1026A	7
14	Flange Nut M4- Stainless	HF1025A	10
15	Marquee Ball Perimeter Trim (Black Ø5mm X 709 mm)	HP-FP-061-R0	1
16	Button Head Socket Screw M4 x12- Black	HF0404	10
17	Spring Lock Washer M5- Stainless	HF1076A	2
18	Flat Washer M5- Stainless	HF1066A	2
19	Button Head Socket Screw M5 x 25- Stainless	HF0507C	2

HEADER/MARQUEE FRONT DISPLAY ASSEMBLY

131
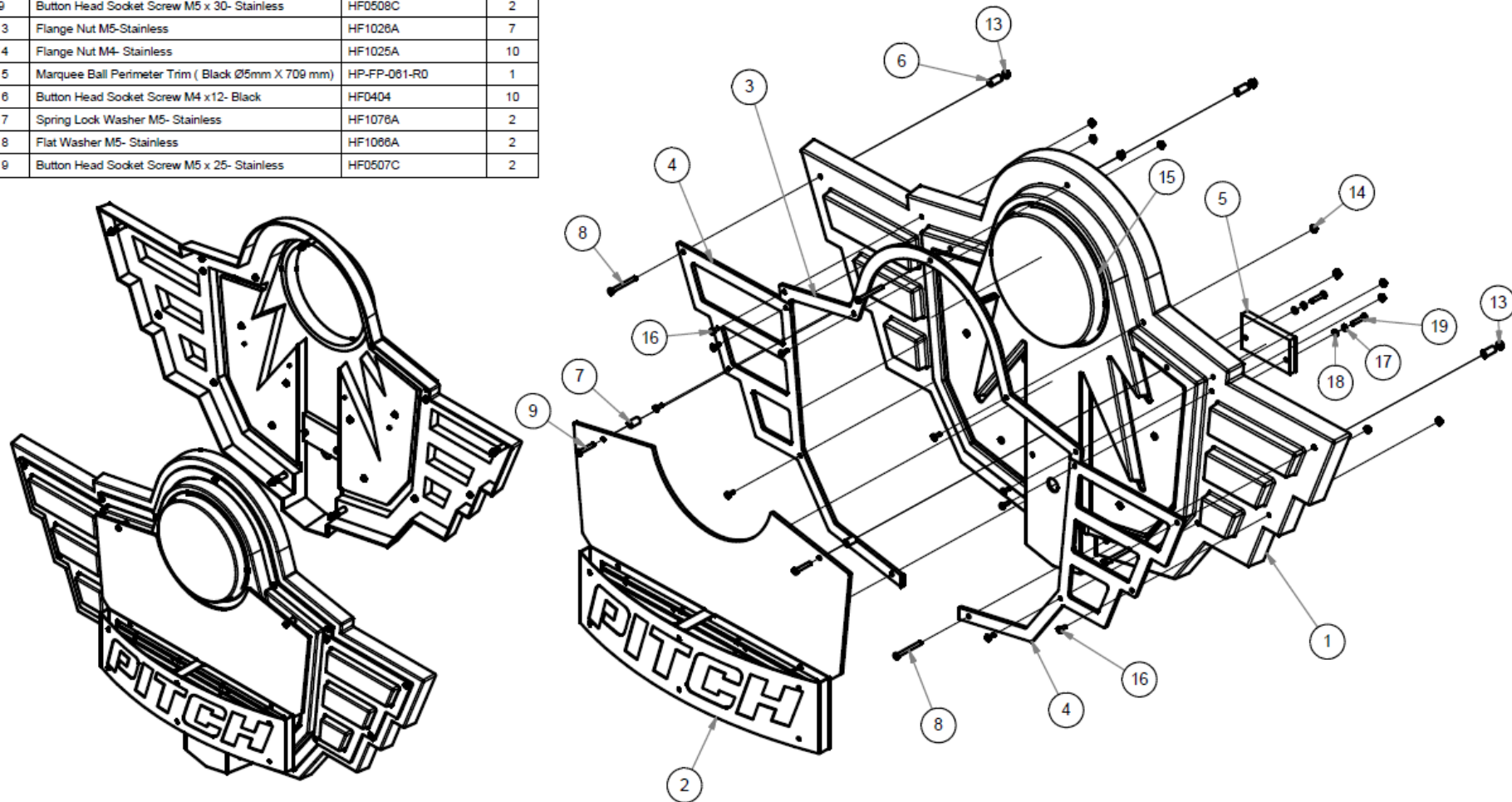
MARQUEE ASSEMBLY

HYPER PITCH HEADER ASSEMBLY (MARQUEE)

PARTS LIST			
ITEM	DESCRIPTION	PART NUMBER	QTY
1	ASSY-Header Front Display	HP-ASSY-82-R2	1
2	ASSY-Header Back Cover	HP-ASSY-84-R3	1
3	ASSY-Header Bracket	HP-ASSY-79-R1	1
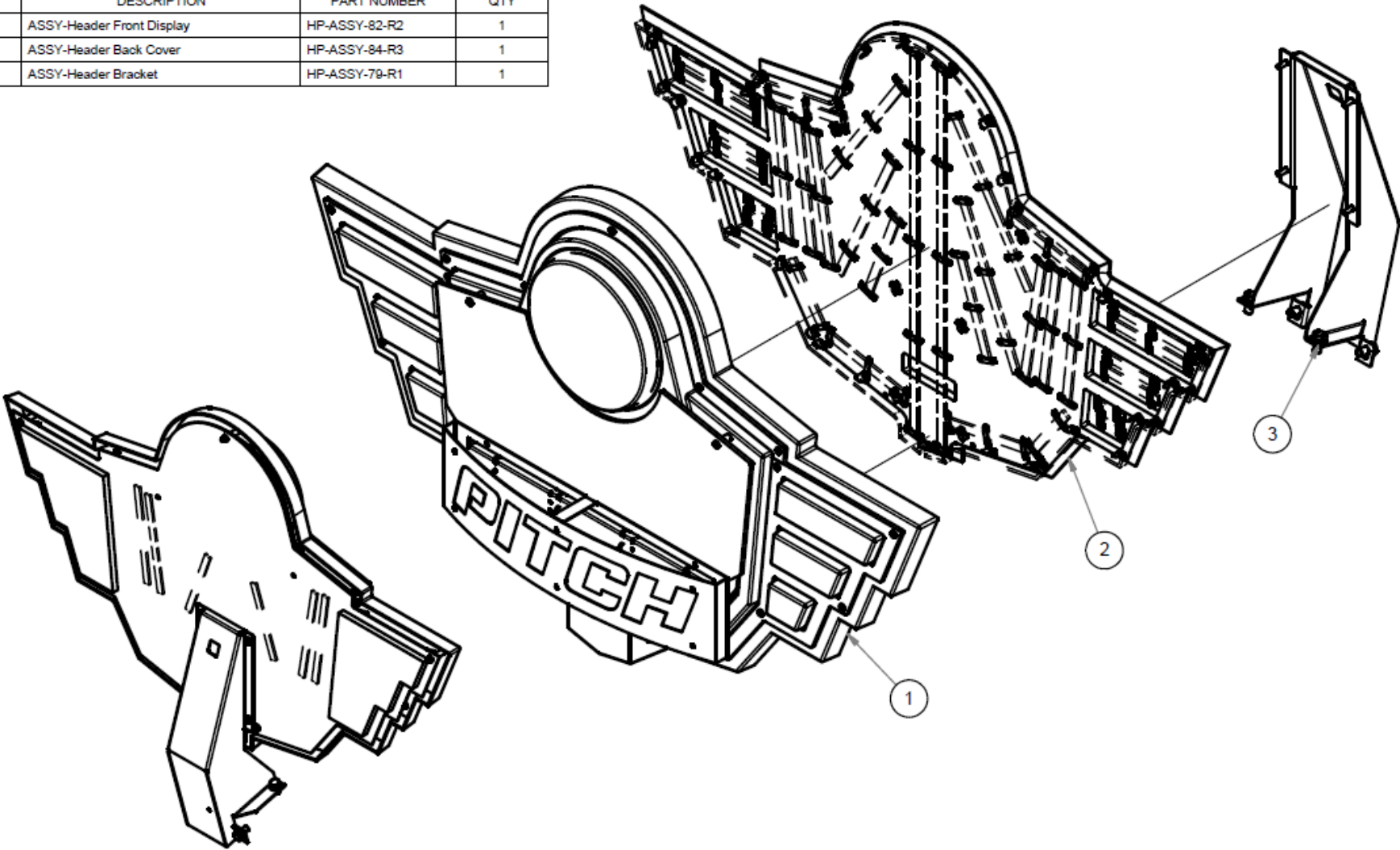
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(b) Assembling or causing the assembly of the hardware in a manner not authorized by or disclosed in this manual;

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(b) To and from transport and freight costs are not covered by the warranty.
(c) Warranty is not transferable with the sale of a machine from one owner to another.

Contact Us

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Website: **laigames.com**

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