

# PINBALL MACHINE OWNERS MANUAL



# Jersey Jack Pinball

## Limited Manufacturer's Warranty

### **Congratulations on purchasing your new JJP Pinball**

Each JJP Pinball machine is handmade, and as such, each machine is one of a kind and has variations in appearance resulting from differences in the machine's particular wood parts, individually printed art and mechanical assemblies. We use the finest materials and processes available to build each machine, however there are certain things outside of our control. Over time, your machine can show signs of wear, which is normal. Refer to your Service Manual for further guidance and instructions on the proper operation and maintenance of your machine.

**What is covered on the game? *Our Limited Warranty covers only the items listed below ("Covered Parts")*** from the date the machine is shipped to JJP's authorized distributors (or directly to the original owner), for the period of time indicated (the "Warranty Period"):

1. Printed circuit boards (game logic). Warranty Period – Sixty (60) Days.
2. LCD monitor. Warranty Period - Two Hundred Seventy (270) Days.

**What is not covered on the game? *JJP's Limited Warranty does not cover anything other than the Covered Parts during the Warranty Period.*** JJP's Limited Warranty also does not cover claims for Covered Parts arising from misuse, abuse, alteration or modification, rust, warping, damage caused by electrical surge, intrusion of any liquid, fire, theft, acts of God, improper repair, installation, testing and improper electrical connections, or damage caused by converting game from one region to another.

**Who is entitled to Limited Warranty coverage?** The original owner and no one else.

**What will JJP do?** During the Warranty Period If a Covered Part fails, JJP will replace or repair the part at its discretion.

**What must I do?** You must register your JJP Machine within 7 days of delivery to activate your warranty. Register on-line at [www.jerseyjackpinball.com](http://www.jerseyjackpinball.com) under Support>Register Your Game.

**Who do I contact for replacement parts?** Contact your selling distributor for replacement parts. If you bought directly from Jersey Jack Pinball, please open a service ticket at the Jersey Jack Pinball website under Support>Support Form, enter all fields and a brief description of the problem.

**Advance Replacement Parts and RMA's** (Return Manufacturer Authorization): Some items will require a valid credit card number on file prior to shipping and will be assigned an RMA number. If the RMA item is not returned within 30 days, the credit card will be charged and the RMA item will be treated as a sale item.

**Statutory Warranties:** This Limited Warranty is distinct from any statutory rights under any mandatory consumer protection laws of your state or country applicable to you. It is intended to grant you specific rights and does not limit the rights you may have under applicable statutory product warranty provisions. You may have other rights based on local laws during or after the Warranty Period. These rights are not excluded by this Limited Warranty.

**Exclusive Agreement:** This Limited Warranty is the complete and exclusive agreement between You and JJP. It supersedes all other written or oral communications related to this product. JJP provides no other warranties for this product. The Limited Warranty exclusively describes all JJP's responsibilities regarding the product. There are no other express warranties. No one is authorized to make modifications to this Limited Warranty, and you should not rely on any such modifications.

**Limitations:** Implied warranties, including those of fitness for a particular purpose and merchantability (an unwritten warranty that the product is fit for ordinary use) are excluded. Some states do not allow the exclusion or limitations of implied warranties, so the above may not apply to you.

In no event shall JJP be liable for any indirect, special, incidental, consequential, or similar damages (including, but not limited to, lost profits or revenue, inability to use the product, or other associated equipment, the cost of substitute equipment, and claims by third parties) resulting from the use of this product. Some states do not allow the exclusion or limitations of incidental or consequential damages, so the above may not apply to you.

Rev. 3.2021

**THE GODFATHER**



# WARNINGS & NOTICES

## **WARNING**

**FOR SAFETY AND RELIABILITY**, substitute parts and equipment modifications are not recommended. Use of non-Jersey Jack Pinball® parts or modifications of game circuitry, may adversely affect game play, or may cause injuries. Substitute parts or equipment modifications may void FCC/Canada Type Acceptance.

**PROLONGED EXPOSURE to high volume levels through the** cabinet headphone jack can lead to irreversible hearing loss.

**BECAUSE THIS GAME IS PROTECTED** by Federal copyright, trademark and patent laws, unauthorized game conversions may be illegal under Federal law.

**THIS 'CONVERSION' PRINCIPLE ALSO APPLIES** to unauthorized facsimiles of Jersey Jack Pinball® equipment, logos, designs, publications, assemblies and games (or game feature not deemed to be public domain), whether manufactured with Jersey Jack Pinball® components or not.

**IF THE LINE CORD IS DAMAGED**, it must be replaced with a cord provided by the game manufacturer (or an equivalent) in order to avoid a shock hazard.

## **Notice**

Godfather and all related elements © & ™ of Godfather. INVISIGLASS® is a registered trademark of Jersey Jack Pinball®. The entire contents of this manual are ©2022 Jersey Jack Pinball®, manufacturers of Jersey Jack Pinball® Amusement Games. All rights reserved.

## **WARNING**

**NOTE:** This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

## **RF Interference Notice**

CABLE HARNESS PLACEMENTS and ground strap routing on this game have been designed to keep RF radiation and conduction within levels accepted by the FCC Rules.

TO MAINTAIN THESE LEVELS, reposition harnesses and reconnect ground straps to their original placements, if they become disconnected during maintenance.

**FCC/CANADA STICKER.** Check the back of your game to verify that an FCC/Canada-certification sticker was attached to your game at the factory. All Games that leave the Jersey Jack Pinball® plant have been tested and found to comply with FCC/Canada Rules. Because the sticker is proof of this fact, legal repercussions to the owner and distributor may result if the sticker is missing. If you receive a game that has no FCC/Canada sticker, call Jersey Jack Pinball® for advice or write us a note on your Game Registration Card. Be sure that the card bears your game's serial number.

***CAUTION:* Transport this game ONLY with the hinged backbox DOWN!**

**THE GODFATHER**

**Dear Jersey Jack Pinball Fan;**

**Congratulations on your purchase of a 50th Anniversary Godfather Pinball Machine.**

**Whichever model you have, we have spent thousands of hours and millions of dollars to design a game that will be played, enjoyed, create memorable experiences and become treasured.**

**The people at Jersey Jack Pinball take pride in what we do because we do it for you. This is Eric Meunier's third game and his first "original title", one of my favorite movies and an all time award winner with an amazing story and iconic actors.**

**Eric and his Team have brought this masterpiece to a World Under Glass and we hope you enjoy it as much as we enjoyed creating it.**

**Lets face it, it's not a game you can easily refuse!**

**Best Regards,**

**Jack Guarnieri  
Founder**



**THE GODFATHER**

# THE GODFATHER

## DOCUMENT REVISION HISTORY

Version 1.0	May 2023	Initial Release
Version 1.1	July 2023	QA Fixes

Manual Written by:  
**Dan Latella**

Special Thanks to:

**Peter Dorn**  
**Joe Katz**  
**Brian Wieczorek**

**Bill Grupp**  
**Mark Molitor**  
**Jordan Wood**

***And the entire JJP Team!***

YOU MAY FREELY PRINT SECTIONS OR A FULL COPY OF THIS DOCUMENT FOR PERSONAL REFERENCE

FOR SERVICE, PLEASE CALL YOUR AUTHORIZED DISTRIBUTOR OR CONTACT US

**JERSEY JACK PINBALL**  
**1850 Greenleaf Ave.**  
**Elk Grove Village, IL 60007**  
**630.830.5225**

*Game Assembly & Setup*

- Unpacking The Godfather Game..... 1
  - Game Set-Up ..... 2
  - Setting up Bluetooth & WIFI ..... 3
  - The Godfather Rules Flowchart..... 4

*The Godfather Menu System*

- Menu System Basics..... 6
- Tests..... 8
- Settings ..... 33
- Utilities..... 52
- Install Presets. .... 64
- Reports..... 65
- Audits..... 68
- Resets..... 79

*Game Parts Information*

- Lower Cabinet Assemblies ..... 71
- Backbox Assembly Outside ..... 83
- Backbox Assembly Inside..... 90
- Collector’s Edition Topper..... 95
- Above-Playfield Assemblies ..... 103
- Under-Playfield Assemblies ..... 144

*Reference Diagrams & Schematics*

Playfield Switches.....	155
Playfield Coils.....	157
Playfield GI Connections.....	159
Playfield Silicone Rings.....	160
USB Cable Information.....	161
Decal Sheet.....	162
Plastic Set.....	163
Controller and LED Boards.....	164
Matrix Switch Wiring Table.....	195
Dedicated Switch Wiring Table.....	196
70 Volt Coil Table.....	197
20 Volt Coil & Motor Table.....	198
12 Volt Coil Motor, Relay & Light Table.....	199
Supply Voltage Conversion .....	200
Fuse Info.....	202
Fused Power Stream.....	203



# UNPACKING & SETUP INSTRUCTIONS FOR YOUR JERSEY JACK PINBALL MACHINE.



Tools required:  
Phillips Head Screwdriver  
5/8" Wrench (for leg bolts)  
Side Cutter or Scissors  
Allen wrench (comes included)

1. If the game has been shipped on a pallet or skid, there are two sets of strapping. Cut the outer straps holding the game to the skid, then cut the two remaining packing straps to open the box.

**CAUTION! SAFETY EYEWEAR RECOMMENDED. Use caution when cutting the strap, as it is under high tension and can spring when cut.**



2. Remove the cap on the top of the box. Inside the box, remove the top tray containing the legs for the game, the leg levelers, and the name/number plate envelope.



3. Remove the legs, leg leveler bag, and the name/number plate envelope from the tray, placing them in a safe location.

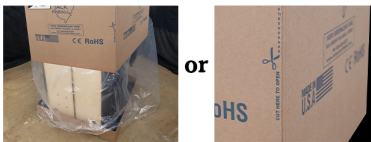


4. In the inside corners of the box are four cardboard stiffeners and two cardboard spacer pieces. These need to be pulled straight up and out of the box.



5. Slide the entire box sleeve up and off the game.

If this is not possible due to a low ceiling, cut the box using a box cutter or a sharp knife. Find the dotted line on the box for the safe location to do this. The line is located on one corner of the box. Damage to your game may result if cut in any other location! Cut through the cardboard and then unwrap the cardboard from the game.



6. Remove the protective plastic bag that covers the game.

**CAUTION! SUFFOCATION DANGER! DO NOT LEAVE THIS BAG WHERE IT COULD BE FOUND BY SMALL CHILDREN OR PETS!**



7. **DO NOT CUT THE STRAP THAT IS AROUND THE GAME AT THIS TIME!**

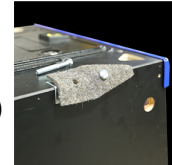
This strap secures the head during setup. Removing this strap could cause the game to become unstable and unexpectedly fall! Leave the game standing upright on the carton base.



8. Take the nuts and levelers from step 3 and put one nut on each leg leveler. Then, thread a leg leveler onto the bottom of each of the legs. Thread them fully into the legs.



9. Using a 5/8" wrench, remove the leg bolts and washers (4) from the front leg positions. Place one leg in each front corner position and use the leg bolts to secure to the cabinet. The included felt pad should remain between the cabinet and the leg. The washer(s) should remain between the head of the bolt and the leg. Use the 5/8" wrench to tighten the legs.



10. Carefully tip/lower the game onto its front legs. It is recommended to have two people for this step.



11. **WARNING! HEAVY LIFTING REQUIRED!**

The next step requires heavy lifting. Two people are recommended to lift the game with a third person to place a support under the game. Keep children and small pets away from the game during this operation!

**DO NOT ATTEMPT THIS OPERATION ALONE!**

Find a suitable support (metal stool or similar) that can hold the back end of the game when it is lifted and raised into position. Place one person on each side of the game and lift the back end of the cabinet. Slide a suitable support under the rear of the game and rest the game on it. Bolt the two remaining legs on to the back end of the game (using same process as step 9). Lift the back end of the game and remove the support. The game should now be standing on four legs. Make sure the leg bolts are tight.

(TURN OVER FOR MORE STEPS)





12. Cut the strap that is wrapped around the game. Use caution when cutting the strap, as it is under high tension and can spring when cut.

13. An Allen wrench came packed with the game leg levelers. Place the wrench in the rear lock of the cabinet. Raise the head of the game into position. Turn the wrench until the backbox is firmly locked into its upright position.

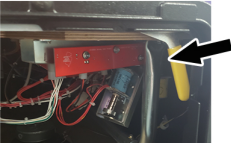
**CAUTION! Failure to lock the backbox in position can result in serious injury! Make sure that you cannot move the raised head after it is locked in position!**



14. The keys to the game are tied to the front shooter rod. Cut the tie wrap to free the keys and discard the tie wrap. Use the keys to open the front cashbox door of the game.



15. Inside the cashbox door, at the top of the opening is a yellow lever. Slide the lever to the left. While holding the lever to the left, remove the front hand protector molding by pulling straight up.



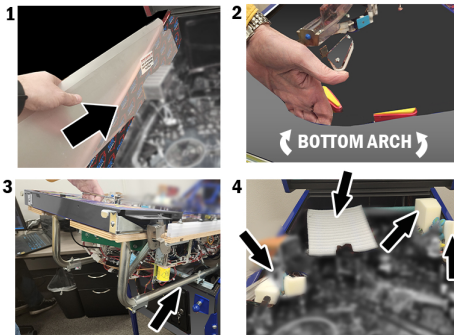
16. Close and lock the cashbox door to prevent scratches while removing the glass. Slide the glass towards you and out of the game. Carefully place the glass on a carpeted/soft surface.



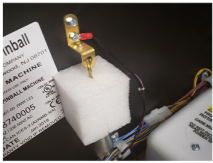
**CAUTION! The glass is tempered and could explode if placed on end on a hard surface!**

17. If arted sideblades are installed, use **ART BLADE PROTECTORS** before raising playfield. The Protectors are found inside of the cabinet on Collector's Edition games. (see pic 1) See Sideblade Art Protector insert for more information.

- Firmly grasp the bottom arch and pull up on the playfield (see pic 2).
- Pull the playfield toward you and rest it on the cabinet front edge in one of the provided service positions (see pic 3).
- Remove all packing foam from the playfield (see pic 4).
- Slightly raise and push the playfield back into its normal game position.



18. Inside the cashbox door, along the left side of the cabinet, is a plumb bob that detects tilted operation of the game. It has a white piece of shipping foam that locks it into place. Remove the shipping foam by turning it until the slot in it can be pulled around the wire of the tilt.

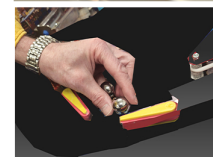
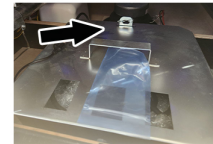


**Adjusting the plumb bob:**

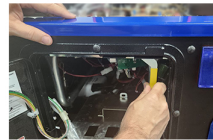
Using the wingnut underneath the plumb bob weight, adjust the tilt mechanism to the desired sensitivity. Raising the weight higher up the hanger wire makes the tilt mechanism more sensitive; lowering the weight makes it less sensitive. With the game leveled and set to the desired playfield incline, the plumb bob weight should hang in the center of the metal contact ring. If the weight is not centered, loosen the screws holding the contact ring to adjust.

19. Inside the game cabinet is the cashbox. It is held in place with a Cotter pin. Remove cotter pin and carefully remove the cashbox from game.

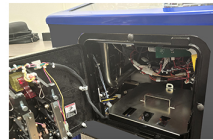
Inside the cashbox are the pinballs, powercord, and goodie bag. Take the pinballs out of their protective plastic and gently clean them with a soft rag. Place the pinballs inside the open top of the game. They will roll to the bottom return area. Set the powercord aside for step 22.



20. With the door closed, carefully place the glass back into the channels of the game and slide it all the way forward. While holding the glass, open the door and move the locking lever to the left and replace the front hand protector molding. Move the lever to the right to lock it into position.



21. Place the cashbox back into the game, re-insert the Cotter pin, and close and lock the coin door.



22. Remove the number plate from its shipping envelope (from Step 2). Remove the two phillips screws in the speaker panel: Using these same screws, install your number plate.



23. Plug in the game via the rear power port with powercord found in cashbox. Remove the power port cover plate screws with your Phillips head screwdriver. Plug in the power cord. Reinstall the plate, making sure the cord is secured in the slot in the wood. The power switch is located under the game on the front right corner. Flip the power switch on. Your game should take a few minutes to boot up and come to life!



# SETTING UP BLUETOOTH & WIFI

To set up Bluetooth you will need to access the Player Menu.

The Player Menu can be accessed by holding the right flipper for several seconds while the game is in attract mode (not during a game).

\*On the LE & CE models, Bluetooth pairing can be accessed directly by pushing the button on the headphone jack panel next to the coin door.



Select Bluetooth setup (using the flippers to move selection) and hit start button.



Once in Bluetooth menu it will attempt to scan for Bluetooth devices. Make sure your device is in pairing mode. Once the Bluetooth device shows up in the list select it with start button, and the Bluetooth should pair the devices and start working.

If the device does not pair exit out of Bluetooth setup and retry. Make sure your device is in pairing mode. Due to the nature of Bluetooth this may take several attempts.

Enabling WIFI allows you to download game updates.  
To set up WIFI you will need to access the Diagnostics Menu.

The Diagnostics Menu can be accessed opening the coin door.

- open coin door
- hit enter button to enter diagnostics
- go to FULL MENU
- go to SETTINGS
- go to NETWORK SETTINGS
- go to WIFI
- go to SET WIFI NETWORK

You must agree to all Terms and Conditions before using the Network Functions!



When setting up your network be sure to read the JJP terms of service and agree to them in order to connect to your pinball machine to WIFI.

While in SET WIFI NETWORK select your network from the available list.

After your network is set, go to SET WIFI PASSWORD in menu and enter your wifi password.

Finally go to CONNECT TO WIFI in menu to connect to the internet.



71-100018-01



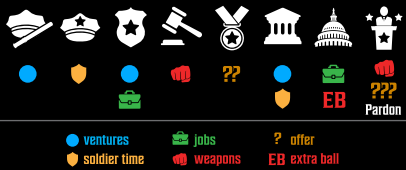
# The Godfather 50 YEARS

## PINBALL GAME RULES

Combos and VITO lanes  
Increase influence level

### INFLUENCE

Each level grants additional perks



### UPGRADE WEAPON

Action button to activate  
Quick repeat to increase!

### PLAYFIELD MULTIPLIER

Action button to extend time

Influence 'Senator' Level

X Job Cashouts

Defeat X Bad Guys

Sicily '2' target  
without a bumper hit

EXTRA  
BALL

Defeat 4 'level 2' Lieutenants

Hit Caporegime

BAPTISM

2

### FAMILY

Action button to select your Family



Soldiers last longer  
Faster territory gain  
Job points -50%



Faster Soldier gain  
Easier Compound MB  
Longer Weapon time  
Shorter MB save



Faster Influence gain  
Bad Guy points +100%  
Longer MB save  
Influence costs more



Ventures Points 100%  
Easier Bad Guy Kills  
Job Awards points +50%  
Slower Influence gain



Easier Weapons gain  
Multiball Points 50%  
Harder Soldier gain  
Shorter Weapon time

Top drop target

Spin disc with flippers  
to whack the ball around

### CAPOREGIME

Defeat 4 'level 1' Lieutenants

Hit Caporegime

### 5 FAMILIES MULTIBALL



### VENTURES

Collect ventures to gather territories

Collect all currently lit ventures

Either orbit to lock all balls

### TURF WAR MULTIBALL

5

Defeat 4 'level 2' Lieutenants

Hit Caporegime

Shots, targets and slings / bumper

### SOLDIERS

Recruit soldiers to qualify Job

Don's Office

### JOBS

Job mode cashouts  
affect adjacent Multiball

Play 2 adjacent Jobs,  
to qualify Award Mode

Don's Office

### AWARD MODES

Earn Rings

3

Don's Office

Top right inlane target

### FAVOR

Context sensitive award

Lock ball in The Compound

Repeat

### COMPOUND MULTIBALL

Jet bumper and 3 slings

Shoot flashing region target  
Repeat to explore 3 regions

Target under left ramp

### SICILY MULTIBALL

Start all Jobs, Award Modes and Multiballs

Don's Office

HONOR

1

Short plunge

Medium plunge

### SKILL SHOT

Action button

Choose and select

### SUPER SKILL SHOT

Any drop target hit

Right inlane X-target

Coming from ramp  
2X 5X 10X

### SHOT X

Multiplies next shot

Spell V-I-T-O

Don's Office

### OFFER

Mystery award

Re-spell V-I-T-O

Right orbit

### INTERROGATION

Better mystery award

Re-spell V-I-T-O

Left orbit

### HOT TIP

Best mystery award

Left or right ramp

Hideout

Side ramp

Under flipper

Increase X

BONUS X

Max 5X

### PERFORM ALL TASKS

- 1 Play Honor
- 2 Play Baptism
- 3 Earn X rings
- 4 10X Weapon used
- 5 Gather all territories
- 6 Influence 'Presidential' Level

Don's Office

KISS THE RING

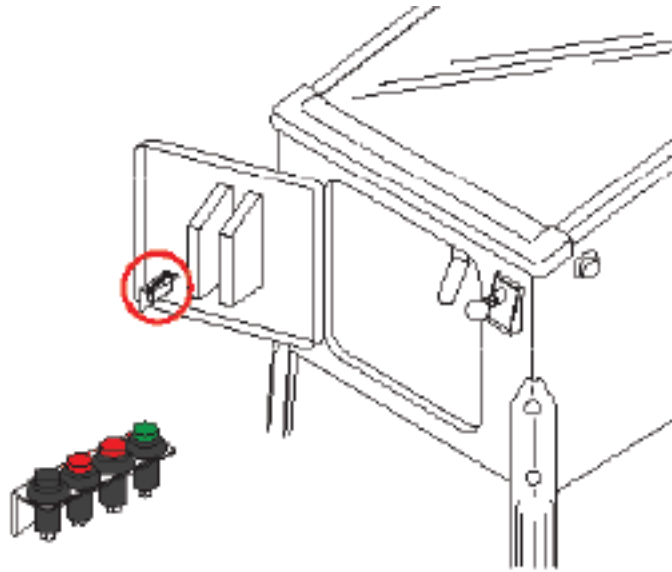
JERSEY  
JACK  
PINBALL





# **The Godfather Menu System**





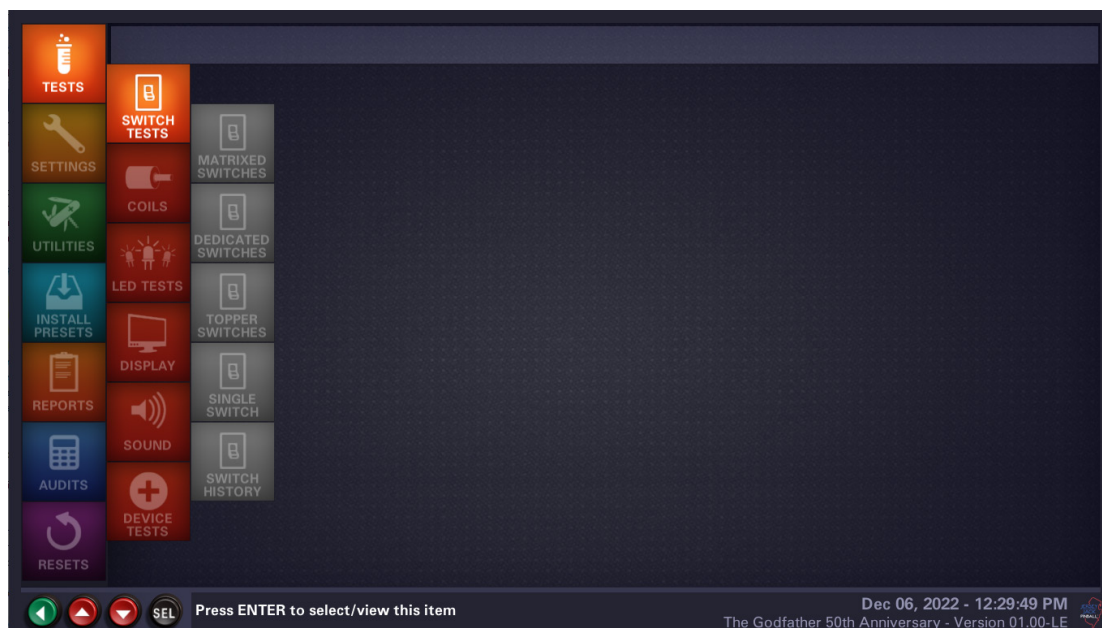
# Menu System Basics

The JJP software menu system allows the user or operator of the game to test the performance of its components and assemblies, personalize its rules and track, monitor or manage its play and/or earnings. Four pushbuttons are used to navigate the menu system, make adjustments, enter data, check components, trigger tests, etc. The buttons are located on the inside of the coin door, mounted to a bracket nearest its outside edge (circled).

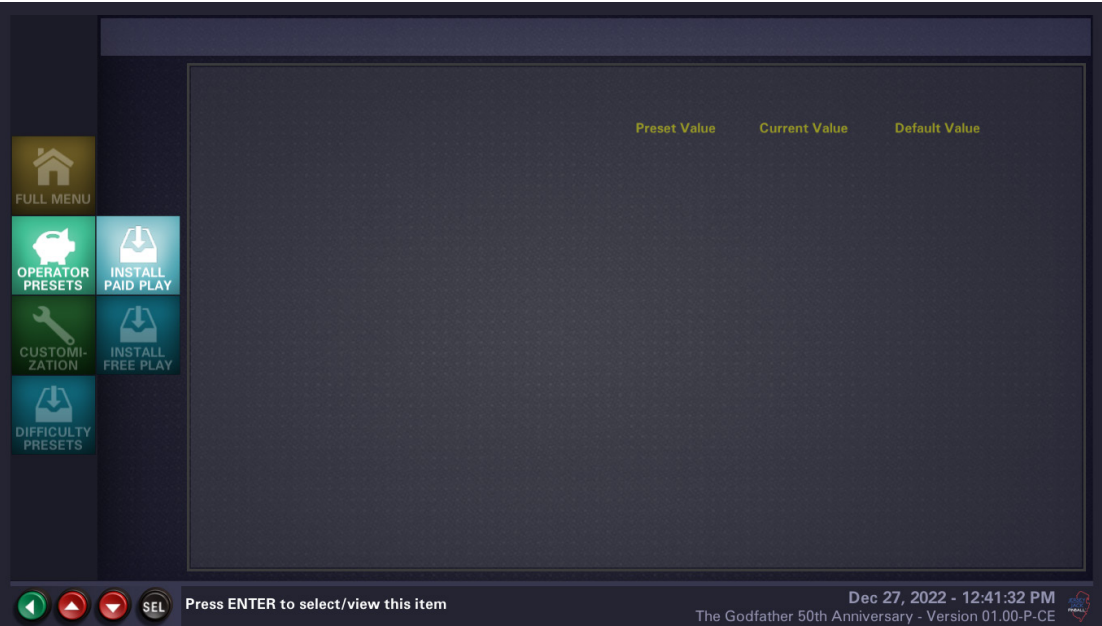
The buttons are labeled: black is **Enter**, red next to it is **Up/+**, next red is **Down/-** and green is **Back/Escape**. Each time you press a button, you will hear an audio response through the game's speakers. Use **Enter** to enter a sub-menu, select a menu item to change or execute a command. Use **Up/+** or **Down/-** to maneuver through menu choices or increase/decrease data values for a selected menu item. Use **Back/Escape** to exit a sub-menu or escape from a selected menu item without saving changes. Each sub-menu screen contains specific instructions for button use and/or visual cues superimposed over the button illustrations in the lower left corner of the LCD screen.

To enter the menu system at any time (after system boot-up), open the coin door and momentarily press **Enter**. The main menu screen will instantly appear on the game's LCD monitor. The current date and time will be displayed in the lower right hand corner of the screen, along with the version of software the game is running. All of the RGB LEDs and GI/flasher LEDs in the game will light up in white to improve visibility above and below the playfield.

Note: When the coin door is opened, the game's safety interlock switch disables the 70-volt power running to the playfield. In order to activate 70-volt devices in any of the diagnostics tests, you must either close the coin door or pull the safety interlock switch's actuator out (it will "click" and lock in place). When you close the coin door, the interlock switch actuator will be pushed back into its normal (unlocked) position. **CAUTION:** Most of the high power coils will be enabled, so slingshots, pop bumpers, VUKs and flippers (if activated by the flipper buttons) will kick a ball around as it rolls down the playfield - or fire when trigger switches are closed by any means. **So please be careful with your fingers and tools on the playfield surface! If you lift the playfield for any reason, please be careful around high power coil lugs, as they present a shock hazard!**



JJP menu system's main menu screen.



Operator Presets screen.

From the main menu screen, you can access the game's **Test Report**. From this screen, you can also readily jump into the **Difficulty Presets, Customization & Operator Presets** sub-menus to quickly customize your game. **Full Menu** gives you access to device/component tests, game settings, audits, utilities, presets, reports and resets. Simply move up/down in the list of menu icons, using **Up/+** and **Down/-**, then press **Enter** to select the sub-menu you'd like to explore. To exit the menu system and return to game play, press **Back/Escape** from the Main Menu screen. Specific details for each **Full Menu** item are included later in this section.

The **Difficulty Presets** sub-menu provides a quick shortcut to the **Difficulty Presets** branch of the **Install Presets** menu item. This sub-menu allows you to quickly change the rules/settings for your game, making it easier or more challenging to play. See page **66** for additional information.

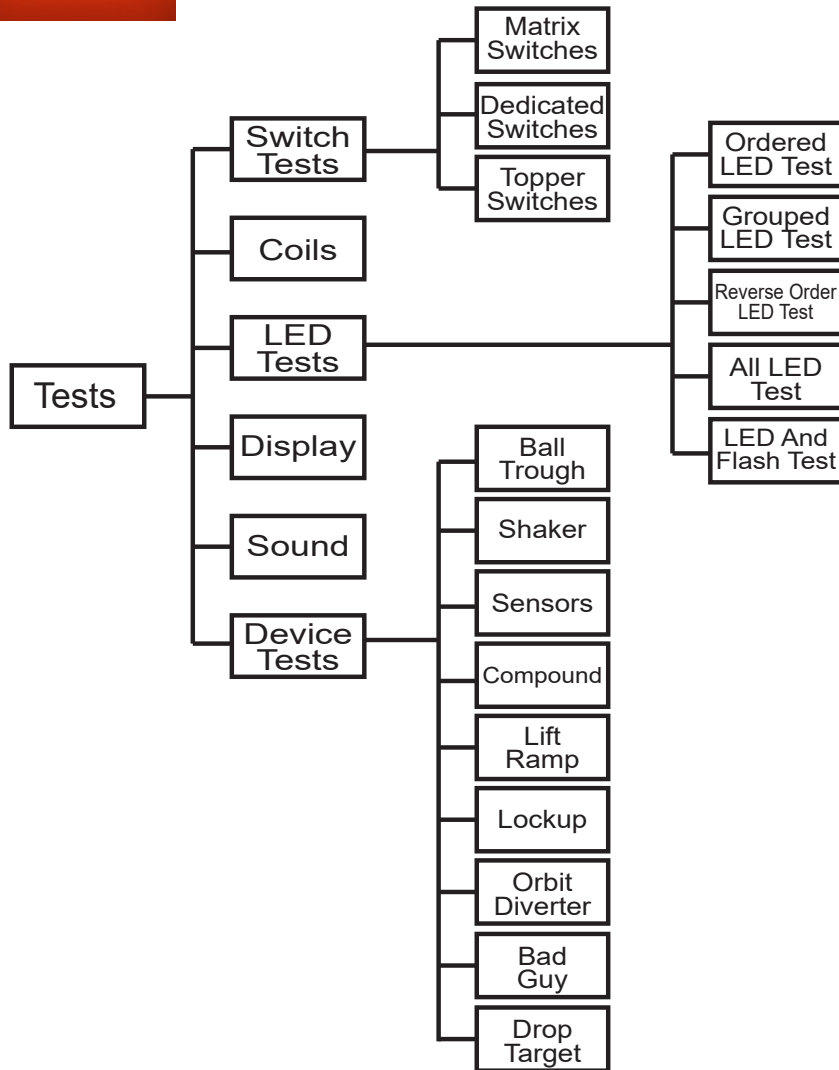
The **Customization** sub-menu provides a quick shortcut to the **Customization** branch of the **Utilities** menu item. This sub-menu allows you to add, edit or remove custom messages and/or graphics that display on the 27" LCD monitor, during the game's attract mode. See pages **58 - 61** for additional information.

When you enter the **Operator Presets** sub-menu, the LCD monitor will display the screen shown. This sub-menu allows you to quickly change a group of predefined settings, designed to make your JJP game more approachable to new players. In short, the changing this group of settings will make the special features in the game more accessible to casual, street pinball players.

**Paid Play** settings are intended for JJP games being operated in a pay-per-play setup, on location. **Free Play** settings are intended for JJP games in the home (or operated in a pay-for-entry location).

Each **Operator Presets** sub-menu page shows a table of the settings affected by the selection, so you can quickly and easily compare the preset value, the current value and the default value.





The Godfather Tests menu tree.

# Tests

The **Tests** menu allows the user to test all major components and assemblies in the game for proper operation.

**Switch Tests** - test all matrixed or dedicated switches in the game. A screen will be displayed for the selected group (**Matrixed Switches** or **Dedicated Switches**) showing the status of every switch within the group. As you manually open or close switches, the status for each is updated on the screen and you hear an audio response through the game’s speakers. In **Single Switch** test, you can scroll through the entire list of switches and repeatedly open or close any single switch. The **Switch History** screen displays the 24 most recent inactive-to-active switch transitions.

**Coils** - test virtually any coil, magnet, motor or light in the game. A screen will be displayed, listing all of the coils, magnets, motors and lights in the game that can be energized. You can auto-cycle through the list one at a time, or repeatedly/manually trigger a single device.

**LED Tests** - test the RGB LEDs in the game (feature and GI lighting). **Ordered LED Test** - you can step through the list of RGB LEDs, one at a time, in hardware order, and test the color-producing capability of each. **Grouped LED Test** - you can step through the list of RGB LEDs, one at a time, in grouped order, and test the color-producing capability of each. **Rev Order LED Test** - basically the same as the **Ordered LED Test**, except the LEDs are listed in reverse hardware order. **All LED Test** - all LEDs (RGB and GI) will light at once, allowing you to test the color-producing capability of the entire chain at one time. **LED And Flash Test** - allows you to test the functionality of all CPU-controlled lighting in the game at one time.

**Display** - test the basic colors and alignment of images on the game’s LCD monitor. You can step through several fundamental colors on the screen and superimpose a grid on it to check for proper centering and alignment of displayed images.

**Sound** - test the game’s sound system for proper balance and operation with sound effects, voices, music and a wide variety of tones and sweeps.

**Device Tests** - test all of the major game devices/assemblies for proper operation. A specific screen will be displayed for each device, allowing the user to repeatedly exercise it and ensure that it is functioning correctly.



# Matrixed Switch Test


When you enter the **Matrixed Switch Test**, the LCD monitor will display the screen shown. A window highlighting locations/states of switches on the game’s playfield can be toggled on and off by pressing the **Start** button on the front of the cabinet. The playfield window can be moved to the center or right side of the screen by using the **Up/+** or **Down/-** buttons. Each square in the playfield window corresponds to a matrixed switch. The color of the square (in both the playfield window and the matrix itself) represents the current state of that switch.

Active switches, regardless of their type, are displayed in bright green squares. Inactive opto switches are displayed in light tan (if normally unblocked) or dark tan (if normally blocked) squares; all other inactive switches are displayed in bright blue (if normally open) or navy blue (if normally closed) squares. Bad switches (switches that have been inactive for approximately 60 balls played) are displayed in red squares. Unused positions in the matrix are represented by gray squares; any unused position that is registering active (an error) is represented by a brown square.

The driver (column) and return (row) numbers for each switch, along with corresponding wire colors and I/O Board connector/pin numbers, are shown at the top and left side of the screen, respectively.

You can simultaneously test as many switches as you like, or repeatedly test a single switch, observing the results in the matrix and/or the playfield window. The game also provides an audible response each time the state of a switch changes. Note: When adjusting a switch, the best method for testing it is to roll a pinball over it, through it or into it.

To exit the **Matrixed Switch Test** at any time, press the **Back/Escape** button.



MATRIXED SWITCHES

MATRIXED SWITCHES

Active switch

Inactive switch (n/o)

Inactive opto (n/o)

Inactive reflective (n/o)

Inactive proximity (n/o)

Unused

Bad switch

Inactive switch (n/c)

Inactive opto (n/c)

Inactive reflective (n/c)

Inactive proximity (n/c)

Unused-closed

	Drive 1 J201-1	Drive 2 J201-2	Drive 3 J201-3	Drive 4 J201-4	Drive 5 J201-5	Drive 6 J201-6	Drive 7 J201-7	Drive 8 J201-8	Drive 9 J202-1	Drive 10 J202-2	Drive 11 J202-3	Drive 12 J202-4	Drive 13 J202-5	Drive 14 J202-6	Drive 15 J202-8	Drive 16 J202-9
Return 1 J200-1	GRN BLK	GRN BRN	GRN RED	GRN ORN	GRN YEL	GRN GRN	GRN BLU	GRN VIO	GRY BLK	GRY BRN	GRY RED	GRY ORN	GRY YEL	GRY GRN	GRY BLU	GRY VIO
6-Ball Trough #5	01	09	17	25	33	41	49	57	65	73	81	89	97	105	113	121
Return 2 J200-2	WHT BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK
6-Ball Trough #4	02	10	18	26	34	42	50	58	66	74	82	90	98	106	114	122
Return 3 J200-3	WHT RED	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK
6-Ball Trough #3	03	11	19	27	35	43	51	59	67	75	83	91	99	107	115	123
Return 4 J200-4	WHT ORN	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK
6-Ball Trough #2	04	12	20	28	36	44	52	60	68	76	84	92	100	108	116	124
Return 5 J200-5	WHT YEL	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK
6-Ball Trough #1 (Right)	05	13	21	29	37	45	53	61	69	77	85	93	101	109	117	125
Return 6 J200-6	WHT GRN	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK
6-Ball Trough jam	06	14	22	30	38	46	54	62	70	78	86	94	102	110	118	126
Return 7 J200-7	WHT BLU	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK
6-Ball Trough #6 (Left)	07	15	23	31	39	47	55	63	71	79	87	95	103	111	119	127
Return 8 J200-8	WHT VIO	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK	GRN BLK
6-Ball Trough #8	08	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128

ESC

+

START

+

Press START to toggle playfield display, + to activate shaker (if installed)

Dec 13, 2022 - 04:55:55 PM

The Godfather 50th Anniversary - Version 01.00-CE

Matrixed Switch Test screen.



# Dedicated Switch Test

When you enter the **Dedicated Switch Test**, the LCD monitor will display the screen shown. The four dedicated switch strings are shown, grouped by their common ground wire. Each square in each string corresponds to a specific switch; the color of the square represents the current state of that switch.

Active switches, regardless of their type, are displayed in bright green squares. Inactive opto switches are displayed in light tan (if normally unblocked) or dark tan (if normally blocked) squares; all other inactive switches are displayed in bright blue (if normally open) or navy blue (if normally closed) squares. Bad switches (switches that have been inactive for approximately 60 balls played) are displayed in red squares. Unused positions in the matrix are represented by gray squares; any unused position that is registering active (an error) is represented by a brown square.

Wire colors and I/O Board connector/pin numbers are shown for each string of switches.

You can simultaneously test as many switches as you like, or repeatedly test a single switch, observing the results on the screen. The game also provides an audible response each time the state of a switch changes.

To exit the **Dedicated Switch Test** at any time, press the *Back/Escape* button.

DEDICATED SWITCHES

Ground J601-1	BLK	BLK	
Return 1 J601-7	BLK	GRY	Left Flipper EOS D01
Return 2 J601-6	BLK	BRN	Right Flipper EOS D02
Return 3 J601-5	BLK	RED	Upper Left Flipper EOS D03
Return 4 J601-4	BLK	ORN	Bad Guy D04
Return 5 J601-2	BLK	YEL	not used D05
Return 6 J601-3	BLK	GRN	not used D06
Return 7 J601-8	BLK	BLU	not used D07
Return 8 J601-9	BLK	VIO	not used D08

Ground J602-1	BLK	BLK	
Return 1 J602-7	YEL	BLK	Left Flipper Switch Lower D09
Return 2 J602-6	YEL	BRN	Left Flipper Switch Upper D10
Return 3 J602-5	YEL	RED	Right Flipper Switch Lower D11
Return 4 J602-4	YEL	ORN	not used D12
Return 5 J602-2	YEL	GRY	Enter / Menu Button D13
Return 6 J602-3	YEL	GRN	Up / Volume+ Button D14
Return 7 J602-8	YEL	BLU	Down / Volume- Button D15
Return 8 J602-10	YEL	VIO	Escape / Service Credit Button D16

Ground J603-1	BLK	BLK	
Return 1 J603-7	BLU	BLK	1st Coin Switch (Right Chute) D17
Return 2 J603-6	BLU	BRN	2nd Coin Switch (Left Chute) D18
Return 3 J603-5	BLU	RED	3rd Coin Switch (DBV) D19
Return 4 J603-4	BLU	ORN	4th Coin Switch D20
Return 5 J603-2	BLU	YEL	5th Coin Switch D21
Return 6 J603-3	BLU	GRN	Ticket Mech Notch Switch D22
Return 7 J603-9	BLU	GRY	not used D23
Return 8 J603-10	BLU	VIO	not used D24

Ground J604-1	BLK	BLK	
Return 1 J604-8	VIO	BLK	Start Button D25
Return 2 J604-6	VIO	BRN	Coin Door Open D26
Return 3 J604-5	VIO	RED	Plumb Bob Tilt D27
Return 4 J604-4	VIO	ORN	Bluetooth D28
Return 5 J604-2	VIO	YEL	Action Button D29
Return 6 J604-3	VIO	GRN	Headphone Panel Volume Down D30
Return 7 J604-9	VIO	BLU	Headphone Panel Volume Up D31
Return 8 J604-10	VIO	GRY	Headphone Panel Jack Sense D32

Active switch

Bad switch

Inactive switch (n/o)

Inactive switch (n/c)

Inactive opto (n/o)

Inactive opto (n/c)

Inactive reflective (n/o)

Inactive reflective (n/c)

Inactive proximity (n/o)

Inactive proximity (n/c)

Unused position

Unused but closed (error)

Last switch edge: #D13, Enter / Menu Button J602-2 (YEL) - J602-1 (BLK)

Dec 13, 2022 - 04:56:29 PM  
The Godfather 50th Anniversary - Version 01.00-CE

Dedicated Switch Test screen.



# Single Switch Test

When you enter the **Single Switch Test**, the LCD monitor will display the screen shown. The entire list of dedicated and matrixed switches is shown alongside a window highlighting the location/state of the currently selected switch on the game’s playfield. The switch is displayed as a small, blinking square; the color of the square represents its current state.

An active switch, regardless of its type, is displayed as a bright green square. An inactive opto switch is displayed as a light tan (if normally unblocked) or dark tan (if normally blocked) square; any other inactive switch is displayed as a bright blue (if normally open) or navy blue (if normally closed) square. A bad switch (a switch that has been inactive for approximately 60 balls played) is displayed as a red square. Unused positions in the matrix are not displayed in the playfield window.

All switch driver (column) and return (row) numbers are shown, along with corresponding wire colors and I/O Board connector/pin numbers.

You can scroll through the list of matrixed switches, using the **Up/+** and **Down/-** buttons, and select any switch to test. You can then repeatedly open or close the selected switch, observing the results in the playfield window. The game also provides an audible response each time the state of the switch changes. Note: When adjusting a switch, the best method for testing it is to roll a pinball over it, through it or into it.

To exit the **Single Switch Test** at any time, press the **Back/Escape** button.

SINGLE SWITCH

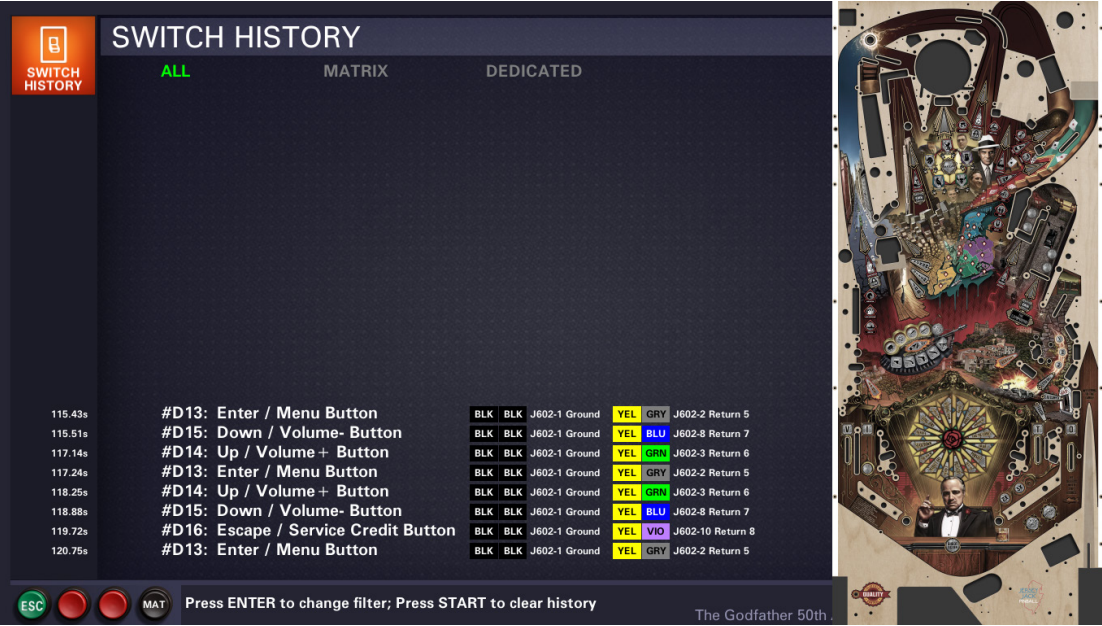
Switch #D01: Left Flipper EOS	BLK	BLK	J601-1 Ground	BLK	GRY	J601-7 Return 1
Switch #D02: Right Flipper EOS	BLK	BLK	J601-1 Ground	BLK	BRN	J601-6 Return 2
Switch #D03: Upper Left Flipper EOS	BLK	BLK	J601-1 Ground	BLK	RED	J601-5 Return 3
Switch #D04: Bad Guy	BLK	BLK	J601-1 Ground	BLK	ORN	J601-4 Return 4
Switch #D05: not used	BLK	BLK	J601-1 Ground	BLK	YEL	J601-2 Return 5
Switch #D06: not used	BLK	BLK	J601-1 Ground	BLK	GRN	J601-3 Return 6
Switch #D07: not used	BLK	BLK	J601-1 Ground	BLK	BLU	J601-8 Return 7
Switch #D08: not used	BLK	BLK	J601-1 Ground	BLK	VIO	J601-9 Return 8
Switch #D09: Left Flipper Switch Lower	BLK	BLK	J602-1 Ground	YEL	BLK	J602-7 Return 1
Switch #D10: Left Flipper Switch Upper	BLK	BLK	J602-1 Ground	YEL	BRN	J602-6 Return 2
Switch #D11: Right Flipper Switch Lower	BLK	BLK	J602-1 Ground	YEL	RED	J602-5 Return 3
Switch #D12: not used	BLK	BLK	J602-1 Ground	YEL	ORN	J602-4 Return 4
Switch #D13: Enter / Menu Button	BLK	BLK	J602-1 Ground	YEL	GRY	J602-2 Return 5
Switch #D14: Up / Volume+ Button	BLK	BLK	J602-1 Ground	YEL	GRN	J602-3 Return 6
Switch #D15: Down / Volume- Button	BLK	BLK	J602-1 Ground	YEL	BLU	J602-8 Return 7
Switch #D16: Escape / Service Credit Button	BLK	BLK	J602-1 Ground	YEL	VIO	J602-10 Return 8
Switch #D17: 1st Coin Switch (Right Chute)	BLK	BLK	J603-1 Ground	BLU	BLK	J603-7 Return 1
Switch #D18: 2nd Coin Switch (Left Chute)	BLK	BLK	J603-1 Ground	BLU	BRN	J603-6 Return 2
Switch #D19: 3rd Coin Switch (DBV)	BLK	BLK	J603-1 Ground	BLU	RED	J603-5 Return 3
Switch #D20: 4th Coin Switch	BLK	BLK	J603-1 Ground	BLU	ORN	J603-4 Return 4

Single Switch Test screen.





# Switch History Test



Switch History Test screen.

When you enter the **Switch History Test**, the LCD monitor will display the screen shown. A list of the 24 most recent dedicated and/or matrixed switch inactive-to-active transitions is shown alongside a window depicting the game’s playfield.

All switch driver (column) and return (row) numbers are shown, along with corresponding wire colors and I/O Board connector/pin numbers.

You can clear the **Switch History Test** listing by pressing the *Enter* button.

To exit the **Switch History Test** screen at any time, press the *Back/Escape* button.



# Coils Test

When you enter the **Coils Test**, the LCD monitor will display the screen shown. The entire list of coils, magnets, motors and lights is shown alongside a window highlighting the location of the currently selected device on the game’s playfield. The device is displayed as a small, white, blinking square. Note: Devices in the list that cannot be activated in the **Coils Test** are highlighted in blue text (these devices have their own specific tests).

Coil number, power/trigger wire colors, I/O Board connectors/pins, drive transistor, in-line fuses and supply voltage level are provided for each device in the list.

There are three different modes for triggering a device: **RUNNING**, **REPEAT** and **MANUAL**. The current mode is highlighted in green text at the top of the screen; you change the current mode by pressing the **Enter** button. In **RUNNING** mode, the game automatically cycles through the list, triggering each device once. In **REPEAT** mode, you scroll through the list (using the **Up/+** and **Down/-** buttons) and select a specific device; the game then repeatedly triggers it. In **MANUAL** mode, you select a specific device in the list and trigger it yourself using the **Start** button on the front of the cabinet.

Note: When the coin door is opened, the game’s safety interlock switch disables the 70-volt power running to the playfield. In order to activate 70-volt devices in the **Coils Test**, you must either close the coin door or pull the safety interlock switch’s actuator out (it will “click” and lock in place). When you close the coin door, the interlock switch actuator will be pushed back into its normal (unlocked) position.

To exit the **Coils Test** at any time, press the **Back/Escape** button.



Coils Test screen.





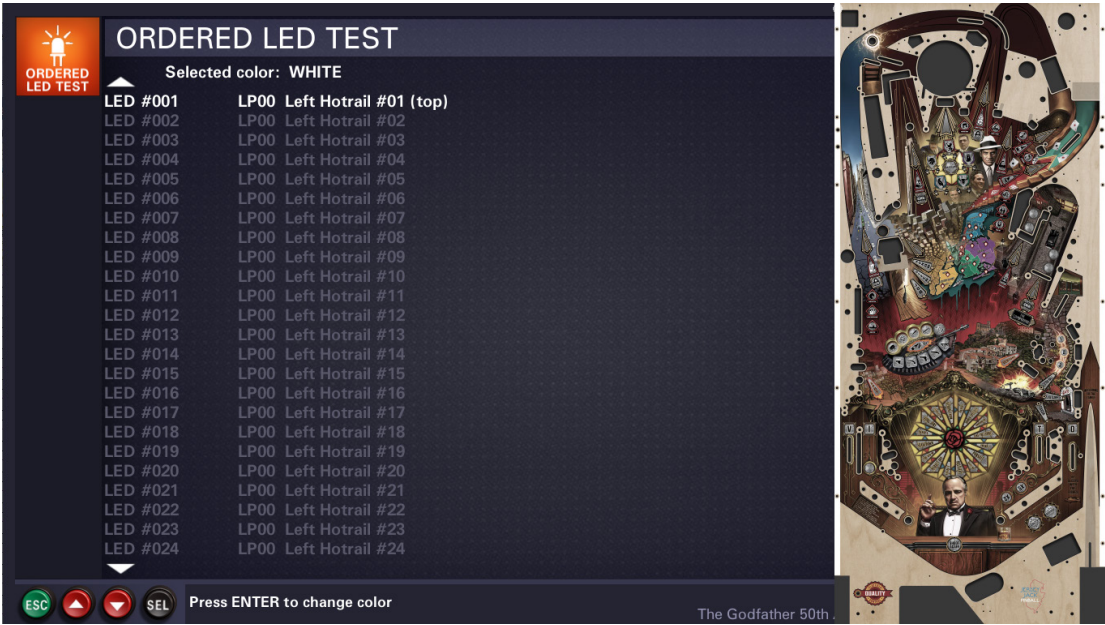
# Ordered LED Test

When you enter the **Ordered LED Test**, the LCD monitor will display the screen shown. The entire list of RGB LEDs is shown alongside a window highlighting the location of the currently selected LED on the game's playfield. The LED is represented in the window by a small, white, blinking circle, while the actual LED flashes on the playfield.

Initially, the selected LED flashes the color *white*. You can change the color to red, green, blue and back to white by repeatedly pressing the **Enter** button. The current color will be displayed at the top of the screen. You can scroll through the list of LEDs using the **Up/+** and **Down/-** buttons.

For this test, the RGB LEDs are listed in hardware order (the order that the RGB LED boards are physically connected to controller boards, under the playfield). In this regard, the RGB LED string can be considered one long chain. The **Ordered LED Test** allows you to step through and test this entire chain, one LED at a time.

To exit the **Ordered LED Test** at any time, press the **Back/Escape** button.



Ordered LED Test screen.



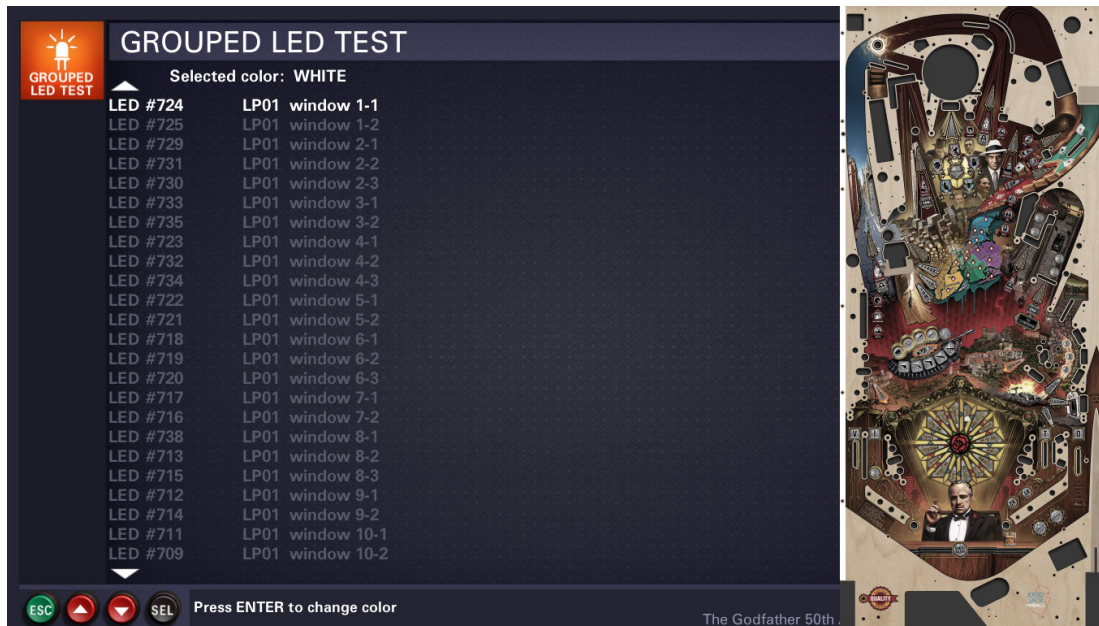
# Grouped LED Test

When you enter the **Grouped LED Test**, the LCD monitor will display the screen shown. The entire list of RGB LEDs is shown alongside a window highlighting the location of the currently selected light on the game's playfield. The light is displayed in the window as a small, white, blinking circle while the actual LED flashes on the playfield.

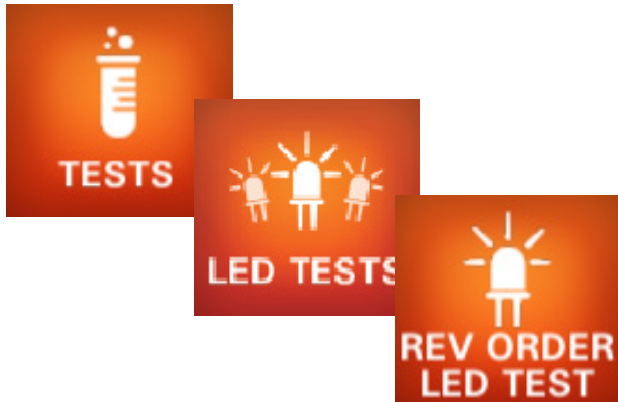
Initially, the selected LED flashes the color white. You can change the color to red, green, blue and back to white by repeatedly pressing the **Enter** button. The current color will be displayed at the top of the screen. You can scroll through the list of LEDs using the **Up/+** and **Down/-** buttons.

For this test, the RGB LEDs are listed in logical/grouped order. The RGB LED string is one long chain. The **Grouped LED Test** allows you to step through and test the entire string of RGB LEDs, in groups, in logical order (words spelled in order), as they are associated on the playfield. The test begins with the LEDs in the lowest portion of the main playfield and progresses upward.

To exit the **Grouped LED Test** at any time, press the **Back/Escape** button.



Grouped LED Test screen.



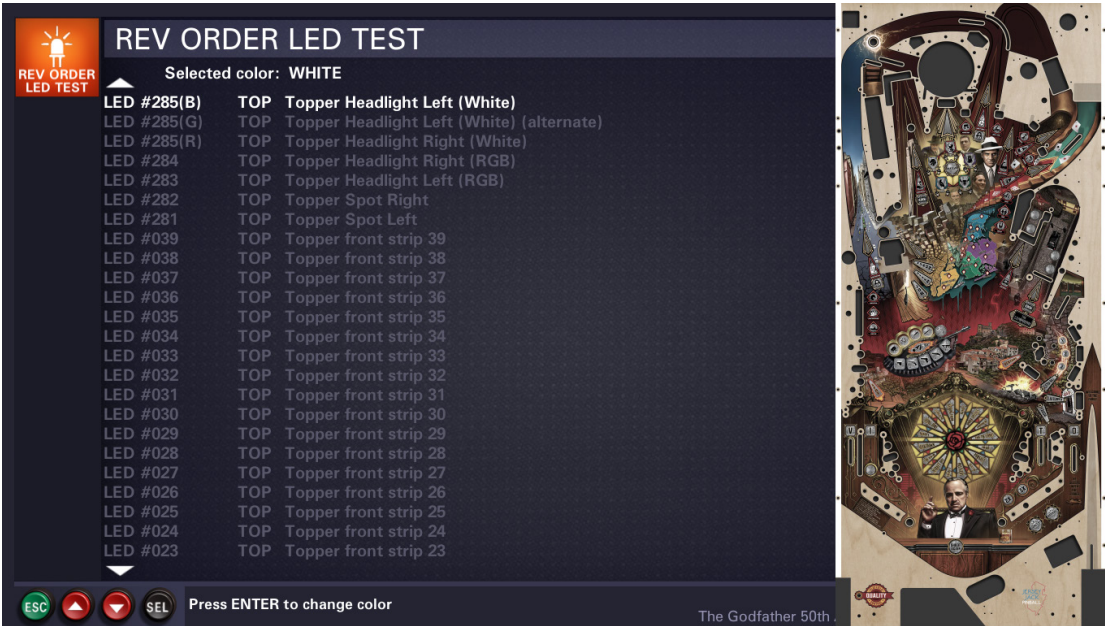
# Reverse Order LED Test

When you enter the **Reverse Order LED Test**, the LCD monitor will display the screen shown. The entire list of RGB LEDs is shown alongside a window highlighting the location of the currently selected LED on the game’s playfield. The LED is represented in the window by a small, white, blinking circle, while the actual LED flashes on the playfield.

Initially, the selected LED flashes the color white. You can change the color to red, green, blue and back to white by repeatedly pressing the **Enter** button. The current color will be displayed at the top of the screen. You can scroll through the list of LEDs using the **Up/+** and **Down/-** buttons.

For this test, the RGB LEDs are listed in reverse hardware order (the reverse order that the RGB LED boards are physically connected to controller boards, under the playfield). The **Reverse Order LED Test** allows you to step through and test this entire chain, in reverse order, one LED at a time.

To exit the **Reverse Order LED Test** at any time, press the **Back/Escape** button.



Reverse Order LED Test screen.

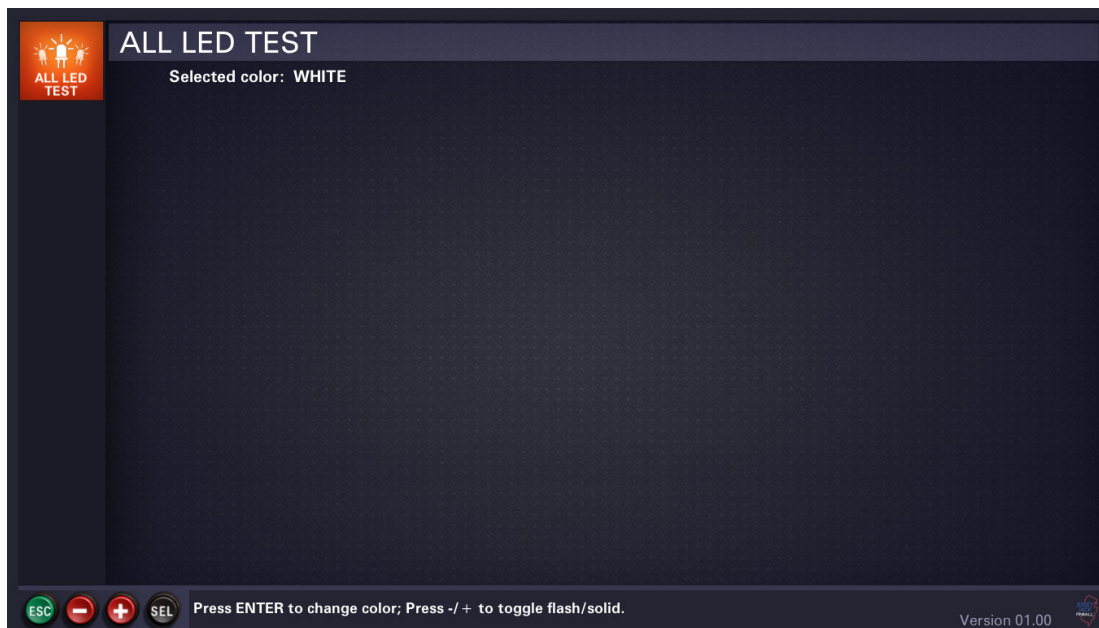




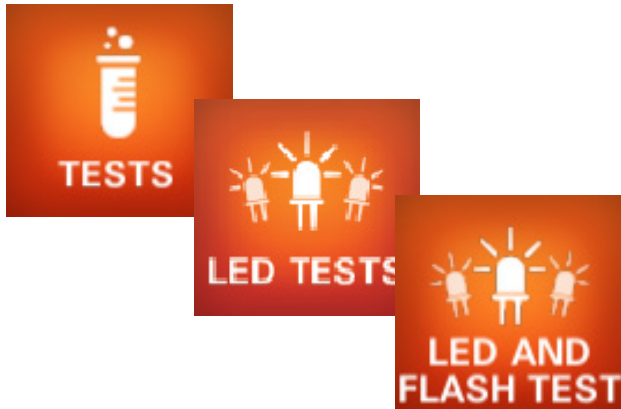
# All LED Test

When you enter the **All LED Test**, the LCD monitor will display the screen shown. The entire chain of RGB LEDs is lit at once. Initially, the LEDs are white and not flashing. You can change the color to red, green, blue and back to white by repeatedly pressing the **Enter** button. The current color will be displayed at the top of the screen. Press either the **Up/+** or **Down/-** button to toggle the LED string between flashing and constant-on.

To exit the **All LED Test** at any time, press the **Back/Escape** button.



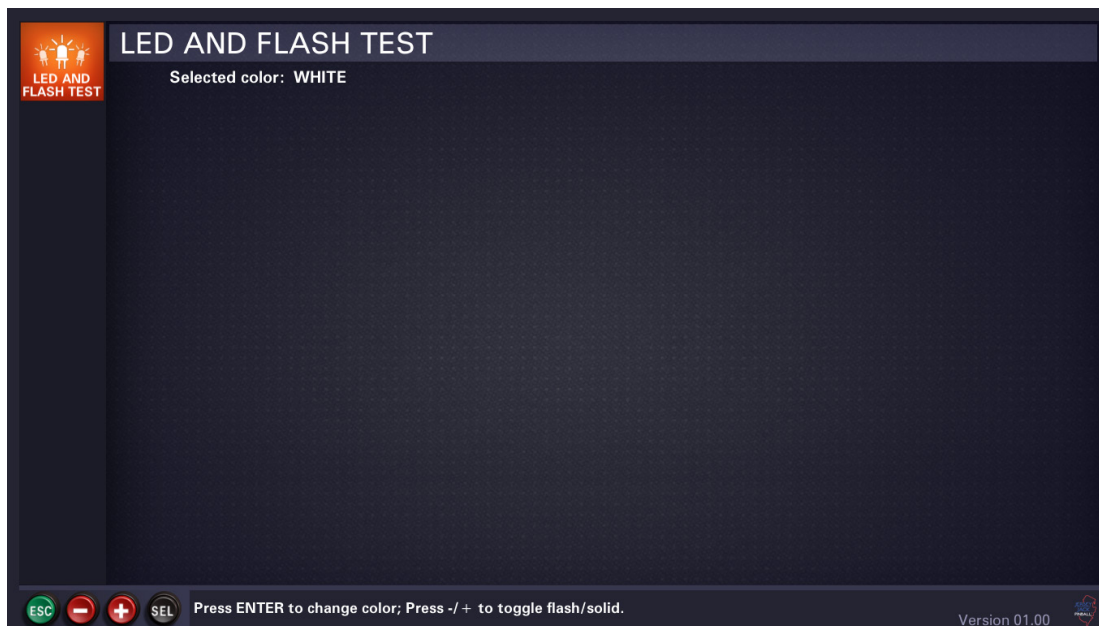
All LED Test screen.



# LED And Flash Test

When you enter the **LED And Flash Test**, the LCD monitor will display the screen shown. All RGB LEDs and GI LEDs are lit at once. All CPU-controlled lights (spotlights, Start button light, etc.) are flashing. Initially, the RGB and GI LEDs are white and not flashing. You can change the color of the RGB LEDs to red, green, blue and back to white by repeatedly pressing the **Enter** button. The current color will be displayed at the top of the screen. Press either the **Up/+** or **Down/-** button to toggle the RGB and GI LEDs between flashing and constant-on.

To exit the **LED And Flash Test** at any time, press the **Back/Escape** button.



LED And Flash Test screen.

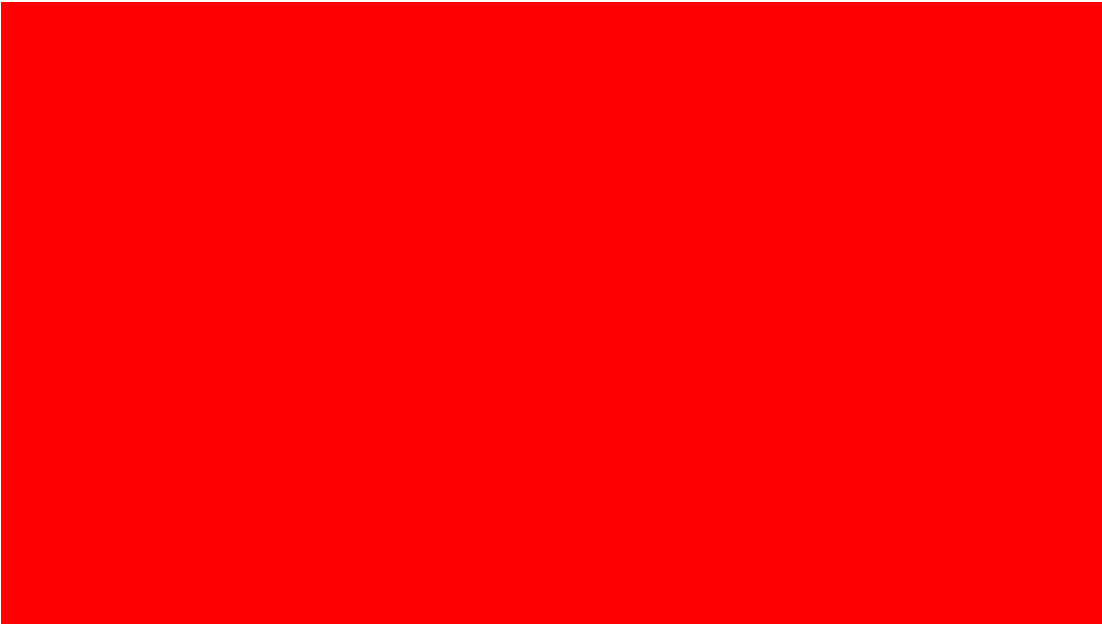


## Display Test

When you enter the **Display Test**, the LCD monitor will display an edge-to-edge red screen, as shown at left. You can change the full-screen color to green, blue then white by pressing the **Up/+**, **Down/-** or **Enter** button three times. Pressing one of these buttons again will fill the screen with a white grid against a black background; once more will change the grid to black against a white background.

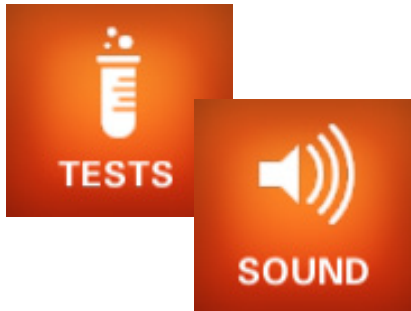
The color screens allow you to test the LCD monitor's color saturation performance, from edge to edge. The grids allow you to test image alignment on the monitor.

To exit the **Display Test** at any time, press the **Back/Escape** button.



Display Test screens.



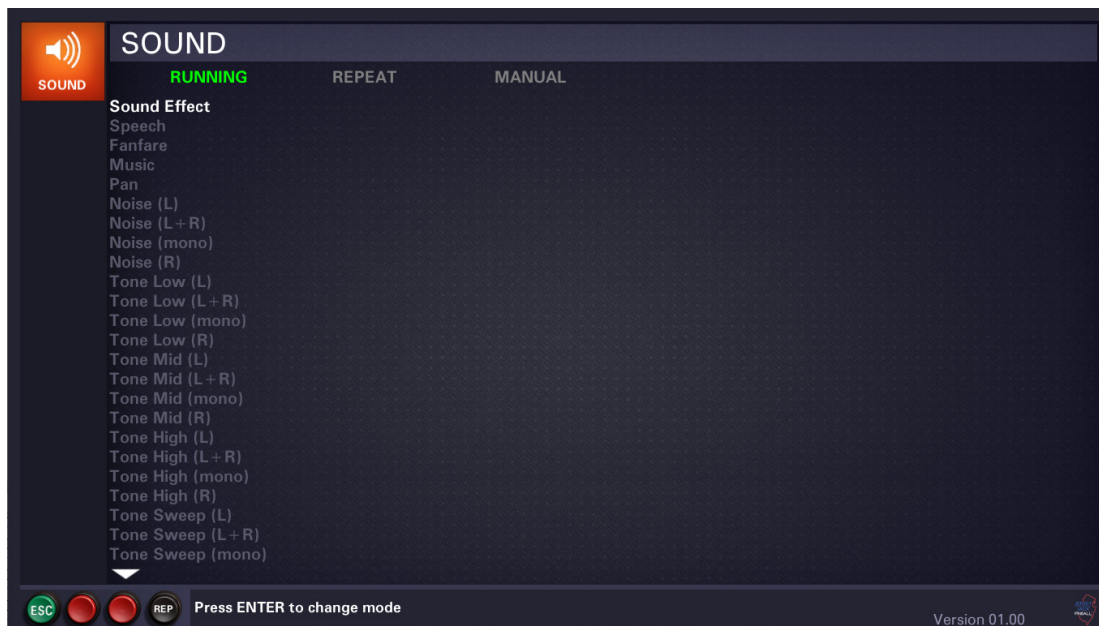


# Sound Test

When you enter the **Sound Test**, the LCD monitor will display the screen shown. The list of programmed test sounds is displayed.

There are three different modes for testing sounds: **RUNNING**, **REPEAT** and **MANUAL**. The current mode is highlighted in green text at the top of the screen; you change the current mode by pressing the **Enter** button. In **RUNNING** mode, the game automatically cycles through the list, playing each sound once. In **REPEAT** mode, you scroll through the list (using the **Up/+** and **Down/-** buttons) and select a specific sound; the game then repeatedly plays it. In **MANUAL** mode, you select a specific sound in the list and trigger it yourself using the **Start** button on the front of the cabinet.

To exit the **Sound Test** at any time, press the **Back/Escape** button.



Sound Test screen.



# Ball Trough Test

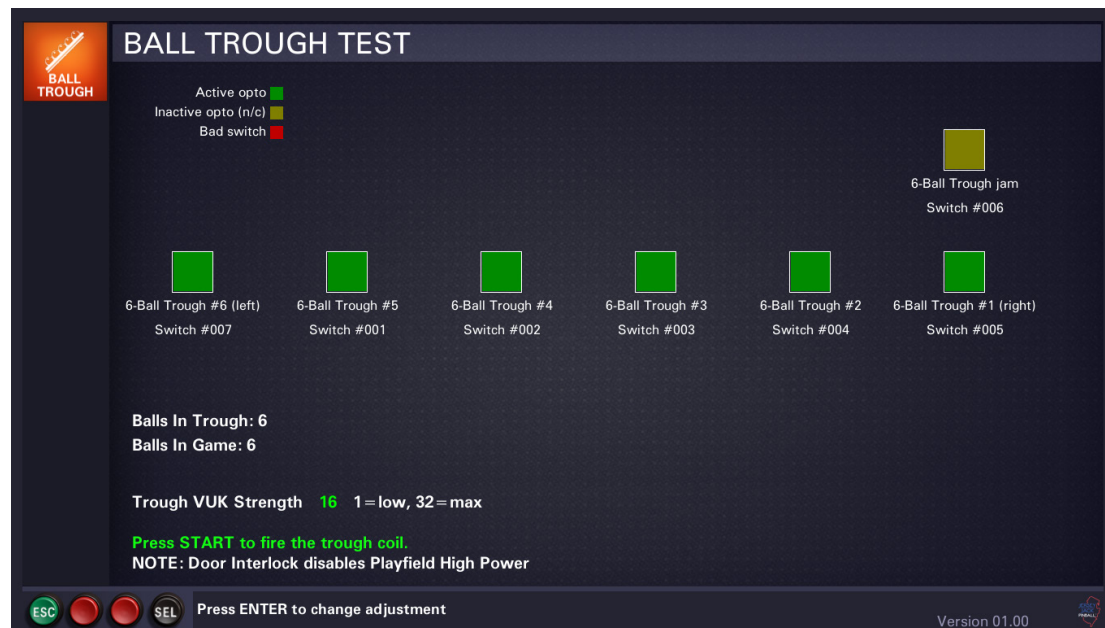
When you enter the **Ball Trough Test**, the LCD monitor will display the screen shown. The squares on the screen represent the current states of the seven opto switch transmitter/receiver pairs in the ball trough mechanism, under the lower part of the playfield. There are six opto switches in the bottom of the trough (labeled “#1” to “#6”) and one higher, in the neck of the trough VUK (labeled “jam”). A green square represents a blocked opto switch, typically caused by a ball in that position. A tan square represents an unblocked opto switch (no ball in that position). A red square represents a bad switch (a switch that has been inactive for approximately 60 balls played). For reference, corresponding matrixed switch numbers are shown under each square.

You can use the **Start** button to fire the trough VUK. The rightmost ball in the trough will be kicked into the shooter lane, then auto-launched up the playfield. Most of the high power coils will be enabled, so slingshots, pop bumpers, VUKs and flippers (if activated by the flipper buttons) will kick a ball around as it rolls down the playfield - so **be careful with your fingers!** You can empty the trough, one ball at a time (catching each one before it returns to the trough), and test all of the opto switches in the process.

Note: When the coin door is opened, the game’s safety interlock switch disables the 70-volt power running to the playfield. To allow coils to function in the **Ball Trough Test**, you must either close the coin door or pull the safety interlock switch’s actuator out (it will “click” and lock in place). When you close the coin door, the interlock switch actuator will be pushed back into its normal (unlocked) position.

Press **Enter** to adjust the trough VUK strength setting. Use the **Up/+** and **Down/-** buttons to alter the highlighted strength value, then press **Enter** to accept the new value. Press **Back/Escape** to escape from the VUK strength adjustment function without saving changes.

To exit the **Ball Trough Test** at any time, press the **Back/Escape** button.



Ball Trough Test screen.

# Bad Guy Test

This test is used to verify the operation of the Bad Guy device at the top of the playfield, including the stepper motor, and the spinning disk under the bad guy and the switches associated with its operation. The stepper motor rotates the figure clockwise and counterclockwise. The figure has a switch to detect the home position of the figure. The switch is actuated by a flag when the figure is approximately facing straight forward. The Bad Guy switch is triggered when the ball hits the plumb bob below the stepper motor.

When you enter the **Bad Guy Test**, the LCD monitor will display the screen shown to the left. The top of the screen shows the state of the Bad Guy Home switch. and the Bad Guy switch. The how switch box will show Green when the switch is active and the figure is in the home position. The box will show amber when the switch is inactive. The Bad Guy switch is normally open and will show Green when hit (active) and blue when not active. The lower squares indicate the state of the Up/Down diagnostic buttons that are used to activate the stepper motor. The squares will show green when the buttons are pressed (active) and blue when they are not pressed. The lower portion of the screen shows the current settings for the travel limits of the Bad Guy figure. **It should not be necessary to change these from their default settings during normal use.**

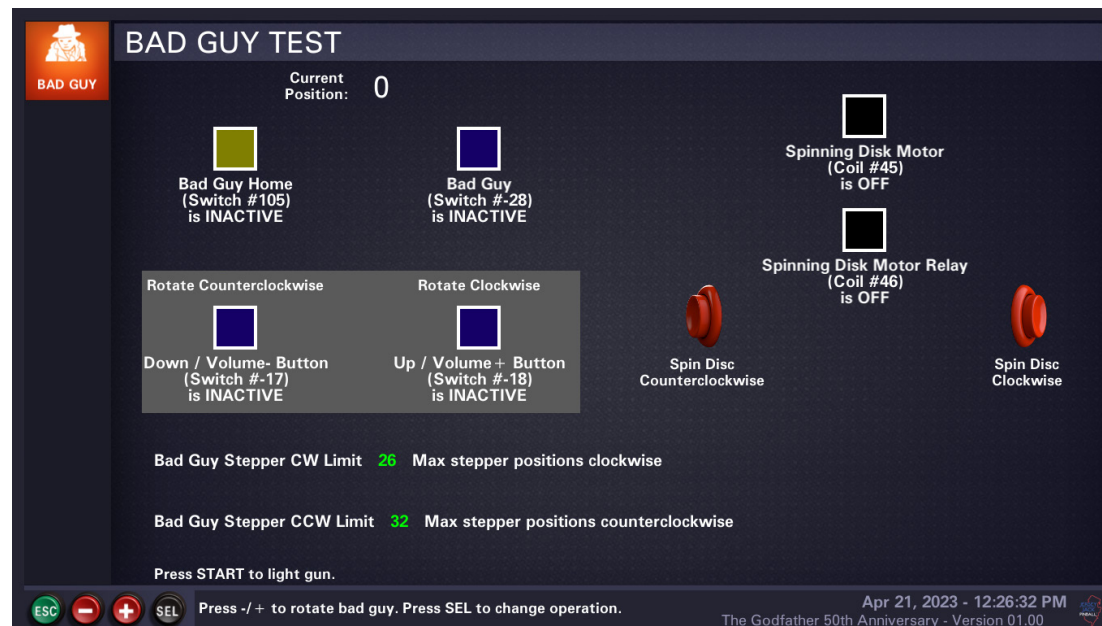
The right side of the screen shows the state of the Spinning Disk Motor and Spinning Disk Motor Relay coils. When the coils are active, the box will show red. When the coils are not active, the box will show black. The Spinning Disk Motor coil controls the power to the disk motor. The Spinning Disk Motor Relay controls the direction of the disk. When the relay coil is active the motor is set to spin the disk counterclockwise when the Spinning Disk Motor coil is activated. When the relay coil is not active, the disk will spin clockwise when the Spinning Disk Motor coil is activated.

To test the operation of the Bad Guy stepper motor, press the – **(Down)** button and verify that the Bad Guy rotates counterclockwise until it reaches its travel limit. Then press the +**(UP)** button and verify that the Bad Guy rotates clockwise until it reaches its travel limit. Also verify that the Bad Guy Home switch activates as the figure passes the approximate center position.

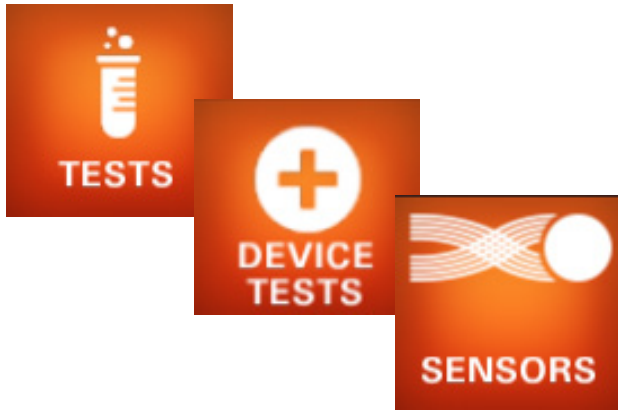
To test the operation of the Spinning Disk Motor, press the **Left Flipper** button to spin the disk counterclockwise. Press the **Right Flipper** button to spin the disc clockwise. With each flipper press, the disk should spin for a few seconds and the slow to a stop. Pressing a flipper button repeatedly will make the disk spin faster.

To test the Bad Guy switch, roll a ball into the front entrance of the Bad Guy, hard enough to strike the plumb bob under the stepper motor. This should activate the Bad Guy switch.

To exit the **Bad Guy Test** at any time, press the **Back/Escape** button.



Bad Guy Test screen.



# Sensor Test & Calibration

When you enter the **Sensor Test**, the LCD monitor will display the screen shown. The six circles represent the sensors in the Compound, left inlane and behind the upper flipper. These sensors are used in place of traditional switches.

With no ball above the sensor, the sensor will display a blue circle on the test screen, if a ball is placed above the sensor, the sensor will display a green circle on the test screen. Each sensor can be tested this way.

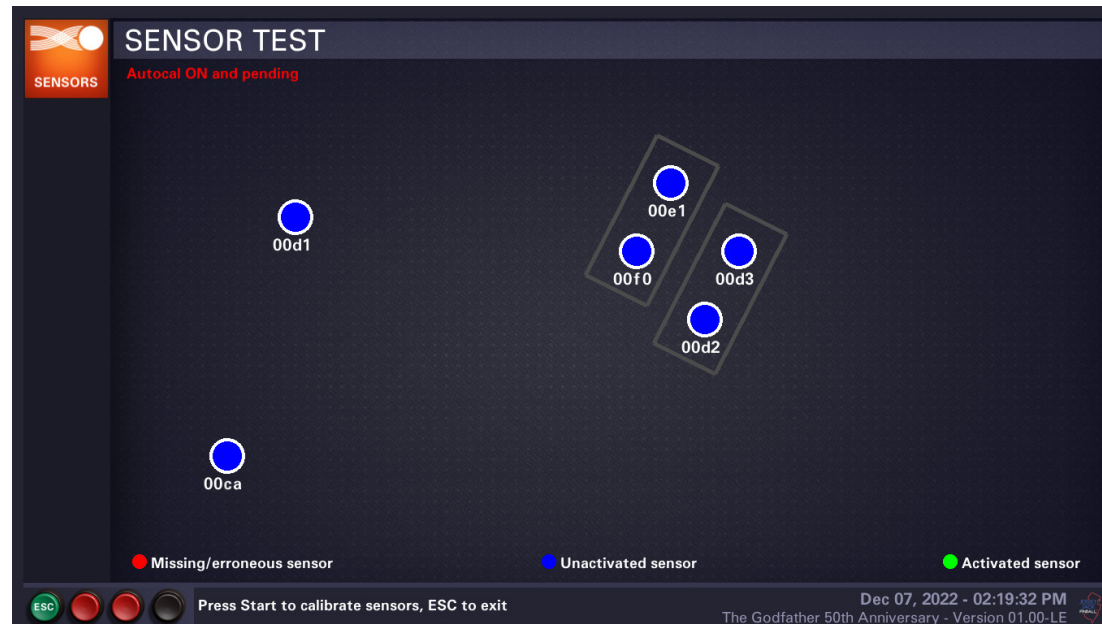
**Sensor Calibration:** If any of the sensors are red or not detecting the balls correctly, a re-calibration of the sensors will need to be performed.

Remove all the balls from all the sensor areas.

While still in the Sensor Test, press the **START** button. The sensor values should change and even fluctuate.

Re-test the sensors to ensure proper operation if the sensors are still not working properly, rerun the calibration process again until the sensors are working properly.

To exit the **Sensors Test** at any time, press the **Back/Escape** button.



Sensors Test screen.





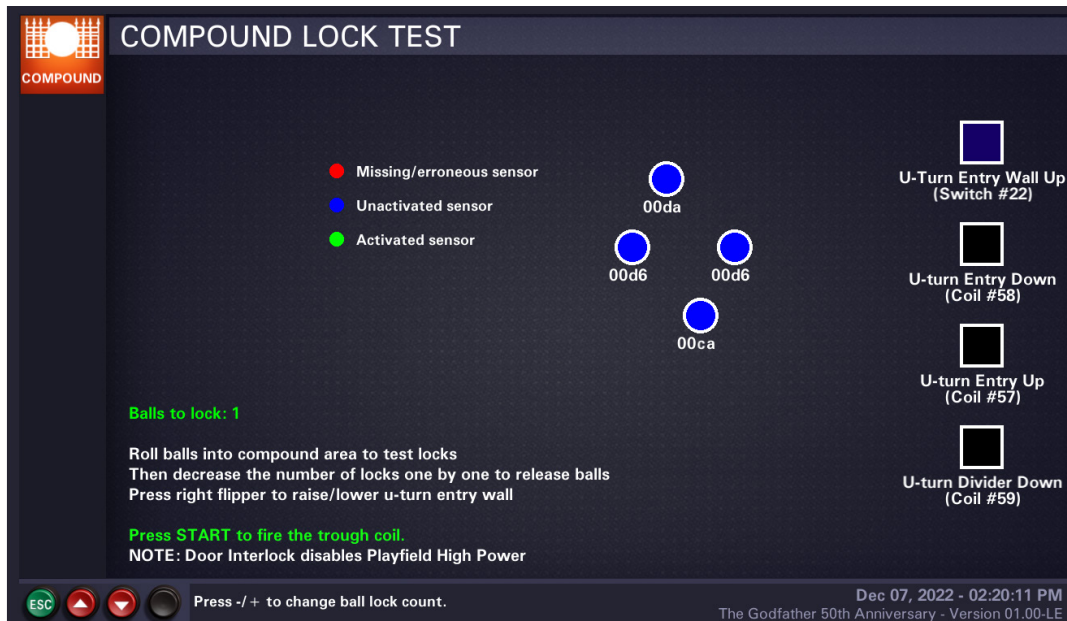
## Compound Lock Test

The Compound lockup is a U-shaped area on the right side of the playfield. It contains four sensors and two controllable divider plates. The compound is able to lock one ball. When a ball is locked, the player can move the ball from side to side by hitting the U-Turn wall or the compound target. The diagnostic test allows the user to test the ability of the compound to correctly lock balls. Since the compound uses sensors to detect balls, it's recommended to make sure the sensor calibration has been completed before entering this test.

When you enter the **Compound Lockup Test**, the LCD monitor will display the screen shown on the left side of this page. Each of the circles represents the state of a sensor located in the compound. The top right square represents the current state of the U-Turn entry wall switch. The lower three squares show the state of the coils for the U-turn entry wall and U-turn divider.

To test locking balls in the Compound, use the **+/- buttons** to set the 'Balls to Lock' count to 1. Roll a ball into the Compound entry so that it loops to the left side. Each of the sensors should change from **blue to green** as the ball passes each sensor. The ball should stay locked when it reaches the bottom sensor on the left side (not released by the U-turn divider). Roll a second ball into the Compound entry so that it loops to the left side. Once the ball reaches the top sensor on the left side, the U-turn divider should lower to release the first ball.

*(continued on next page)*



Compound Lock Test screen.



Compound Lock on playfield.

## Compound Lock Test (cont.)

Next, press the right flipper button to raise the U-turn entry wall. Roll a ball to hit the Compound target. This should move the locked ball to the right side of the Compound and the sensor for the bottom right side should change from **blue to green**. Roll a ball to hit the U-turn entry wall. This should move the locked ball back to the left side. Hit the **left flipper button** to lower the U-turn entry wall. Next, use the **+/- buttons** to set the 'Balls to Lock' count to 0. This should lower the U-turn divider and release the locked ball from the Compound.

Note: When the coin door is opened, the game's safety interlock switch (the upper switch on item XXX, page XXX of this manual) disables the 70-volt power running to the playfield. To allow coils to function in the Compound Lockup Test, you must either close the coin door or pull the safety interlock switch's actuator out (it will "click" and lock in place). When you close the coin door, the interlock switch actuator will be pushed back into its normal (unlocked) position. While in the Compound Lockup Test, you can serve a ball from the trough at any time by pressing the **'Start'** button on the front of the cabinet. To exit the **Compound Lockup Test** at any time, press the **Back/Escape** button.



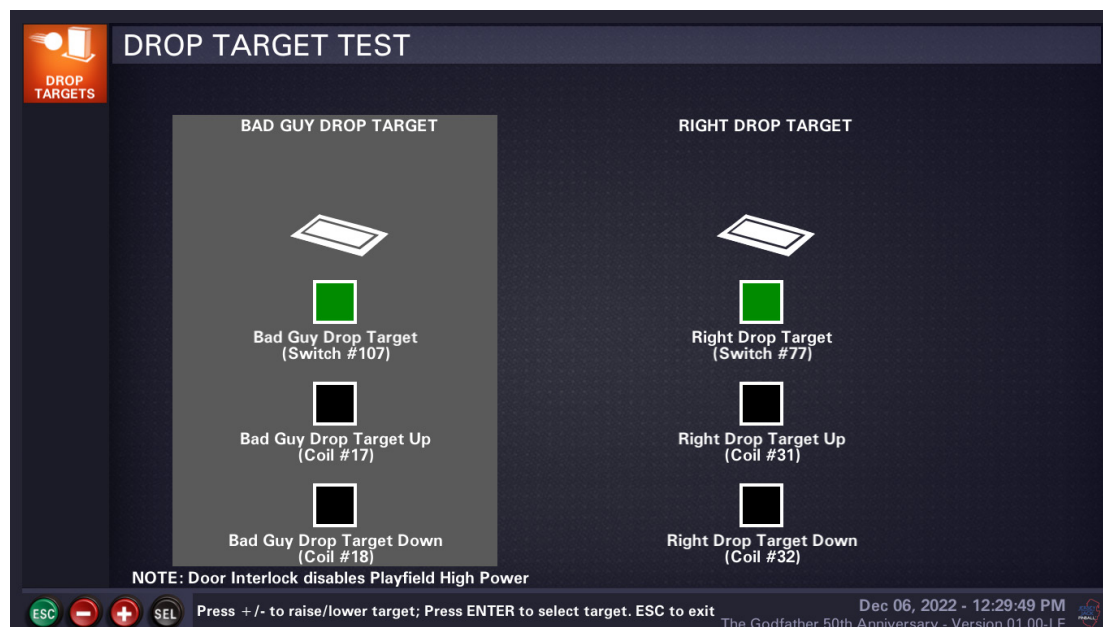
# Drop Target Test

This test allows the user to verify the operation of the two drop targets in the game. The Bad Guy Drop Target and Right Drop Target are both resettable single drop targets. When you enter the **Drop Target Test**, the LCD monitor will display the screen shown on the left side of this page. The screen shows a graphic with the current state of the two drop targets and the state of the switches and coils associated with each target.

The user can select which drop target to test by pressing the **ENTER** button. This will toggle the active target as shown by the highlighted area on the screen. Once a target is selected, the user can press the **+/- buttons** to request the target move up and down. The user can also manually knock down the drop target by gently rolling a ball into the target.

The graphic icon of the target should match the physical state of the drop target on the playfield. The squares below the icon show the state of the switch and coils for each drop target. When a target is in the down position, the switch state should show a **Green (Active)** box. When the target is up, the switch should show an **Amber (Inactive)** box. The coil squares will show black when the coils are inactive and Red when the coils are active. Note that the Target Down coils have a short fire time and may be hard to see on the display.

Note: When the coin door is opened, the game's safety interlock switch (the upper switch on item XXX, page XXX of this manual) disables the 70-volt power running to the playfield. To allow coils to function in the drop targets, you must either close the coin door or pull the safety interlock switch's actuator out (it will "click" and lock in place). When you close the coin door, the interlock switch actuator will be pushed back into its normal (unlocked) position. While in the **Drop Target Test**, you can serve a ball from the trough at any time by pressing the '**Start**' button on the front of the cabinet. To exit the **Drop Target Test** at any time, press the **Back/Escape** button.



Drop Target Test screen.





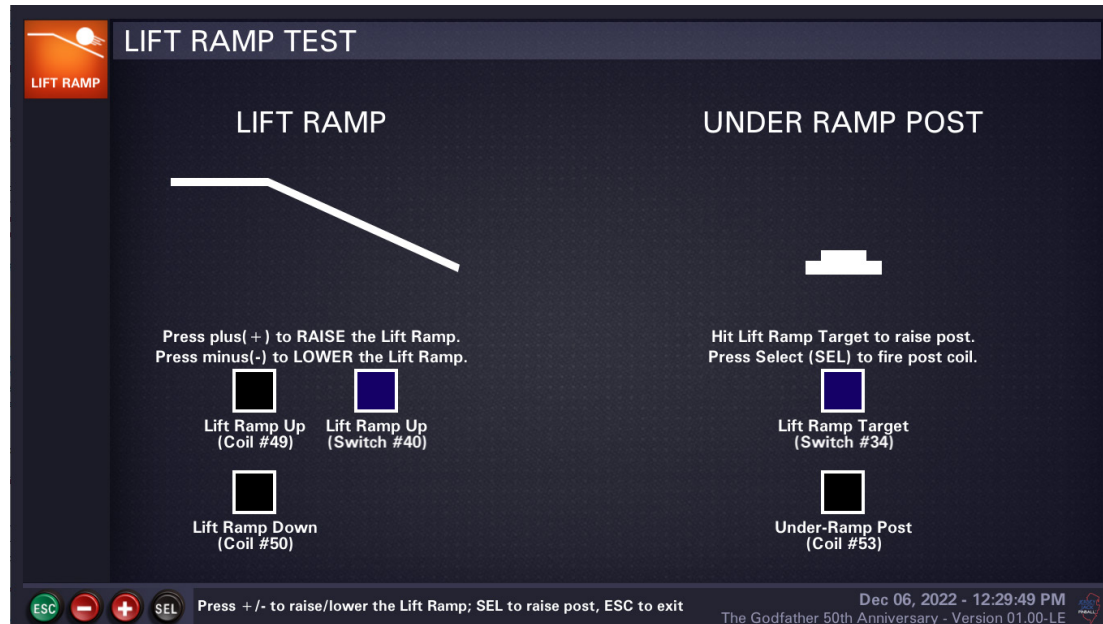
# Lift Ramp Test

The Lift Ramp is a playfield feature that changes the path of the ball around the left ramp. The ramp can be moved up and down and there is a target and an up-post under the ramp. This test allows the user to verify the operation of the components of the lift ramp.

When you enter the **Lift Ramp Test**, the LCD monitor will display the screen shown on the left side of this page. The left side of the screen shows the state of the up/down feature of the ramp. The right side of the screen shows the features under the ramp.

To test the operation of the ramp, press the **+/- buttons** to **raise/lower** the ramp. The ramp icon image should match the physical state of the ramp. When the ramp is in the UP state, the Lift Ramp Up switch box should show **Green (active)**. When the ramp is down, the switch box should show **Blue (inactive)**. The Lift Ramp Up and Lift Ramp Down coil squares will show **Red** during the times the coils are active.

*(continued on next page)*



Lift Ramp Test screen.





Lift Ramp on playfield.

## Lift Ramp Test (cont.)

To test the features under the ramp, use the **+ button** to raise the ramp. Then, roll a ball under the ramp to hit the target at the rear. This will trigger the Under Ramp Post to raise and catch and hold the ball for about three seconds. The Under Ramp Post icon should match the physical state of the playfield post. The Under Ramp Target square will show **Green (active)** when the target is hit and the Under Ramp Post coil square will show **red** when the Under Ramp Post coil is active. You can also press the **Enter (SEL)** button to manually raise the Under Ramp Post.

Note: When the coin door is opened, the game's safety interlock switch (the upper switch on item XXX, page XXX of this manual) disables the 70-volt power running to the playfield. To allow coils to function in the Lift Ramp Test, you must either close the coin door or pull the safety interlock switch's actuator out (it will "click" and lock in place). When you close the coin door, the interlock switch actuator will be pushed back into its normal (unlocked) position. While in the Lift Ramp Test, you can serve a ball from the trough at any time by pressing the **'Start'** button on the front of the cabinet. To exit the **Lift Ramp Test** at any time, press the **Back/Escape** button.



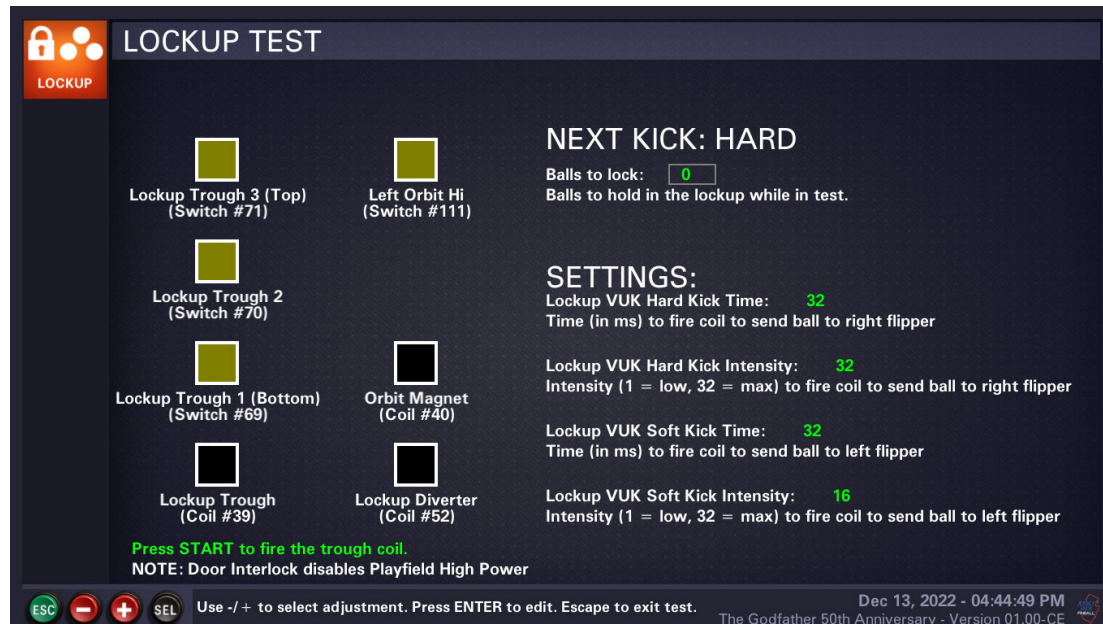
# Lockup Test

The **Lockup Test** allows you to test the operation of the Lockup Trough. This is a playfield feature that can collect three balls and eject them back onto the playfield. The balls enter the lockup at the top left of the playfield by being caught on the Orbit Magnet and passing through the Lockup Diverter. The ball is ejected from the lockup by the Lockup Trough coil.

When you enter the **Lockup Test**, the LCD monitor will display the screen shown on the left side of this page. The left side of the screen shows the state of the switches (optos) in the lockup and left orbit and the state of the coils and magnets used as part of the device. The switches (optos) will show a **green** box when activated and an **amber** box when inactive. The coils will show a **red** box when the coil is active and a **black** box when the coil is inactive. The right side of the screen has settings for how the test operates and allows the user to adjust the strength of the Lockup Trough coil.

To test the operation of the Lockup Trough, begin by rolling a ball around the left or right orbit. The ball should be caught on the Orbit Magnet and the Lockup Diverter should activate (pull down). After a short delay, the Orbit Magnet should release the ball into the back of the Lockup Trough. The “**Balls to lock**” setting will determine if the ball should stay in the lockup or be ejected by the Lockup Trough coil. You can change the “**Balls to lock**” setting by pressing the **+/- buttons** to move the cursor to the lock count and then pressing the **ENTER** button to select this parameter. The **+/- buttons** will then adjust the value. When set to “1” or “2”, the lockup will hold up to that number of balls. Any additional balls that enter the lockup will be ejected by the VUK. Reducing the “**Balls to lock**” count should cause a ball to be released from the Lockup Trough.

*(continued on next page)*

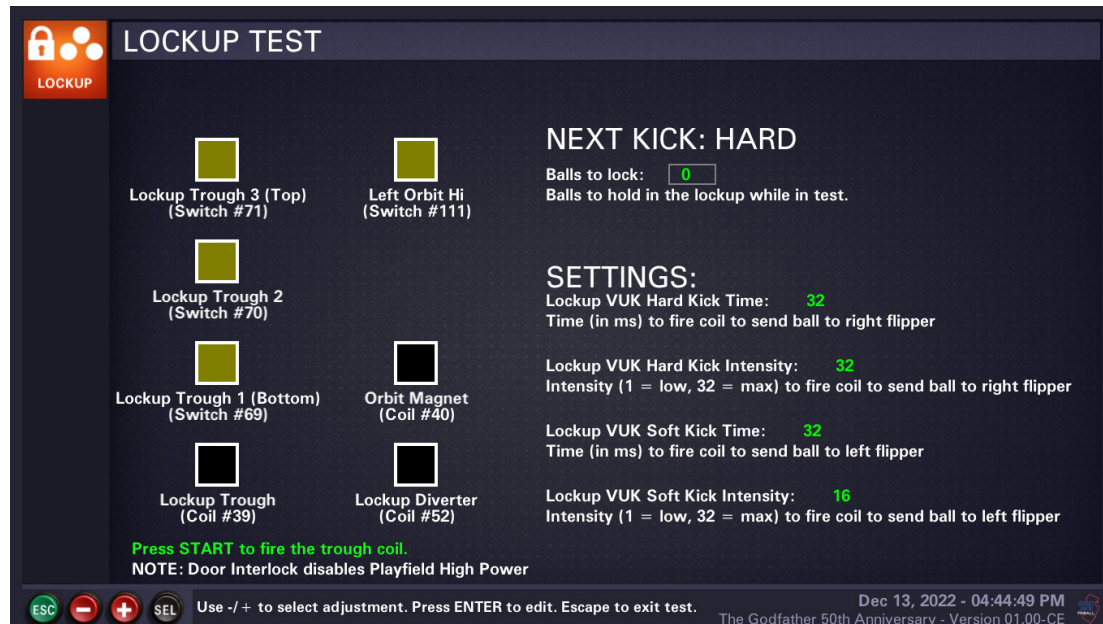


Lockup Test screen.

# Lockup Test (cont.)

The Lockup Trough coil can do either a hard or soft kick. The test will alternate between HARD and SOFT kicks for each ball ejected from the lockup, as shown by the NEXT KICK header. The user should verify that the ball is able to be ejected from the Lockup Trough for both a HARD and SOFT kick. The settings for Lockup VUK Kick Time and Lockup VUK Kick Intensity can be used to adjust the kick strength. Press the **+/- buttons** to move the cursor to the kick adjustment you wish to change. Then, select the kick setting by pressing the **ENTER** button. The user can then adjust the kick setting value using the **+/- buttons**. Once the desired value is reached, press the **ENTER** button to save the new value.

Note: When the coin door is opened, the game’s safety interlock switch (the upper switch on item XXX, page XXX of this manual) disables the 70-volt power running to the playfield. To allow coils to function in the Lockup Test, you must either close the coin door or pull the safety interlock switch’s actuator out (it will “click” and lock in place). When you close the coin door, the interlock switch actuator will be pushed back into its normal (unlocked) position. While in the **Lockup Test**, you can serve a ball from the trough at any time by pressing the **‘Start’** button on the front of the cabinet. To exit the **Lockup Test** at any time, press the **Back/Escape** button.



Lockup Test screen.





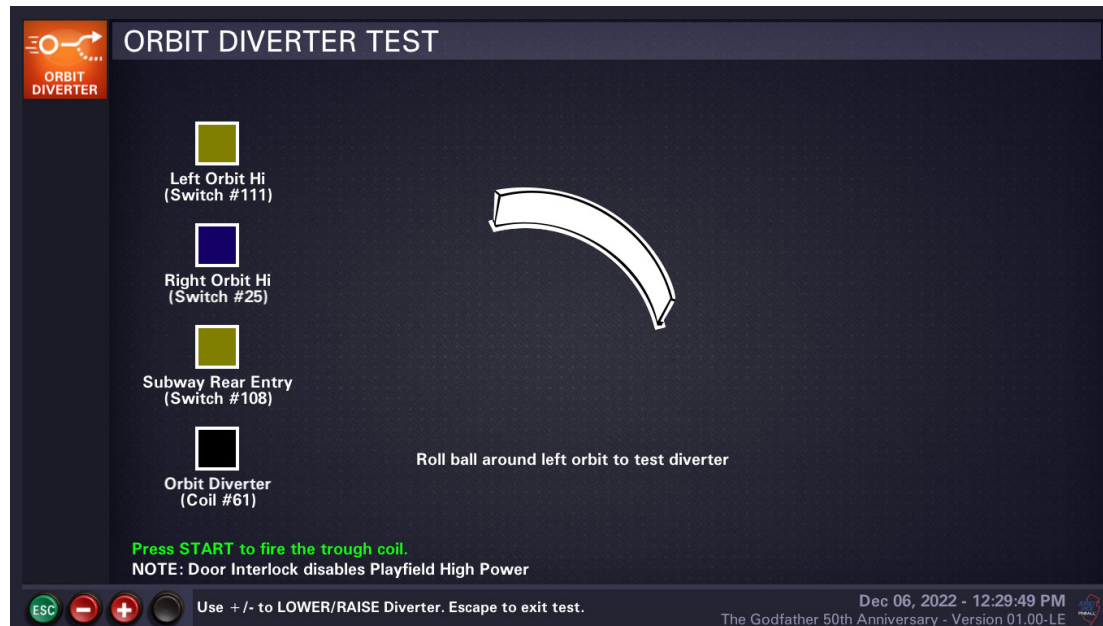
# Orbit Diverter Test

The Orbit Diverter is a device at the top of the playfield, in the right orbit, that can change the path of the ball from the orbit to the subway (Hideout.) This test allows you to test the operation of the diverter and the switches associated with its operation.

When you enter the **Orbit Diverter Test**, the LCD monitor will display the screen shown on the left side of this page. The left side of the screen shows the state of the switches and coils used by the device. The right side shows an icon of the diverter that represents the current up/down state. The switches will show a green box when activated and an amber (optos) or blue (micro switch) box when inactive. The coil will show a red box when the coil is active and a black box when the coil is inactive. When the Orbit Diverter coil is active, the diverter should be pulled down flush with the playfield.

To test the operation of the Orbit Diverter, press the – (**Down**) button and verify that the Orbit Diverter coil activates and the diverter is pulled down. Press the + (**Up**) button and verify that the Orbit Diverter coil turns off and the diverter raises all the way up. Next, press the – (**Down**) button to lower the diverter. Then, roll a ball into the right orbit. The ball should pass over the diverter and into the subway (Hideout) and be ejected from the Don’s office (scoop). Once the ball enters the subway, the diverter should automatically be raised again. Next, roll a ball into the left orbit. As the ball passes the Left Orbit Hi switch, the diverter should automatically be lowered and the ball should roll over the diverter and into the subway (Hideout) and be ejected from the Don’s Office (scoop). The diverter should automatically raise once the ball is released from the scoop.

Note: When the coin door is opened, the game’s safety interlock switch (the upper switch on item XXX, page XXX of this manual) disables the 70-volt power running to the playfield. To allow coils to function in the **Orbit Diverter Test**, you must either close the coin door or pull the safety interlock switch’s actuator out (it will “click” and lock in place). When you close the coin door, the interlock switch actuator will be pushed back into its normal (unlocked) position. While in the **Orbit Diverter Test**, you can serve a ball from the trough at any time by pressing the ‘**Start**’ button on the front of the cabinet. To exit the **Orbit Diverter Test** at any time, press the **Back/Escape** button.



Orbit Diverter Test screen.



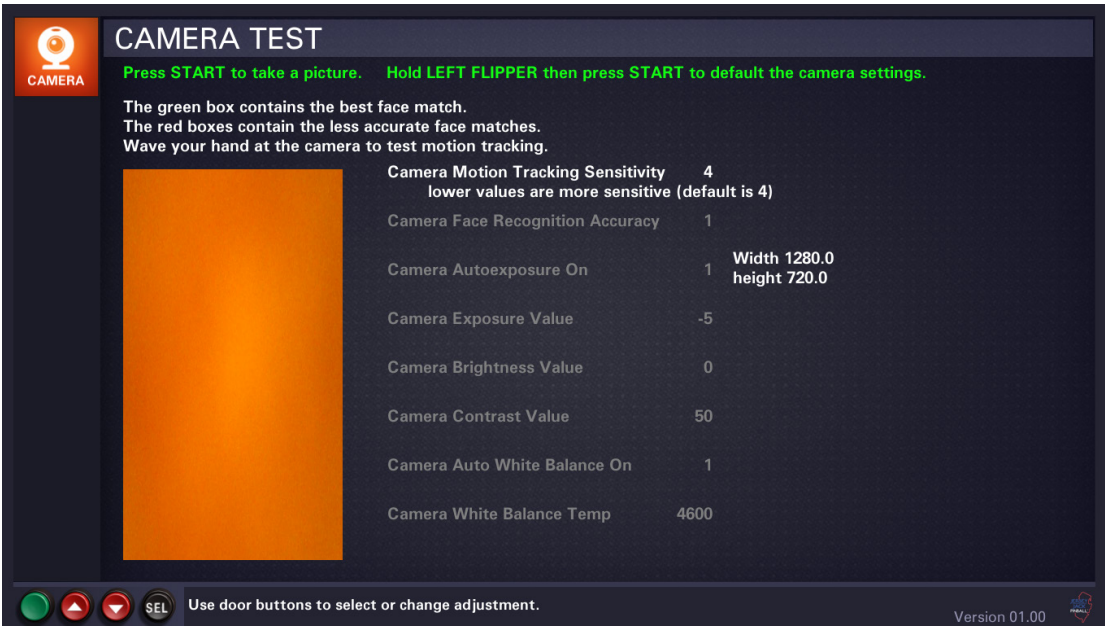


# Camera Test

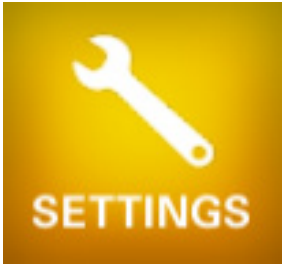
When you enter the **Camera Test**, the LCD monitor will display a screen similar to that shown. A large window on the left side of the screen will show what the game's camera (in the lower, center area of the backbox) currently "sees". Within that window, a green box will be placed around (what the software determines to be) the "best match" for a person's face. Red boxes will be placed around (what the software determines to be) "less accurate" face matches. You can wave your hand around to test motion detection. When the software recognizes your hand moving, the words "MOTION DETECTED" will appear, in green, in the center of the screen.

You select a sensitivity control to adjust (motion tracking or face recognition) with the **Up/+** and **Down/-** buttons. The currently selected control will be highlighted in white text. To make a change, press the **Enter** button, then use the **Up/+** and **Down/-** buttons to specify a new numeric value. You are providing relative sensitivity levels for the software to use to recognize faces and detect motion. The game software will apply these levels to the camera image data during game play in order to implement special features. Once you're finished adjusting a numerical value, press the **Enter** button once again to apply the change. To cancel the change, press the **Back/Escape** button.

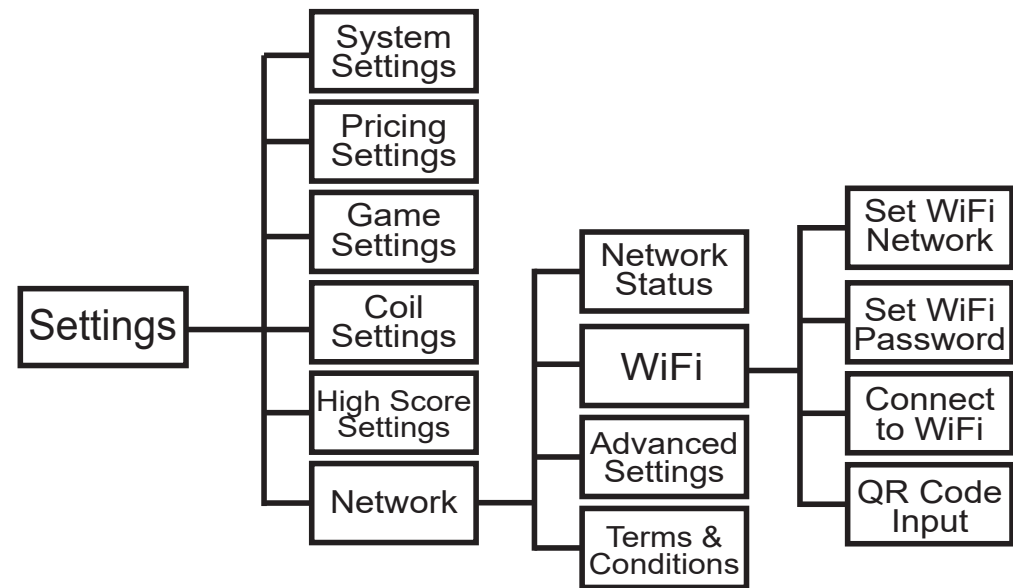
To exit the **Camera Test** at any time, press the **Back/Escape** button.



Camera Test screen.



# Settings



Settings menu tree.

The **Settings** menu allows the user to adjust system, pricing, game, coil and high score settings, to personalize the game (home use) or optimally configure it for a location or route (commercial use).

**System Settings** - adjust settings for high-level game controls such as balls per game, ball save time, tilt warnings, audio levels, match percentage and replay/scoring awards.

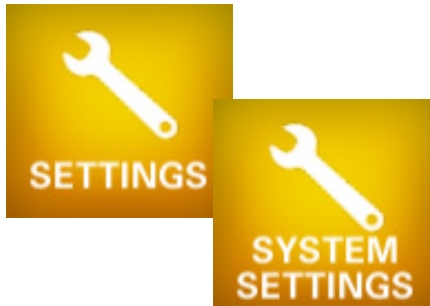
**Pricing Settings** - adjust settings for pricing controls such as free play, accepted currency, coin door specifics and pricing tiers/levels.

**Game Settings** - adjust game-specific settings such as Jackpot difficulties, Kickback & Extra Ball relight frequencies, and Mode, Bonus & Multiball difficulties.

**Coil Settings** - adjust kicking strength for virtually every coil in the game.

**High Score Settings** - adjust settings related to high scores such as whether the game will record them, what the award for high score will be, multiple player initials and default high scores.

**Network Settings** - adjust settings related to the WiFi and online game connectivity features



# System Settings

When you enter the **System Settings** menu, the LCD monitor will display the screen shown. Settings that have been changed from factory defaults are displayed in red. Default settings are displayed in green, but only when a menu item is highlighted. Menu items that cannot be altered are displayed in gray. You can scroll through menu items with the **Up/+** and **Down/-** buttons; press **Enter** to select an item you would like to change. Use the **Up/+** and **Down/-** buttons to alter the highlighted data value, then press **Enter** to accept the new value. Press **Back/Escape** to escape from a selected menu item without saving changes. NOTE: Pindemption® settings are only available in a JJP game with a Pindemption®-enabled security dongle.

To exit the **System Settings** menu at any time, press the **Back/Escape** button.

## GENERAL

**Game Play Type:** specify how the game will end: after a designated number of balls played or a designated amount of time.

*BALLS*: traditional style of pinball play

Default: BALLS

*TIME*: timed pinball play

**Ball Play Type:** specify how extra balls will be played during a game. With the BALLS IN PLAY option, extra balls will be played immediately after the ball on which they are earned. With the BALLS IN RESERVE option, earned extra balls will be held until the end of the game, with players continuing to take turns playing one ball at a time until all balls in reserve have been played.

**BALLS IN PLAY:** extra ball played immediately

Default: BALLS IN RESERVE

**BALLS IN RESERVE:** extra ball held in reserve, to play later

**Balls Per Game:** specify the number of balls each player gets to play within a single game.

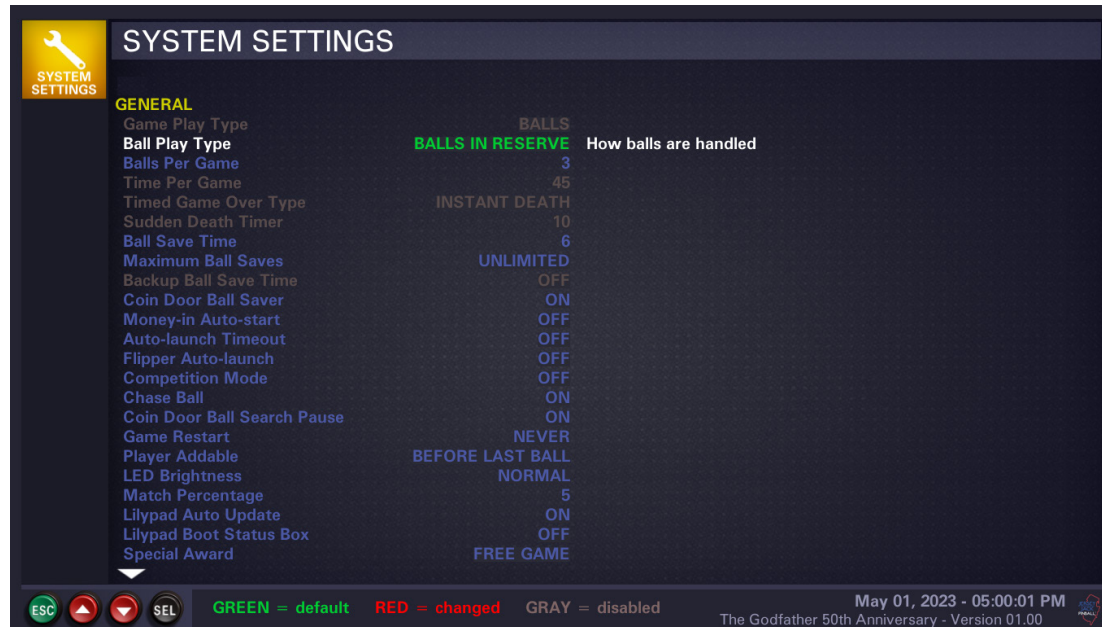
1-5: 1-5 balls

Default: 3 balls

**Time Per Game:** specify how long a game will last.

30-300: 30-300 seconds

Default: 45 seconds



**System Settings screen.**



**Timed Game Over Type:** specify how a timed game will end.  
*INSTANT DEATH:* game ends when timer reaches zero. Default: INSTANT DEATH  
*SUDDEN DEATH:* game ends when timer reaches zero and the ball in play drains.  
*SUDDEN TIMER:* game ends when timer reaches zero and the Sudden Death Timer reaches zero.

**Sudden Death Timer:** specify the amount of sudden death time.  
*2-15:* 2-15 seconds Default: 10 seconds

**Ball Save Time:** specify the time, from ball launch, up to which the game will Auto-Launch a replacement ball into play, if a player’s ball drains for any reason (except a tilt).  
*OFF:* ball save feature disabled Default: 6 seconds  
*1-20:* 1-20 seconds

**Maximum Ball Saves:** how many times the normal ballsaver time can save the ball.  
Default: UNLIMITED

**Backup Ball Save Time:** ball save seconds after using max ball saves.  
Default: OFF

**Coin Door Ball Saver:** when ON, ball saver turns on automatically when door opens.  
Default: ON

**Money-In Auto-Start:** specify whether the game will begin immediately when a credit equivalent, in money, has been inserted or not.  
*ON:* begin game immediately Default: OFF  
*OFF:* do not begin immediately

**Auto-Launch Timeout:** specify whether the game will auto-launch a served ball from the shooter lane, after a designated period of time or not.  
*30, 60, 90:* 30, 60 & 90 second auto-lanch Default: OFF  
*OFF:* never auto-launch a served ball

**Flipper Auto-Launch:** specify whether the flipper buttons can be used to launch a served ball into play or not.  
*LEFT FLIPPER:* left button launches ball Default: OFF  
*RIGHT FLIPPER:* right button launches ball  
*EITHER FLIPPER:* either button launches ball  
*BOTH FLIPPERS:* both buttons, simultaneously pressed, launch ball  
*OFF:* flipper buttons don’t launch ball

**Competition Mode:** specify whether the game will give random awards and allow carry-over features during gameplay or not.  
*ON:* no random awards or carry-over features Default: OFF  
*OFF:* allow random awards and carry-over features

**Chase Ball:** specify whether or not a chase ball will be auto-launched into play when ball search cannot locate the ball in play.  
*ON:* use a chase ball Default: ON  
*OFF:* do not use a chase ball

**Coin Door Ball Search Pause:** if ON, pause ball searching while the coin door is open.  
Default: ON

**Game Restart:** specify how the game responds to the start button being pressed in the middle of a game already in progress.  
*NEVER:* never restart the game Default: NEVER  
*SLOW:* restart the game only if the start button is held in for 1/2 second or more

**Player Addable:** specify when a new player can join a game already in progress. This setting is only available when *BALLS IN RESERVE* is selected as the **Ball Play Type** above.  
*ALWAYS:* new player can join anytime Default: *BEFORE LAST BALL*  
*BEFORE LAST BALL:* new player can only join before last ball begins

**LED Brightness:** specify the intensity level of LEDs under the playfield inserts.  
*LOW:* lowest intensity Default: NORMAL  
*LOWER:* low-medium intensity  
*NORMAL:* medium intensity  
*HIGH:* highest intensity







## SCORE AWARDS

**Score Award Levels:** specify the number of score award levels. With the score award system, you can configure up to four fixed score Levels, along with specific awards for reaching each of those levels. You can also define and employ Score Award Boosts, if desired.

0-4: 0-4 levels

Default: 0 levels

**Score Level 1:** specify 1st score award level (Score Award Levels: 1-4 only).

Default: 1,000,000 points

**Score Level 2:** specify 2nd score award level (Score Award Levels: 2-4 only).

Default: 2,500,000 points

**Score Level 3:** specify 3rd score award level (Score Award Levels: 3-4 only).

Default: 5,000,000 points

**Score Level 4:** specify 4th score award level (Score Award Levels: 4 only).

Default: 10,000,000 points

**Score Award 1:** specify award for achieving score level 1 (Score Award Levels: 1-4 only).

*FREE GAME*: a free game

Default: EXTRA BALL

*EXTRA BALL*: an extra ball

*LIGHT SPECIAL:* light the Special shot on the playfield

*AUDIT:* no award, just record in Audits

**Score Award 2:** specify award for achieving score level 2 (Score Award Levels: 2-4 only).

Default: EXTRA BALL

**Score Award 3:** specify award for achieving score level 3 (Score Award Levels: 3-4 only).

Default: EXTRA BALL

**Score Award 4:** specify award for achieving score level 4 (Score Award Levels: 4 only).

Default: EXTRA BALL

**Score Award Boost:** specify whether to temporarily boost score levels (when achieved) or not (Score Award Levels: 1-4 only).

*OFF*: no score level boost

Default: OFF

*10000-500000*: 10,000-500,000 point boost

## MONITOR

**Width Scale:** the width extent of the game's LCD screen, in pixels (1000 is the maximum).

**Height Scale:** the height extent of the game's LCD screen, in pixels (1000 is the maximum).

**X Offset:** the left offset for the game's LCD screen, in pixels.

**Y Offset:** the top offset for the game's LCD screen, in pixels.

## Player Menu

**Menu Enabled:** Enable or disable the player menu

Default: YES

**Bluetooth Menu Item Enabled:** Enable or disable the bluetooth menu

Default: YES

**Camera Menu Item Enabled:** Enable or disable the camera

Default: YES

**Competition Menu Item Enabled:** Enable or disable the competition menu

Default: YES



## Pricing Settings

When you enter the **Pricing Settings** menu, the LCD monitor will display the screen shown. Settings that have been changed from factory defaults are displayed in red. Default settings are displayed in green, but only when a menu item is highlighted. Menu items that cannot be altered are displayed in gray. You can scroll through menu items with the **Up/+** and **Down/-** buttons; press **Enter** to select an item you would like to change. Use the **Up/+** and **Down/-** buttons to alter the highlighted data value, then press **Enter** to accept the new value. Press **Back/Escape** to escape from a selected menu item without saving changes.

To exit the **Pricing Settings** menu at any time, press the **Back/Escape** button.

## GENERAL

**Free Play:** specify whether the game will play for free or not.

YES: play for free

Default: YES

*NO*: require currency for play

**Currency:** specify currency for the game to accept. Default values and currency labels under COIN DOOR and PRICING SCHEME headings change with different types of currency. Values and labels shown below are for Dollars currency.

*Dollars (\$):* Dollars

Default: Dollars

Euros (€): Euros

*Pounds (£):* Pounds

*Yen (¥): Yen*

*Krone (kr)*: Krone

*Krona (kr):* Krona

*Coins:* coins

*Tokens:* tokens

*Swipes:* card swipes through a reader

*Bills:* bills through a bill acceptor

*Frankens (Fr):* Frankens



### Pricing Settings screen.

**Money Limit:** specify the maximum amount of money the game can accept at any time.

**\$0.00:** Unlimited dollar amount

Default: \$0.00

\$0.01-\$100,000.00: \$0.01-\$100,000.00

**Credit Limit:** specify the maximum number of credits the game can hold at any time.

0: Unlimited credits

Default: 0

*1-100: 1-100 credits*

COIN DOOR

**Coin Switch 1 Pulse Amount:** specify the amount of currency represented by one pulse from coin switch 1.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$0.25

**Coin Switch 2 Pulse Amount:** specify the amount of currency represented by one pulse from coin switch 2.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$0.25

**Coin Switch 3 Pulse Amount:** specify the amount of currency represented by one pulse from coin switch 3.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$0.25

**Coin Switch 4 Pulse Amount:** specify the amount of currency represented by one pulse from coin switch 4.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$0.25

**Coin Switch 5 Pulse Amount:** specify the amount of currency represented by one pulse from coin switch 5.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$0.25

**Card Reader Installed:** specify whether a card reader is installed in the game or not.

*YES:* card reader installed                      Default: NO

*NO:* no card reader installed

PRICING SCHEME

**Pricing Levels:** specify the number of desired pricing levels (or tiers).

*1-10:* 1-10 levels                      Default: 1 level

**Tier 1 Cost:** specify cost for pricing tier 1.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$1.00

**Tier 1 Credits:** specify the number of credits for pricing tier 1.

*1-100:* 1-100 credits                      Default: 1 credit

**Tier 2 Cost:** specify cost for pricing tier 2.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$2.00

**Tier 2 Credits:** specify the number of credits for pricing tier 2.

*1-100:* 1-100 credits                      Default: 2 credits

**Tier 3 Cost:** specify cost for pricing tier 3.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$3.00

**Tier 3 Credits:** specify the number of credits for pricing tier 3.

*1-100:* 1-100 credits                      Default: 3 credits

**Tier 4 Cost:** specify cost for pricing tier 4.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$4.00

**Tier 4 Credits:** specify the number of credits for pricing tier 4.

*1-100:* 1-100 credits                      Default: 4 credits

**Tier 5 Cost:** specify cost for pricing tier 5.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$5.00

**Tier 5 Credits:** specify the number of credits for pricing tier 5.

*1-100:* 1-100 credits                      Default: 5 credits

**Tier 6 Cost:** specify cost for pricing tier 6.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$6.00

**Tier 6 Credits:** specify the number of credits for pricing tier 6.

*1-100:* 1-100 credits                      Default: 6 credits

**Tier 7 Cost:** specify cost for pricing tier 7.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$7.00

**Tier 7 Credits:** specify the number of credits for pricing tier 7.

*1-100:* 1-100 credits                      Default: 7 credits

**Tier 8 Cost:** specify cost for pricing tier 8.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$8.00

**Tier 8 Credits:** specify the number of credits for pricing tier 8.

*1-100:* 1-100 credits                      Default: 8 credits

**Tier 9 Cost:** specify cost for pricing tier 9.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$9.00

**Tier 9 Credits:** specify the number of credits for pricing tier 9.

*1-100:* 1-100 credits                      Default: 9 credits

**Tier 10 Cost:** specify cost for pricing tier 10.

*\$0.01-\$100,000.00:* \$0.01-\$100,000.00                      Default: \$10.00

**Tier 10 Credits:** specify the number of credits for pricing tier 10.

*1-100:* 1-100 credits                      Default: 10 credits





# Game Settings

When you enter the **Game Settings** menu, the LCD monitor will display the screen shown. Settings that have been changed from factory defaults are displayed in red. Default settings are displayed in green, but only when a menu item is highlighted. Menu items that cannot be altered are displayed in gray. You can scroll through menu items with the **Up/+** and **Down/-** buttons; press **Enter** to select an item you would like to change. Use the **Up/+** and **Down/-** buttons to alter the highlighted data value, then press **Enter** to accept the new value. Press **Back/Escape** to escape from a selected menu item without saving changes.

To exit the **Game Settings** menu at any time, press the **Back/Escape** button.

Please refer to the game software for detailed setting descriptions when highlighting each item!



Game Settings screen.



# Coil Settings

When you enter the **Coil Settings** menu, the LCD monitor will display the screen shown. Settings that have been changed from factory defaults are displayed in red. Default settings are displayed in green, but only when a menu item is highlighted. Menu items that cannot be altered are displayed in gray. You can scroll through menu items with the **Up/+** and **Down/-** buttons; press **Enter** to select an item you would like to change. Use the **Up/+** and **Down/-** buttons to alter the highlighted data value, then press **Enter** to accept the new value. Press **Back/Escape** to escape from a selected menu item without saving changes.

From the **Coil Settings** menu, virtually every single coil strength in the game is adjustable. This feature allows the owner/operator to fine tune game play and operation for specific uses.

**CAUTION:** Be careful when adjusting the values in this menu; making certain coils too strong can result in breakage or excessive wear on certain parts of the game.

To exit the **Coil Settings** menu at any time, press the **Back/Escape** button.

Please refer to the next three pages for a listing of the coil settings and their default values.



Coil Settings screen.



# COIL SETTINGS

## TROUGH

Trough VUK Strength 16 1 = low, 32 = max  
Auto-launch Strength 24  
Trough: Restrict Kickout on Error YES

## GENERAL

Kickouts: Restrict Kickout on Error YES  
Maximum Shaker Strength MEDIUM

## FLIPPERS

Left Flipper Strength 22  
Left Flipper Hold Strength 16  
Right Flipper Strength 25  
Right Flipper Hold Strength 16  
Upper Left Flipper Strength 20  
Upper Left Flipper Hold Strength 16

## BAD GUY

Disc Intensity 32  
Bad Guy Stepper CW Limit 14  
Bad Guy Stepper CCW Limit 19

## BUMPERS

Jet Bumper Strength 24

## SLINGSHOTS

Left Slingshot Strength 32  
Right Slingshot Strength 32  
Upper Left Slingshot Strength 32



GREEN = default RED = changed GRAY = disabled

Dec 27, 2022 - 01:28:41 PM  
The Godfather 50th Anniversary - Version 01.00-CE







## COIL SETTINGS

# COIL SETTINGS



Upper Left Slingshot Strength

32 Pulse length in milliseconds

### LOCKUPS / KICKERS / EJECTS

Scoop VUK Kicker Strength

15

U-Turn Divider 1 ball kick time

325

U-Turn Divider 2 ball kick time

400

Captive Wall kick time

300

### LIFT RAMP

Lift Ramp Up Fire Time

200

Lift Ramp Up Fire Intensity

32

Lift Ramp Release Up Fire Time

100

Lift Ramp Release Up Fire Intensity

26

Lift Ramp Down Fire Time

200

Lift Ramp Down Fire Intensity

20

### UNDER RAMP POST

Under Ramp Post Fire Time

250

Under Ramp Post Fire Intensity

32

Under Ramp Post Hold Intensity

32

### CAPTIVE WALL

Captive Wall Up Fire Time

100

Captive Wall Up Fire Intensity

24

Captive Wall Release Up Fire Time

100

Captive Wall Release Up Fire Intensity

20

Captive Wall Down Fire Time

200

Captive Wall Down Fire Intensity

24



ESC



SEL

GREEN = default

RED = changed

GRAY = disabled

Dec 27, 2022 - 01:31:42 PM

The Godfather 50th Anniversary - Version 01.00-CE







# COIL SETTINGS



U-Turn Divider 2 ball kick time 400  
Captive Wall kick time 300

## LIFT RAMP

Lift Ramp Up Fire Time 200  
Lift Ramp Up Fire Intensity 32  
Lift Ramp Release Up Fire Time 100  
Lift Ramp Release Up Fire Intensity 26  
Lift Ramp Down Fire Time 200  
Lift Ramp Down Fire Intensity 20

## UNDER RAMP POST

Under Ramp Post Fire Time 250  
Under Ramp Post Fire Intensity 32  
Under Ramp Post Hold Intensity 32

## CAPTIVE WALL

Captive Wall Up Fire Time 100  
Captive Wall Up Fire Intensity 24  
Captive Wall Release Up Fire Time 100  
Captive Wall Release Up Fire Intensity 20  
Captive Wall Down Fire Time 200  
Captive Wall Down Fire Intensity 24

## DIVERTER

Orbit Diverter Fire Time 150  
Orbit Diverter Fire Intensity 32  
Orbit Diverter Hold Intensity 16 Diverter hold intensity (1 = weak, 32 = full)



GREEN = default RED = changed GRAY = disabled





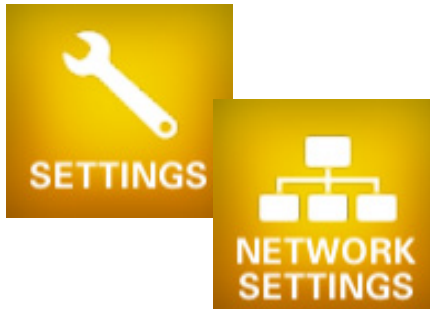
# High Score Settings

When you enter the **High Score Settings** menu, the LCD monitor will display the screen shown. Settings that have been changed from factory defaults are displayed in red. Default settings are displayed in green, but only when a menu item is highlighted. Menu items that cannot be altered are displayed in gray. You can scroll through menu items with the **Up/+** and **Down/-** buttons; press **Enter** to select an item you would like to change. Use the **Up/+** and **Down/-** buttons to alter the highlighted data value, then press **Enter** to accept the new value. Press **Back/Escape** to escape from a selected menu item without saving changes.

To exit the **High Score Settings** menu at any time, press the **Back/Escape** button.



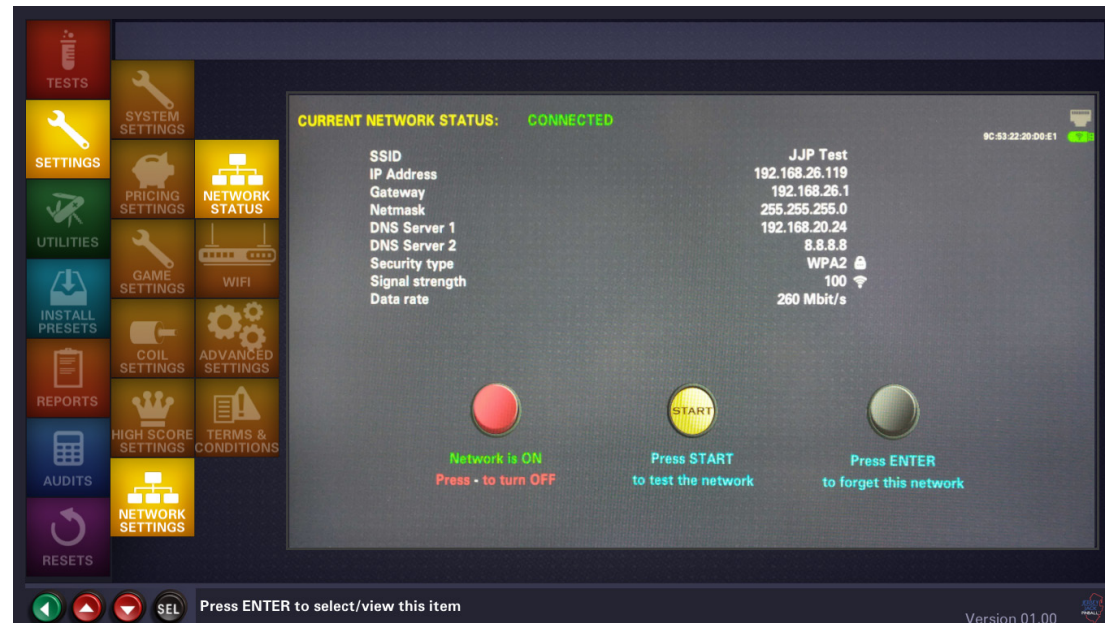
High Score Settings screen.



# Network Settings

Use the **NetWork Settings** utility to configure your games wireless internet connection and check for software updates. See page III (located after the Table of Contents) for more information on how to setup your WIFI connection.

**You must agree to all Terms and Conditions before using the Network Functions!**



Network Settings screen.



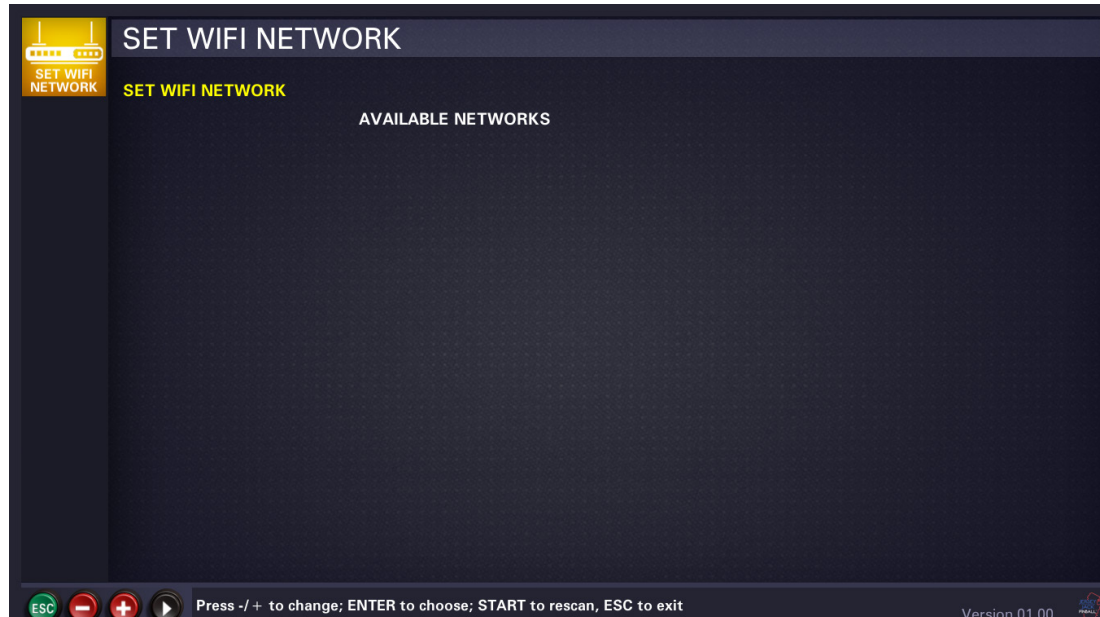


# Set WIFI Network

When you enter **Set WIFI Network Settings**, the LCD monitor will display the screen shown. Set WIFI Network is used to scan available WIFI networks.

Press the black **Enter** button to scan for available networks.  
Use the red **Up/+** and **Down/-** buttons to highlight the network you want to connect to. Select your network with the black **Enter** button.

Use the green **Back/Escape** button to Exit.



Set WIFI NetWork utility screen.



# Set WIFI Password

When you enter **Set WIFI Password Settings**, the LCD monitor will display the screen shown. Set WIFI Password is used to input the network password.

Use flipper buttons to change the character set.

Use black **Enter** button and green **Back/Escape** button to move cursor between characters.

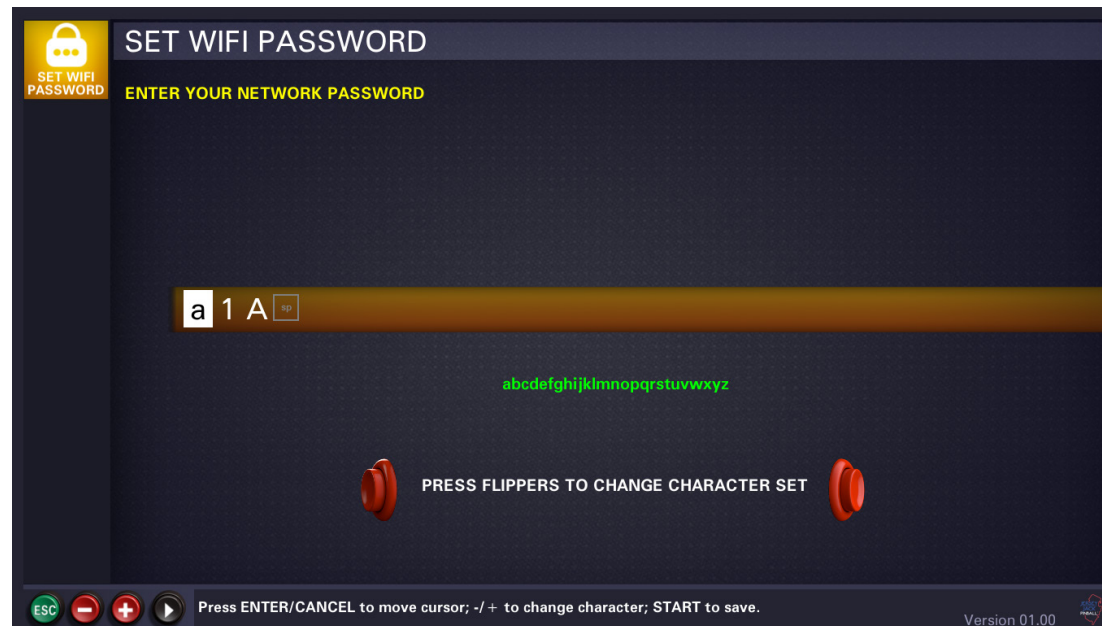
Use red **Up/+** and **Down/-** buttons to change characters within a character set.

Press “Start Button” to save password once you’re finished.

Press the black **Enter** button to scan for available networks.

Use the red **Up/+** and **Down/-** buttons to highlight the network you want to connect to. Select your network with the black **Enter** button.

Use the green **Back/Escape** button to Exit.



Set WIFI Password Utility Screen.

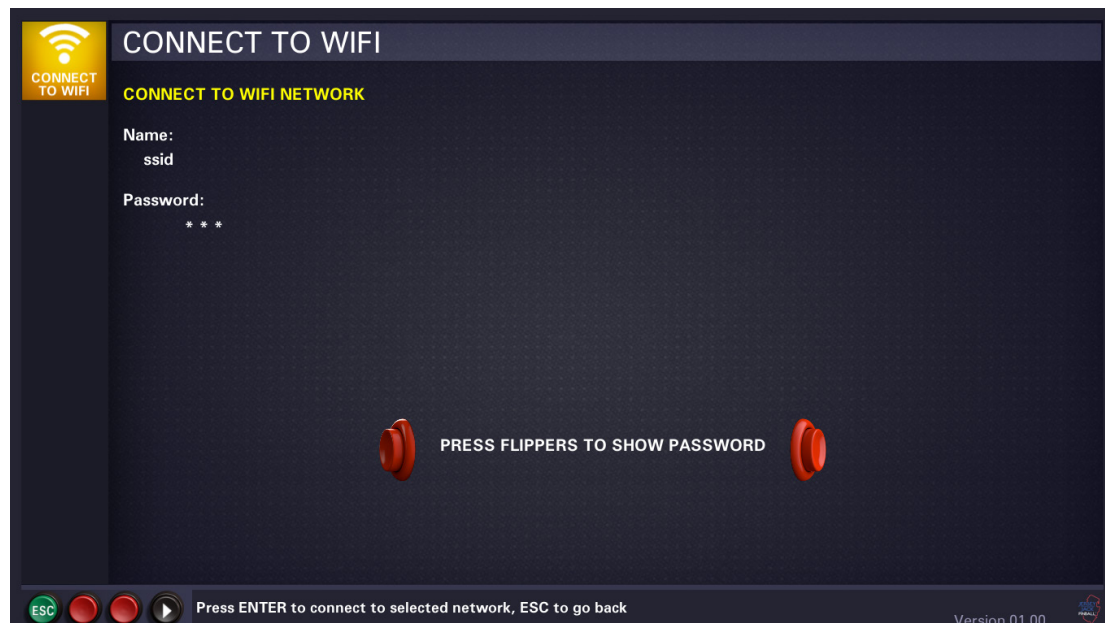


# Connect to WIFI

When you enter **Connect to WIFI Settings**, the LCD monitor will display the screen shown. Connect to WIFI Settings is used to connect to the network.

Use black **Enter** button to connect to the WIFI Network.  
Connected to Network “xxx” will be shown once connected to the network.

Use the green **Back/Escape** button to Exit.



Connect to WIFI utility screen.



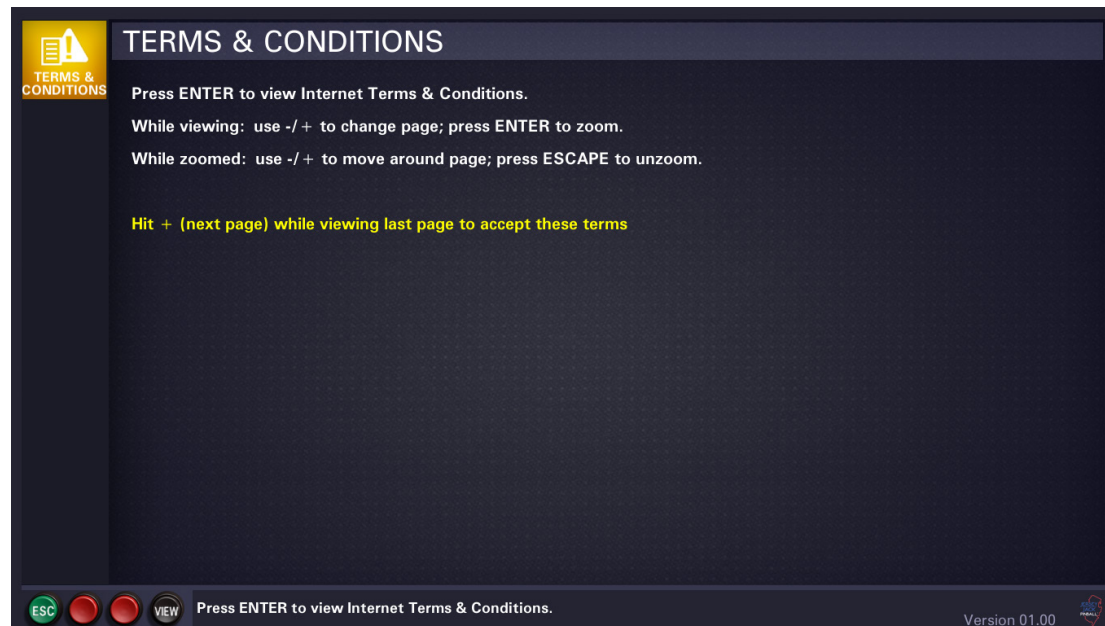
# Terms & Conditions

When you enter **Terms and Conditions**, the LCD monitor will display the screen shown.

Use red **Up/+** and **Down/-** buttons to scroll through the different T&C pages. Once all pages are viewed, “Terms Accepted” will be displayed.

**You must agree to all Terms and Conditions before using the Network Functions!**

Use the green **Back/Escape** button to Exit.



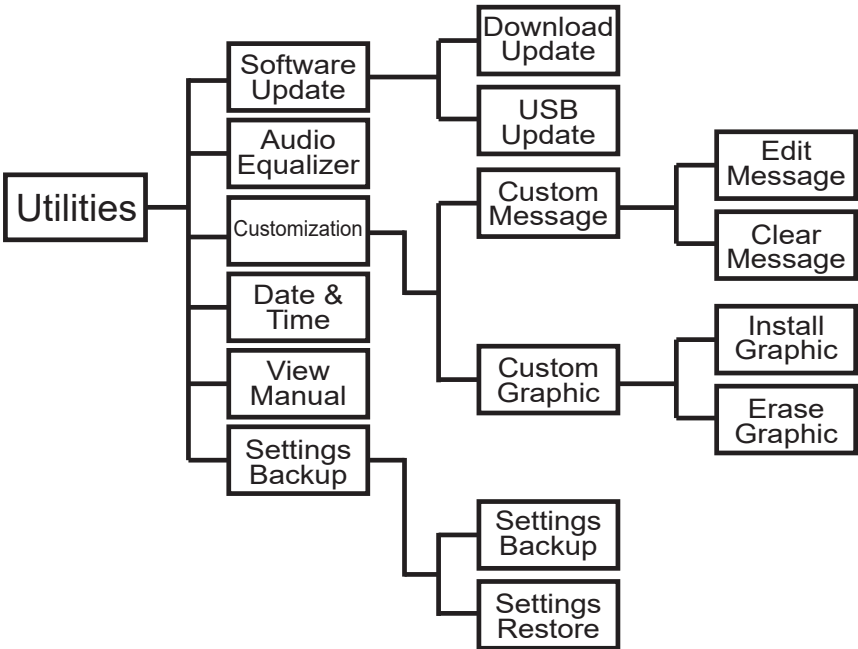
Terms and Conditions Utility Screen.





# Utilities

The **Utilities** menu allows the user to manage and maintain the game by setting the internal clock, entering messages/graphics and through commonly-used routines like burn-in and software update. There are also utility screens to save/restore settings and view this manual.



Utilities menu tree.

**Software Update** - Update your game software via WIFI or USB update methods.

**Audio Equalizer** - Fine tune your audio experience by adjusting the output frequency ranges.

**Customization** - Customize your game: enter/modify a message for the game to display in attract mode (**Custom Message > Edit Message**), clear an existing message (**Custom Message > Clear Message**), upload/select an image (**Custom Graphic > Install Graphic**) for the game to display in attract mode or erase a previously uploaded graphic with the **Custom Graphic > Erase Graphic** utility.

**Date & Time** - Adjust the system date and time.

**View Manual** - Display/navigate the PDF version of the game manual on the main LCD screen.

**Settings Backup** - Backup (**Settings Backup**) and/or restore (**Settings Restore**) settings, audits, replay information and custom message for the game.



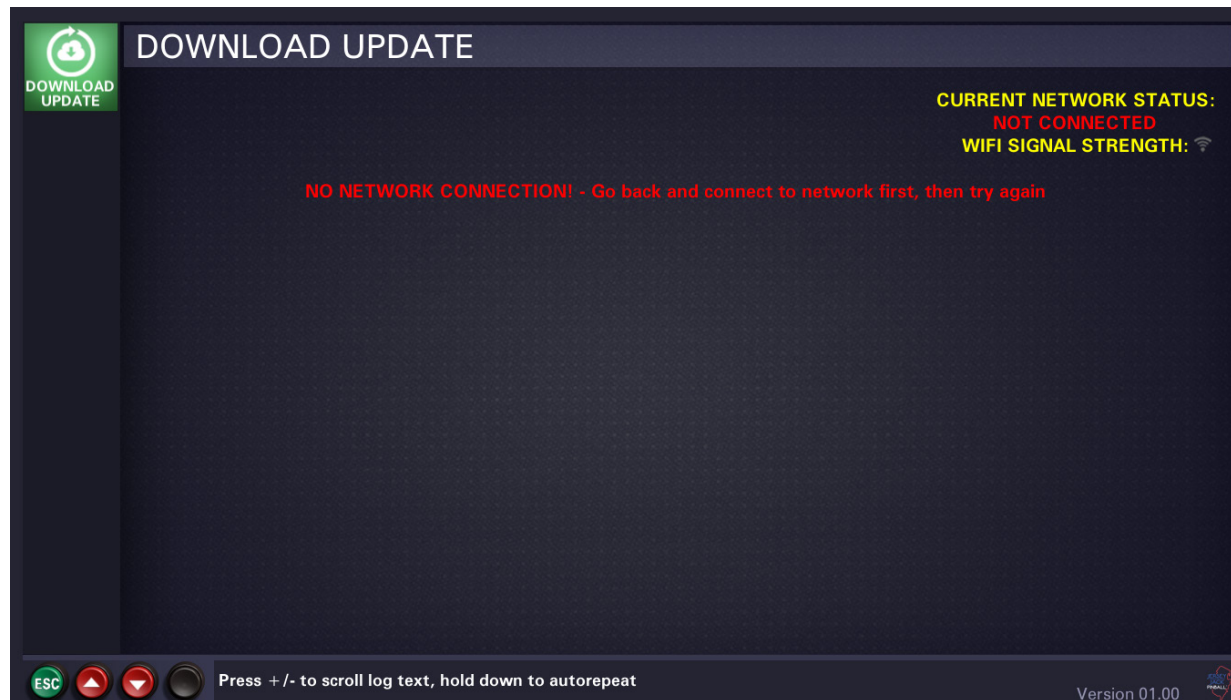
# Download Update

When you enter **Download Update Settings**, the LCD monitor will display the screen shown. Download Update Settings is used to update the game code.

Once entered, the current software version will be displayed along with any available updates.

Use black **Enter** button to highlight the available update and follow the onscreen instructions.

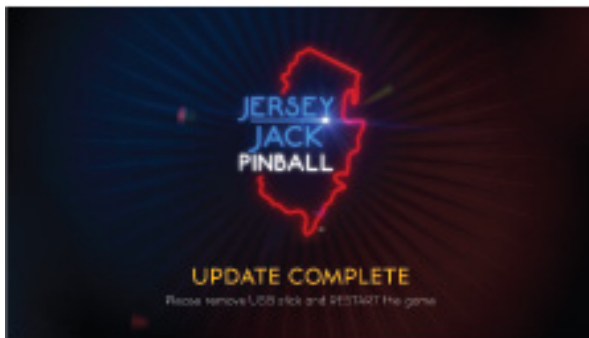
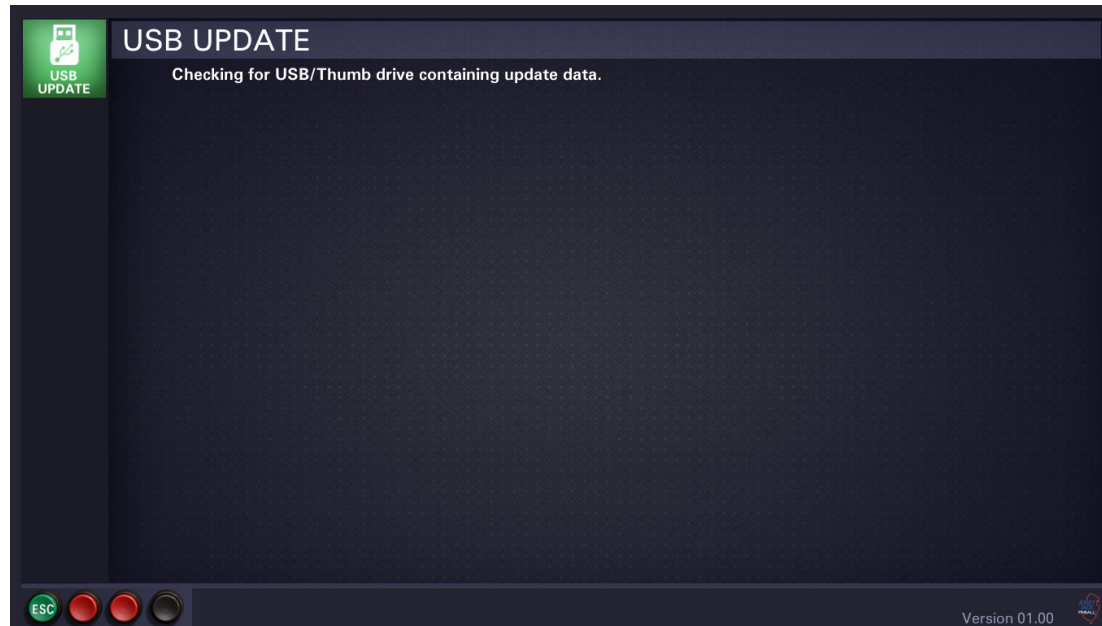
Use the green **Back/Escape** button to Exit.



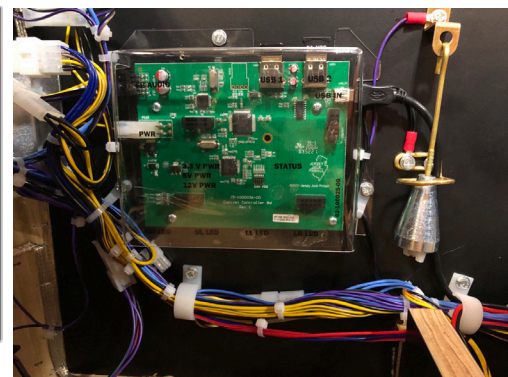
Download Update utility screens.



# USB Update



USB Update utility screens.



Cabinet Control Board (pn: 62-100025-00)

Use the **USB Update** utility to apply a JJP® delta software update to your game, which should only be necessary if the Download Update option is not available. **Note:** The USB update must be downloaded from the JJP® support website (<https://www.jerseyjackpinball.com/support/>), using a separate computer. Copy the “xxxxx\_update” folder from your computer onto an empty USB memory stick (i.e. it should be the only folder on the stick). Power up the game, open the coin door, and use the diagnostics buttons to enter the **USB Update** utility; the LCD monitor will display the screen shown.

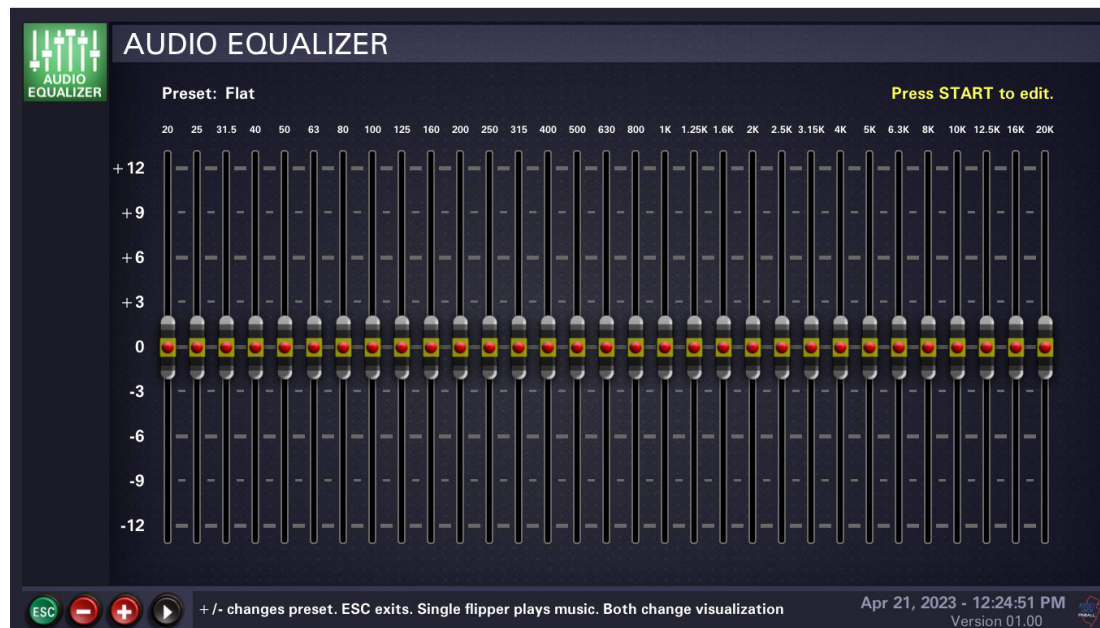
Find the **Cabinet Controller Board**, located to the inside-left from the coin door. Remove either the WiFi or Bluetooth USB dongle, located along the top edge of the board. Insert your USB update stick into the open port, the USB Update screen should display that the update is ready to begin.

To attempt the USB delta update, press the **Enter** button. The game’s playfield will go dark for approximately 15-30 seconds (depending upon the size of the update); the LCD monitor will display the bottom, left screen. You can abort the update process by pressing the **Back/Escape** button. When the delta update is complete, the LCD monitor will prompt you to remove the USB stick and restart the game. Power the game down, remove your USB stick from the Cabinet Controller Board and replace the previously removed WiFi or Bluetooth dongle, then power the game back up again. Once the game has rebooted, verify that the delta update installed successfully by re-entering the game’s Menu System. The installed software version is displayed in the lower, right hand corner of most menu system screens.

To exit the **USB Update** utility, press the **Back/Escape** button.



# Audio Equalizer



Audio EQ utility screen.

You can use the Audio Equalizer to balance the in-game audio to your listening preferences.

There are multiple presets available for audio output to different gaming environments. Use the **-/+ buttons** to change the audio preset, **either flipper button** to play sample audio, and **both flipper buttons** to change how the audio is visualized on the LCD screen.

Use the green **Back/Escape** button to Exit.





## Edit Message

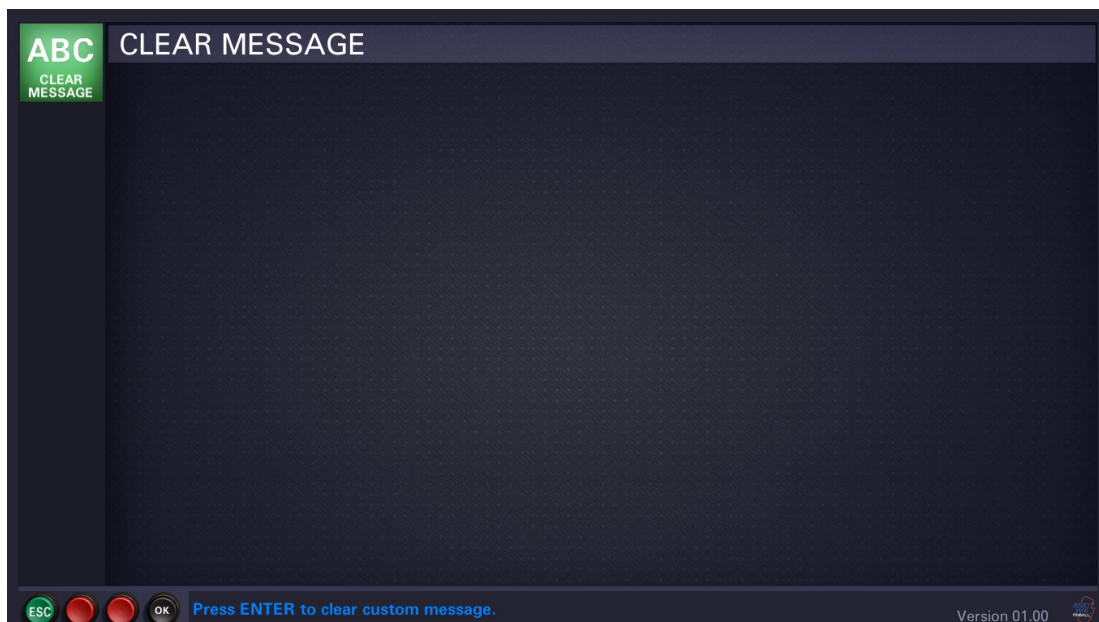
Use the **Custom Message** utility to enter a message that will be displayed on the LCD monitor, periodically, during the game's attract mode. The message is entered or modified using the **Edit Message** utility.

When you enter the **Edit Message** utility, the LCD monitor will display the screen shown. To move the cursor around in the message, use the **Back/Escape** (move left) and **Enter** (move right) buttons. Use the **Up/+** and **Down/-** buttons to change the highlighted character, then press the **Start** button to save your custom message, as displayed on the screen.

To exit the **Edit Message** utility, move the cursor to the position shown (The upper left hand corner), then press the **Back/Escape** button. Note: The **Start** button moves the cursor to this position after saving the message.



Edit Message utility screen.



Clear Message utility screen.

## Clear Message

Use the **Clear Message** utility to delete a previously entered custom message.

When you enter the **Clear Message** utility, the LCD monitor will display the screen shown. To clear the current custom message, press the **Enter** button. You will be prompted to hit the **Start** button to confirm and complete the operation.

To exit the **Clear Message** utility at any time, press the **Back/Escape** button.



# Install Graphic

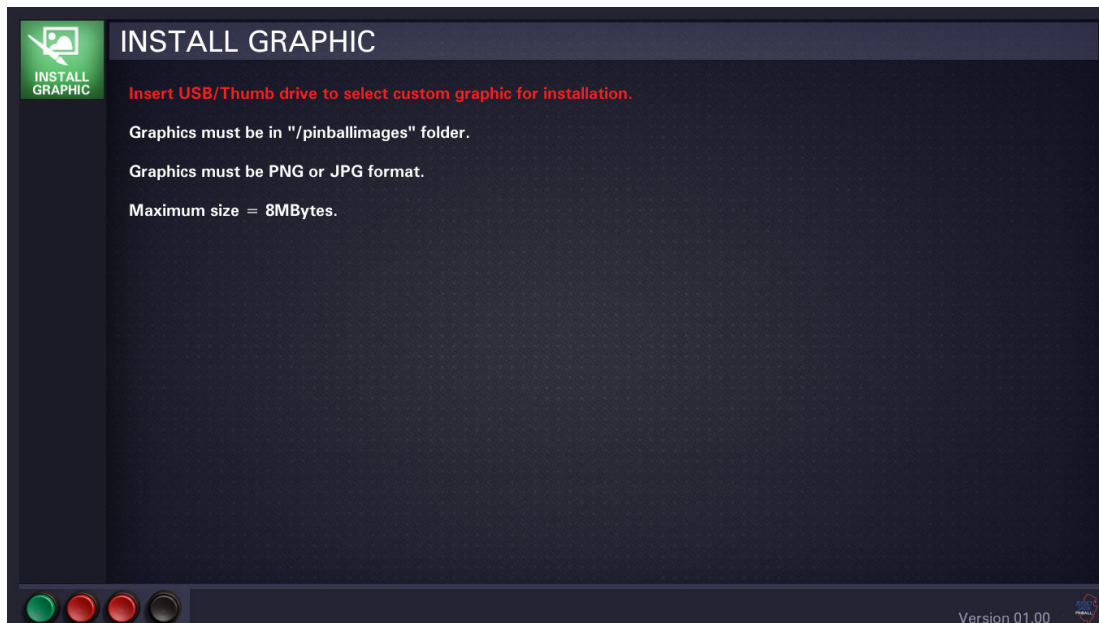
Use the **Custom Graphic** utility to install an image that will be displayed on the LCD monitor, periodically, during the game's attract mode. The custom image is uploaded or changed using the **Install Graphic** utility.

Note: The image must be loaded onto a USB memory stick, using a separate computer. **It must be in PNG or JPG format and under 2MB in size.** Create a folder named "**pinballimages**" in the root directory of the USB stick, then copy your graphic(s) into the folder. Power up the game, open the coin door, and use the diagnostics buttons to enter the **Install Graphic** utility; the LCD monitor will display the screen shown on the left.

Locate the end of the USB extension cable, just inside the open coin door. Fully insert the USB stick into the connector at the end of the cable (if your USB stick is equipped with an "in-use" light, it will illuminate). A screen will come up automatically, showing a listing of the available graphics in your USB stick's "**pinballimages**" folder.

Use the **Up/+** and **Down/-** buttons to select the graphic you wish to install, then press the **Enter** button to complete the operation.

To exit the **Install Graphic** utility at any time, press the **Back/Escape** button.



Install Graphic utility screens.

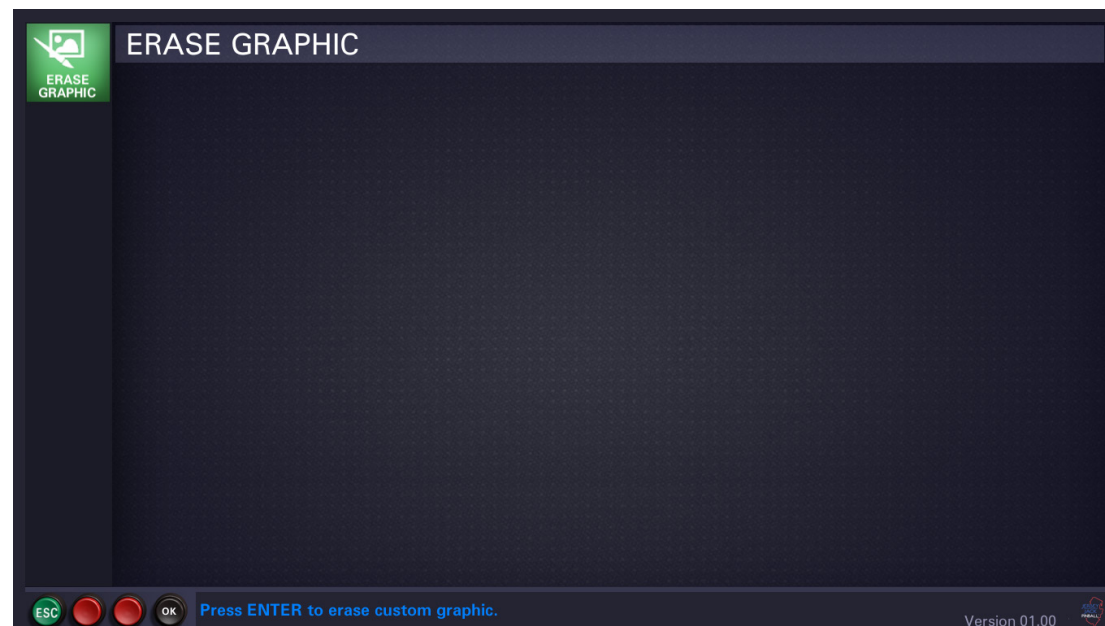


# Erase Graphic

Use the **Erase Graphic** utility to delete a previously installed custom graphic.

When you enter the **Erase Graphic** utility, the LCD monitor will display the screen shown. To clear the current custom graphic, press the **Enter** button. You will be prompted to hit the **Start** button to confirm and complete the operation.

To exit the **Erase Graphic** utility at any time, press the **Back/Escape** button.

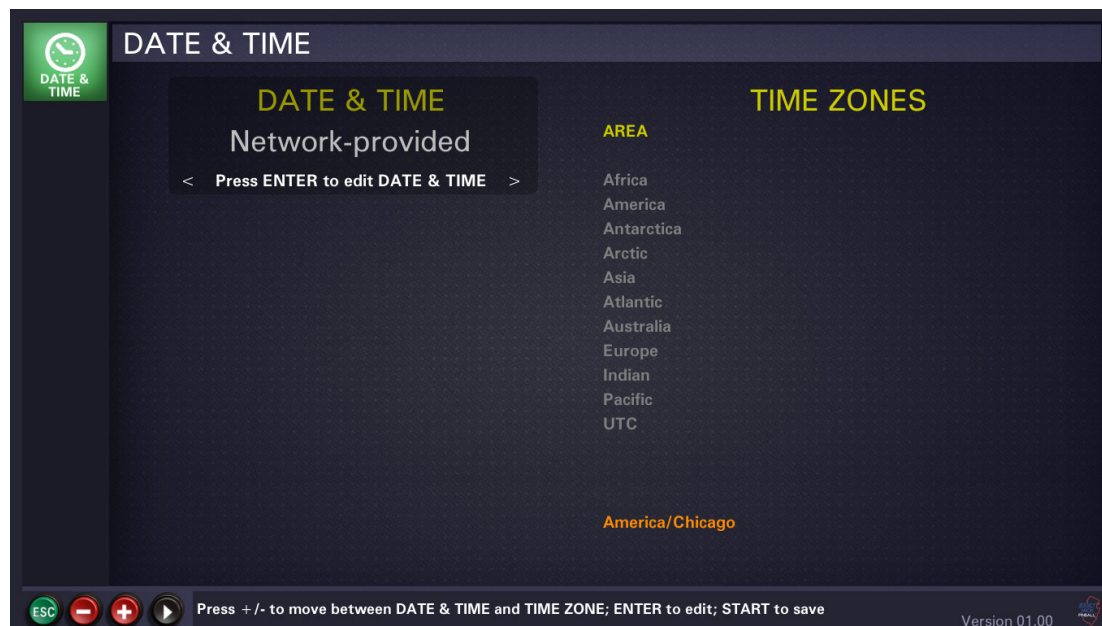


Erase Graphic utility screen.





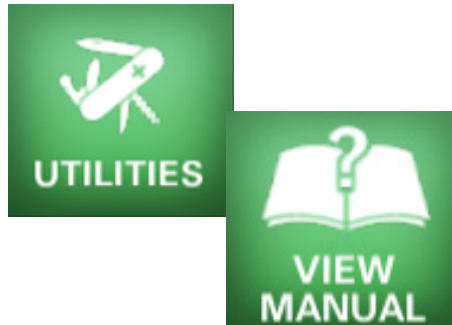
# Date & Time



Date & Time utility screen.

When you enter the **Date & Time** utility, the LCD monitor will display the screen shown. To maneuver to the portion of the display that requires adjustment, use the **Back/Escape** (left) and **Enter** (right) buttons. Use the **Up/+** and **Down/-** buttons to alter the highlighted value, then press the **Start** button to save the time and date, as displayed on the screen.

To exit the **Date & Time** utility, move the cursor to the position shown, then press the **Back/Escape** button. Note: The **Start** button moves the cursor to this position after saving the time/date.

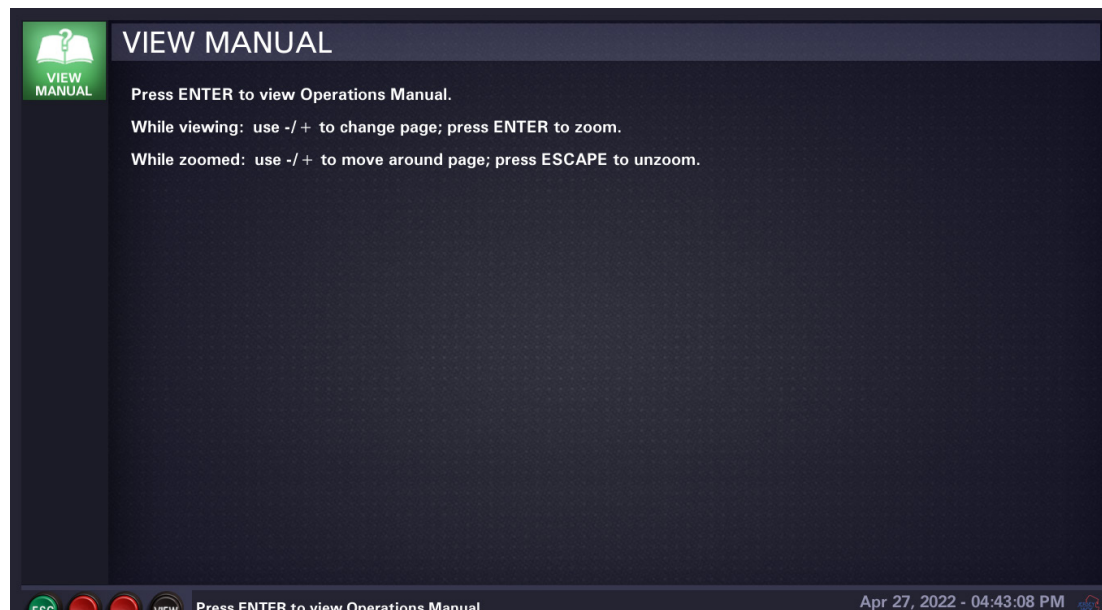


# View Manual

When you enter the **View Manual** utility, the LCD monitor will display the screen shown. To view the game Operations Manual (this document), press the **Enter** button.

While viewing, use the **Up/+** and **Down/-** buttons to move from page to page; use the **Enter** button to zoom in on the current page. When zoomed in, use the **Up/+** and **Down/-** buttons to move around the current page; use the **Back/Escape** button to cancel the zoom function.

To exit the **View Manual** utility, press the **Back/Escape** button while in the viewing mode.



View Manual utility screen.



# Settings Backup

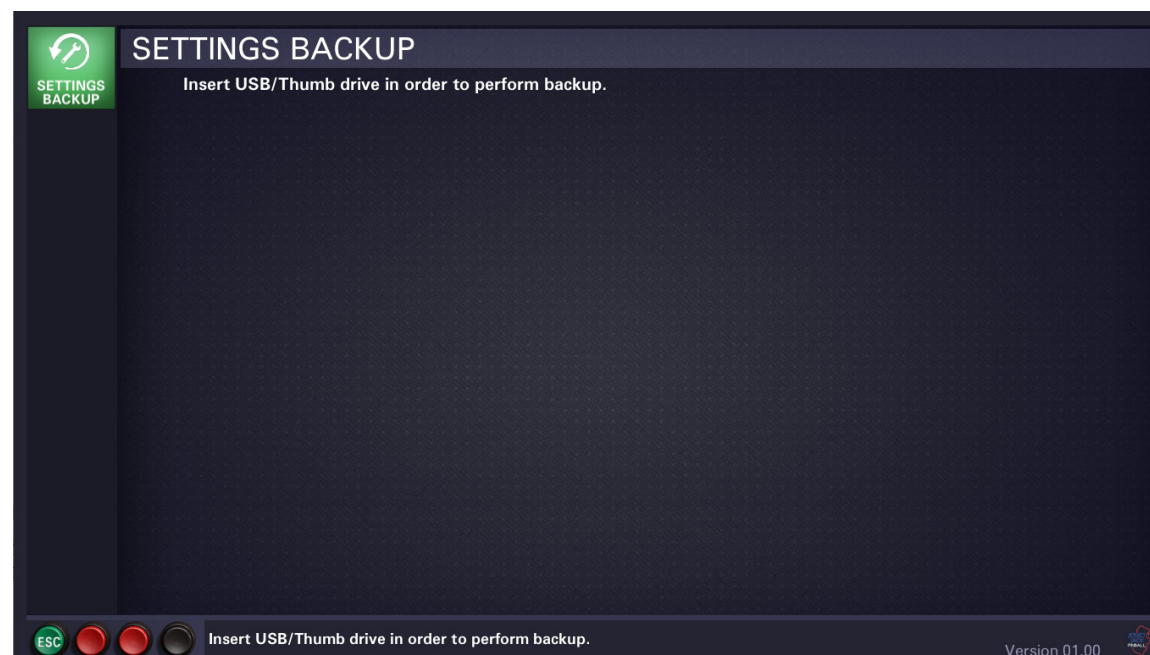
The **Settings Backup** & **Settings Restore** utilities allow you to quickly and easily backup & restore your game’s settings, audits, reports, replay information and custom message. Your settings will be stored on a USB memory stick.

When you enter the **Settings Backup** utility, the LCD monitor will display the screen shown on the left side of this page. Locate the end of the USB extension cable, just inside the open coin door. Fully insert a USB stick into the connector at the end of the cable (if your USB stick is equipped with an “in-use” light, it will illuminate).

Note: The saved settings file is unique to each game (allowing you to use the same USB stick to backup settings for several different games, without fear of overwriting anything). The file is also time- and date-stamped, using the game’s internal clock.

Press the **Enter** button to perform the backup. If there is an existing settings file for the game on the USB stick, you will be prompted to hit the **Start** button to confirm and complete overwriting the backup.

To exit the **Settings Backup** utility, press the **Back/Escape** button.



Settings Backup utility screen.



# Settings Restore

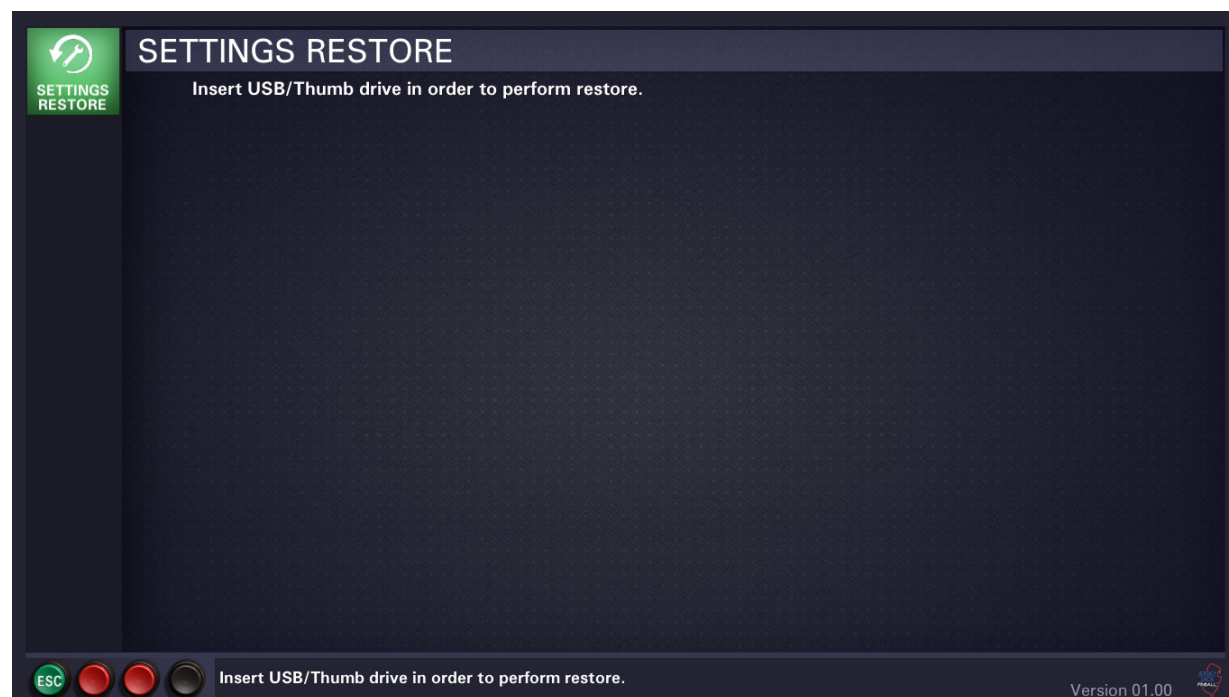
The **Settings Backup** & **Settings Restore** utilities allow you to quickly and easily backup & restore your game's settings, audits, reports, replay information and custom message. Your settings will be restored from a USB memory stick.

When you enter the **Settings Restore** utility, the LCD monitor will display the screen shown on the left side of this page. Locate the end of the USB extension cable, just inside the open coin door. Fully insert the USB stick containing your settings file into the connector at the end of the cable (if your USB stick is equipped with an "in-use" light, it will illuminate).

Note: The saved settings file is unique to each game (so you can use the same USB stick to backup settings for several different games, without fear of overwriting anything). The file is also time- and date-stamped, using the game's internal clock.

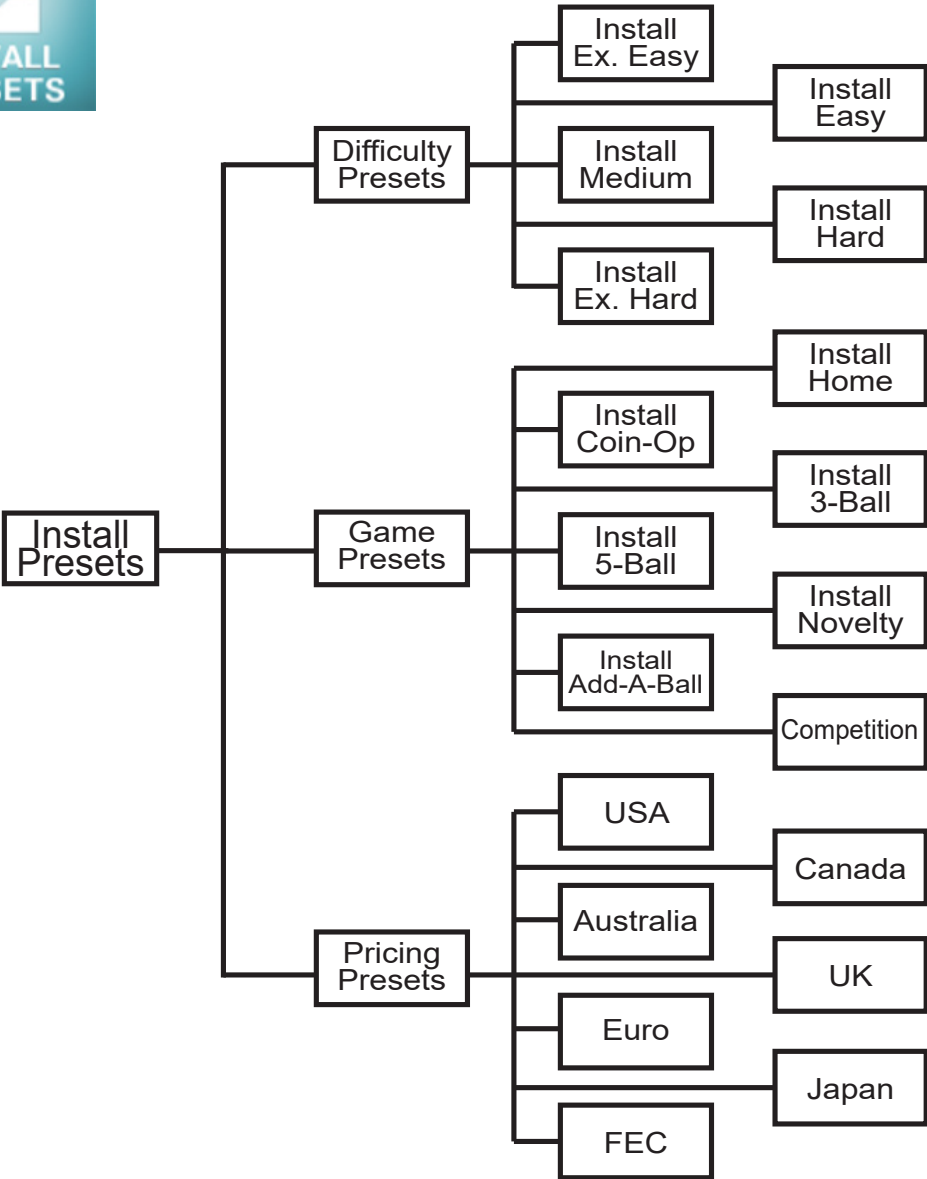
If a settings file for the game is found on the USB stick, its date and time will be displayed as shown. Press the **Enter** button to perform the settings restore operation.

To exit the **Settings Restore** utility, press the **Back/Escape** button.



Settings Restore utility screen.





Install Presets menu tree.

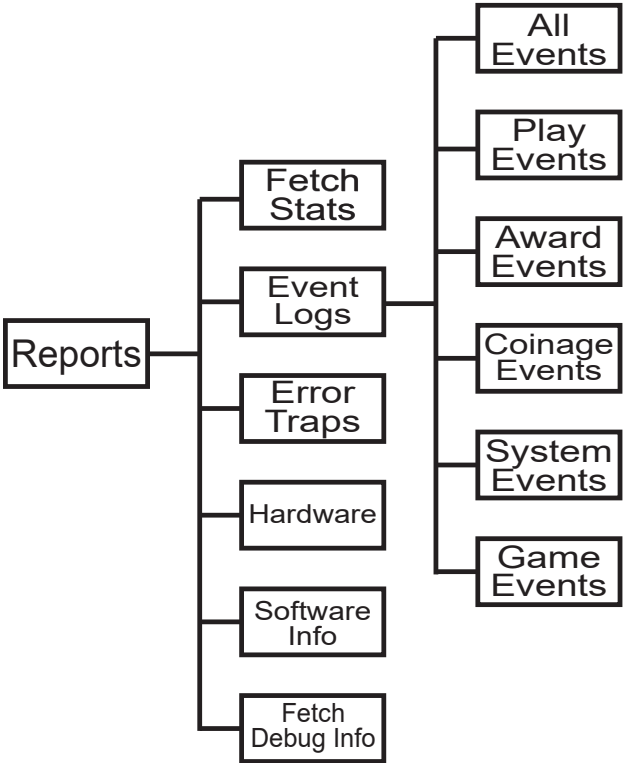
# Install Presets

The **Install Presets** menu allows the user to quickly make *quantum*, predefined changes to game play settings (as opposed to changing settings individually, in other sub-menus).

**Difficulty Presets** - change a predefined group of game/system settings to quickly make the game easier or more difficult to play. The difficulty level options are listed.

**Game Presets** - change a predefined group of game/system settings to quickly configure the game to play in one of the standard modes listed.

**Pricing Presets** - change a predefined group of pricing settings to quickly configure the game to accept coinage from one of the countries listed.



Reports menu tree.

# Reports

The **Reports** menu allows the user to view logs and graphs of events of interest in the game including bad switch alerts, device errors, game power-ups, service credits, game statistics, awards, etc.

**Fetch Stats** - Export game statistics to a USB drive for records or detailed, offline analysis.

**Event Logs** - View logs for various system events including when the power was cycled on the game, when the game was started, when the coin door was opened, when service credits were added, when game awards were earned, etc.

**Error Traps** - View the contents of the game’s error log.

**Hardware** - Information about the game’s hardware.

**Software Info** - Information pertaining to the game’s software.

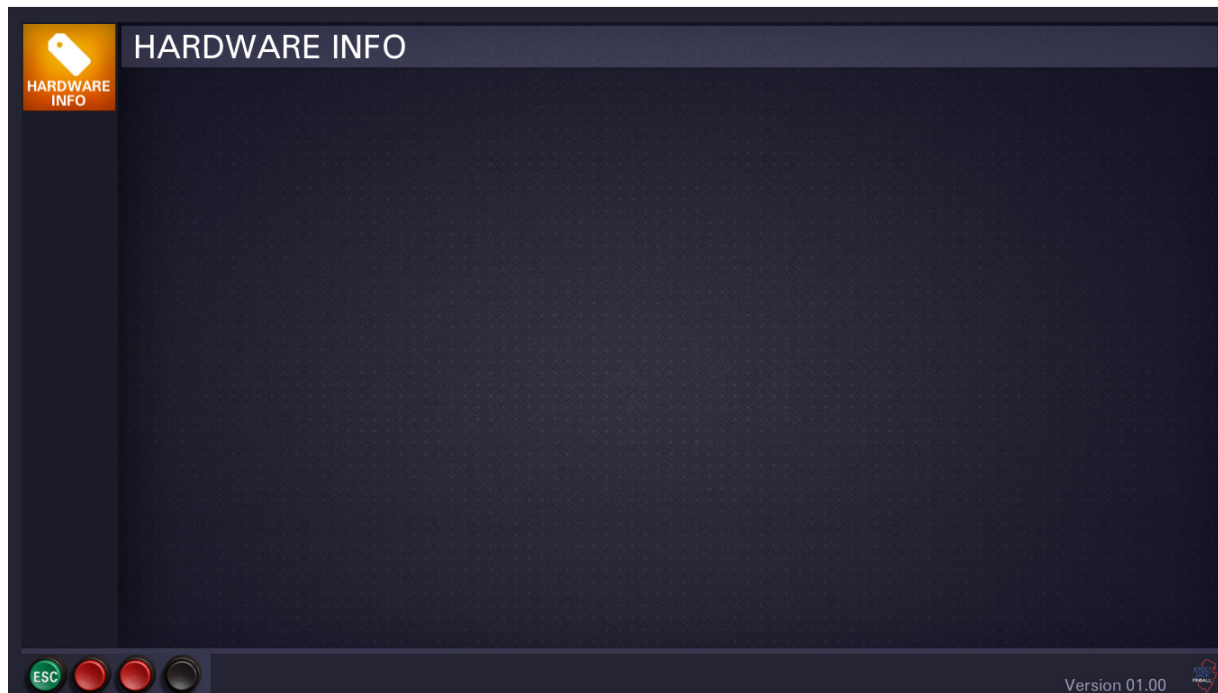
**Fetch Debug Info** - Export debug information to a USB drive for software dev usage.



# Hardware Info

Use the **Hardware Info** report to view your game's hardware characteristics such as serial number, firmware revision levels, motherboard type, available RAM, processor speed & solid state disk size. When you enter the **Hardware Info** utility, the LCD monitor will display the screen shown on the left, along with the relevant information for your game's hardware setup.

To exit the **Hardware Info** utility at any time, press the **Back/Escape** button.



Hardware Info utility screen.

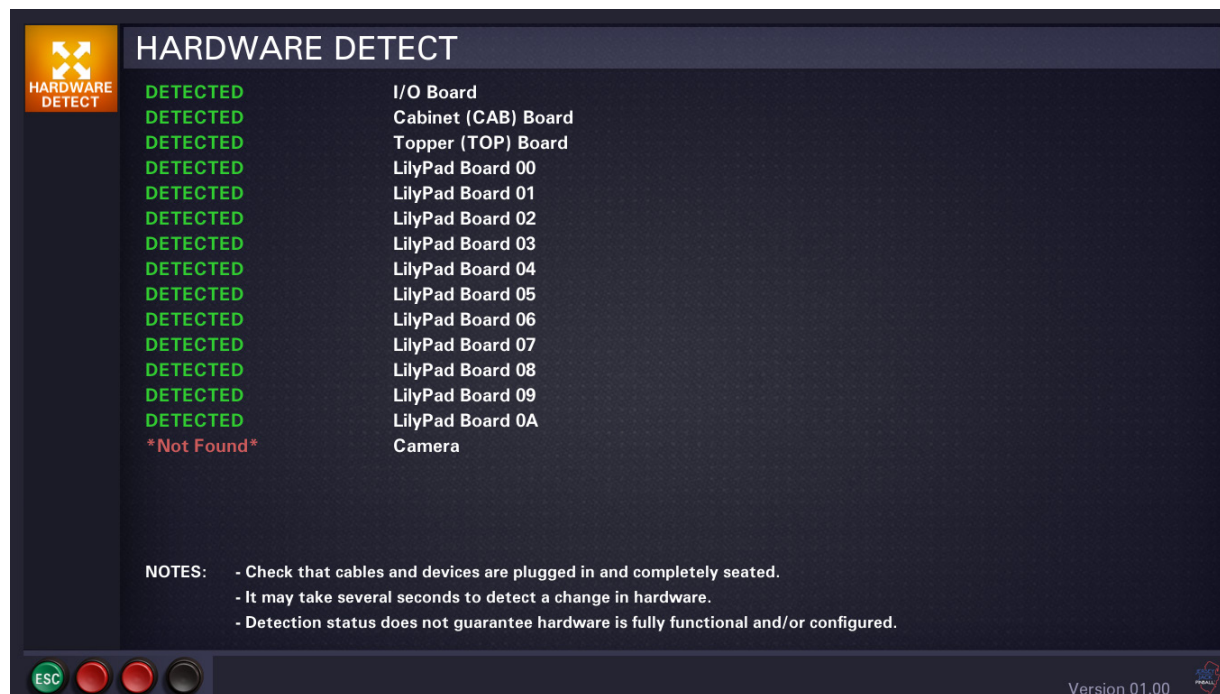


# Hardware Detect

Use the **Hardware Detect** report to scan for missing or improperly configured devices.

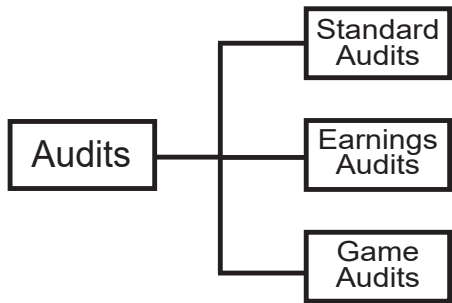
The hardware items detected by this utility will vary based on the game software running. Devices that are not detected will be displayed on the screen as **\*Not Found\***

To exit the **Hardware Detect** utility at any time, press the **Back/Escape** button.



Hardware Info utility screen.





Audits menu tree.

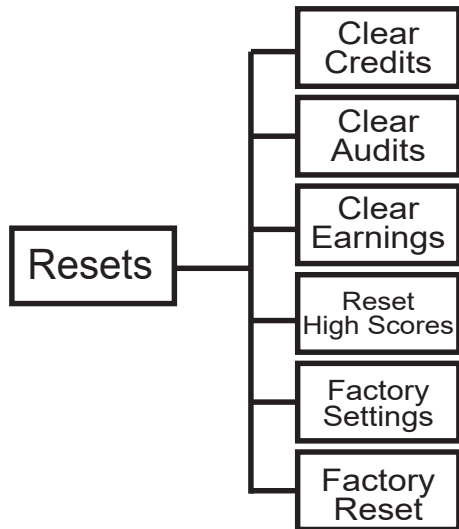
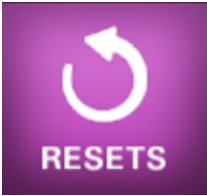
# Audits

The **Audits** menu allows the user to view, monitor and/or track game usage and earnings over a specific time period (since audits were last cleared and over the lifetime of the game).

**Standard Audits** - view game-related totals such as free plays, 1-, 2-, 3- & 4-player games started, extra balls, replays, matches, etc.

**Earnings Audits** - view totals for paid credits, free plays, service credits, pricing tier purchases and coins accepted in each slot.

**Game Audits** - view totals for various shots made (targets hit or switches closed) and modes started and/or completed in the game.



Resets menu tree.

# Resets

The **Resets** menu allows the user to quickly clear game audits/earnings information and high scores from a single menu.

**Clear Credits** - clear credits from the game.

**Clear Audits** - reset audits data.

**Clear Earnings** - reset earnings data.

**Reset High Scores** - reset high scores to default values (see **High Score Settings** in Section B.3).

**Factory Settings** - reset all software-adjustable settings to the values they originally were given at the factory.

**Factory Reset** - reset factory settings (as above) plus reset audits and alarm counters.



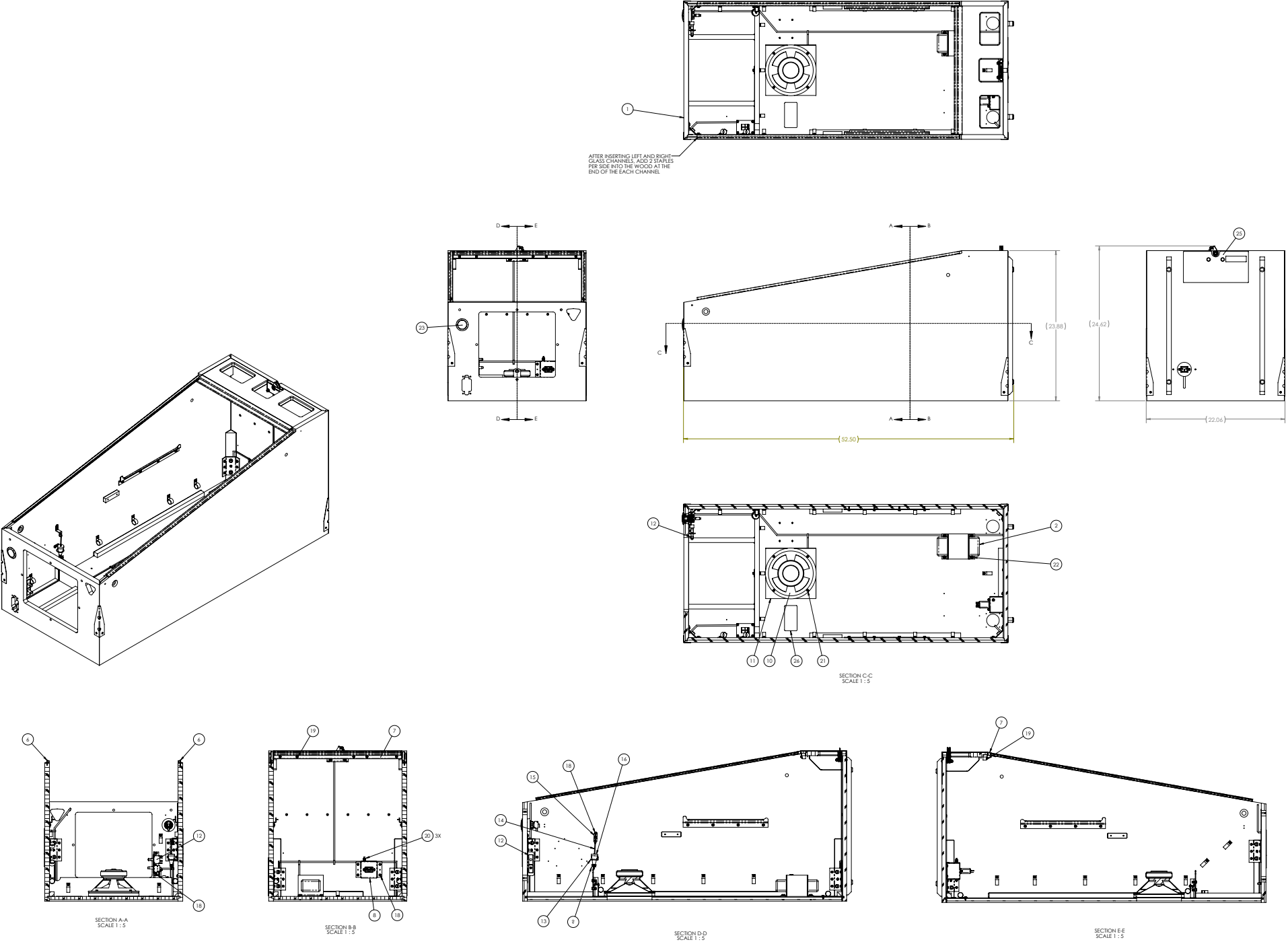
# Game Parts Information

# CABINET AND BACKBOX





# LOWER CABINET BASE ASSEMBLY



# LOWER CABINET BASE ASSEMBLY

## 50-005040-02

Item	Part Number	Description	Qty
1	51-100190-00	Cabinet Wood Assy Standard	1
2	16-005000-02	Main Transformer	1
3	19-009027-02	Transformer Secondary Cable, Backbox PCB's	1
4	30-000118-20	Poly Tubing, Split, Black, 1-1/4"	52 IN.
5	30-000051-08	8" Wire Tie, Natural	3
6	30-008000-00	Cabinet Side Glass Channel	2
7	30-008001-02	Cabinet Rear Glass Channel	1
8	51-005023-00	Line Filter Box Assy	1
9	19-003052-55	Ground Jumper Cable, 18AWG, GRN	1
10	51-006004-01	Subwoofer Speaker & Cable Assy	1
11	05-003007-00	Subwoofer Mtg Panel	1
12	51-000035-00	Door & Interlock Switch Assy	1
13	13-003008-00	Tilt Contact Wire Form Brkt	1
14	13-003009-00	Tilt Hanger Wire	1
15	10-000086-00	Tilt Hanger Wire Brkt	1
16	11-000028-00	Plumb Bob	1

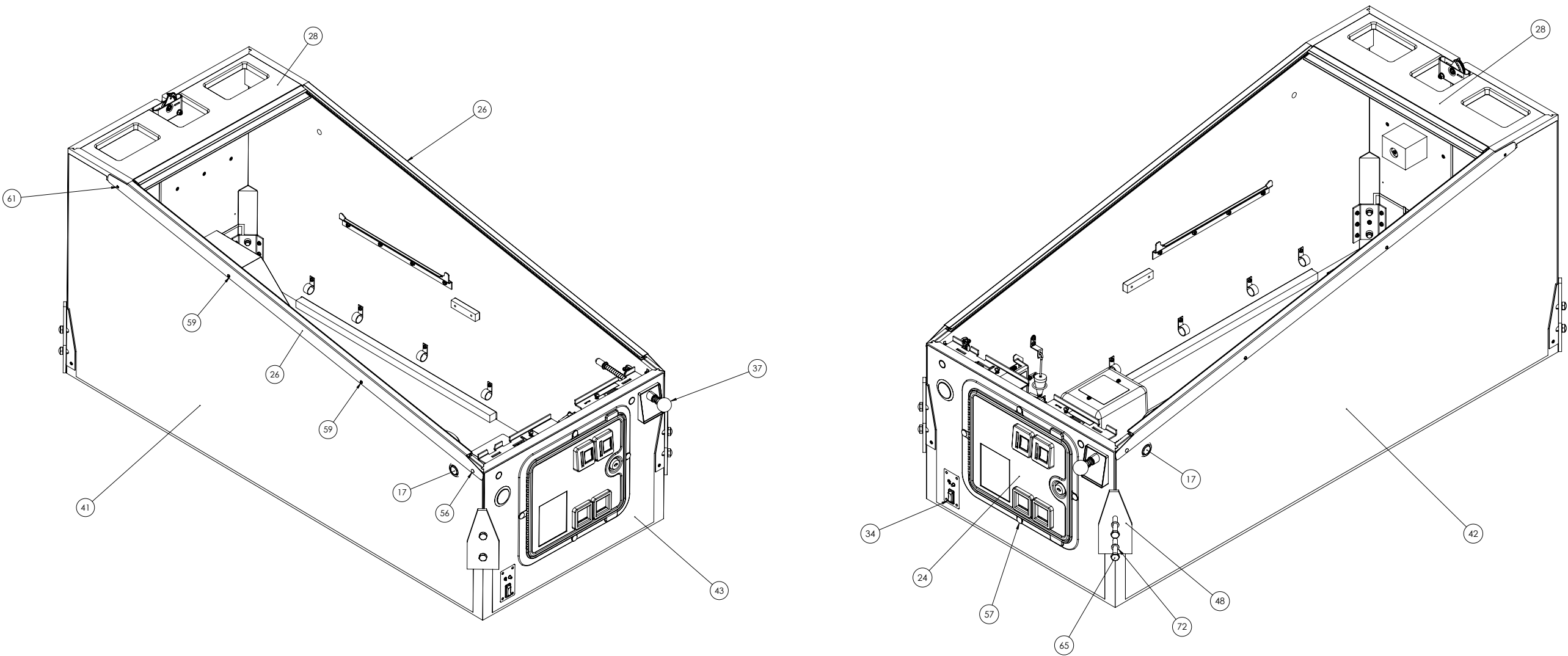
Item	Part Number	Description	Qty
17	91-003406-00	#6-32 Wing Nut, Nylon	1
18	82-009008-08	#8x1/2" AB Special HWH Phillips SMS	10
19	82-002108-08	#8 HWH Phillips SMS, Black	5
20	91-001008-00	#8-32 Keps Nut, Zinc Plated	3
21	80-002008-20	8-32 X 1-1/4" HWH Phillips MS, Serrated	4
22	80-002025-10	#1/4-20 x 5/8" HWH Phillips MS, Serrated, Zinc	4
23	18-007023-04	Start Button Switch Assy, Recessed, Yellow	1
24	19-009028-01	Power Box AC Input Cable, Backbox PCB's	1
25	62-100031-00	Decal, Backbox Outside Info	1
26	72-100060-00	Warning, Void Warranty Label	1

### LEGS

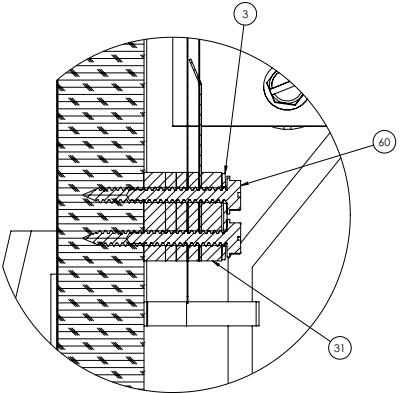
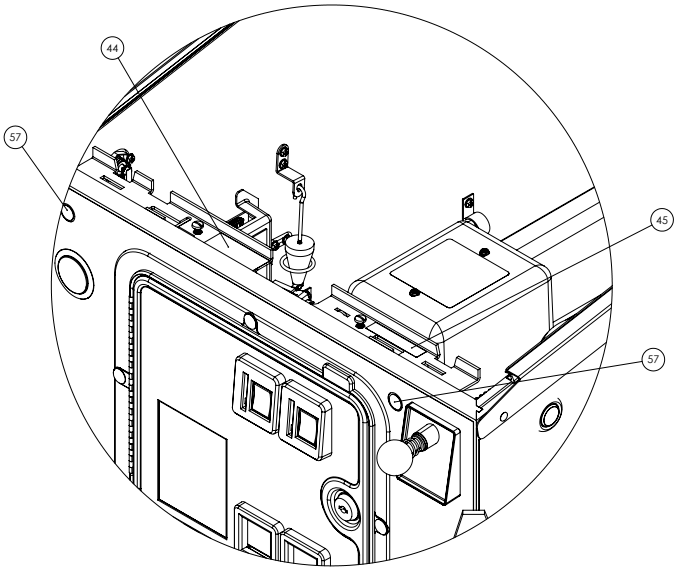
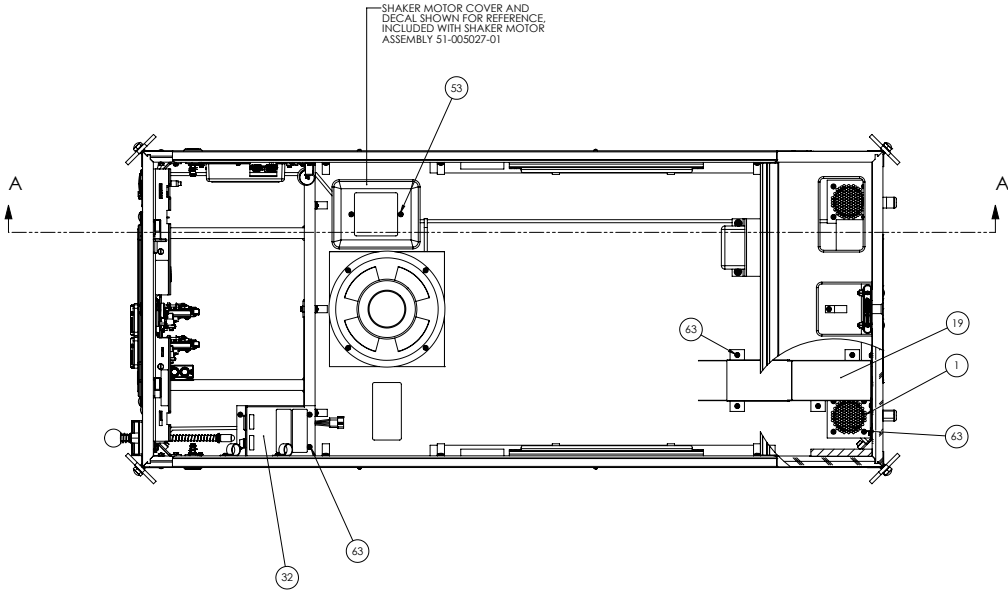
10-000031-19  
10-000031-20

LE - Ford Tuxedo  
CE - Illusion Cherry

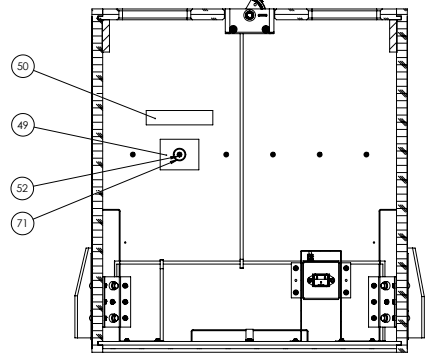
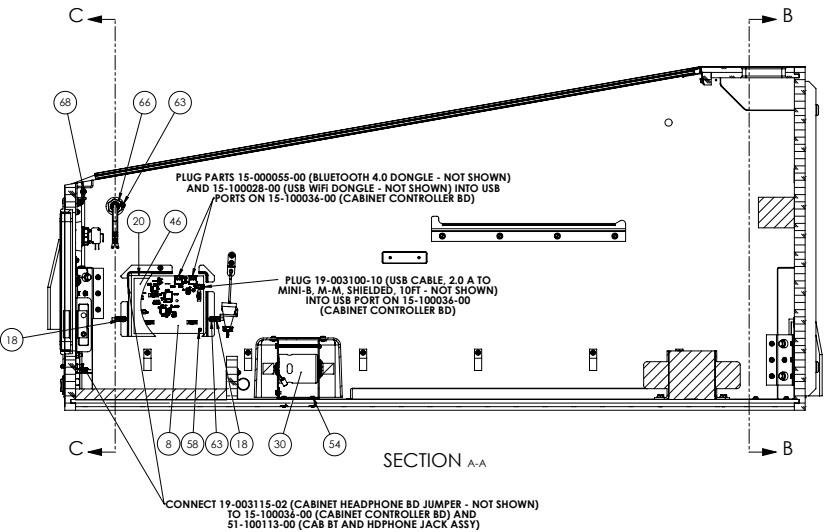
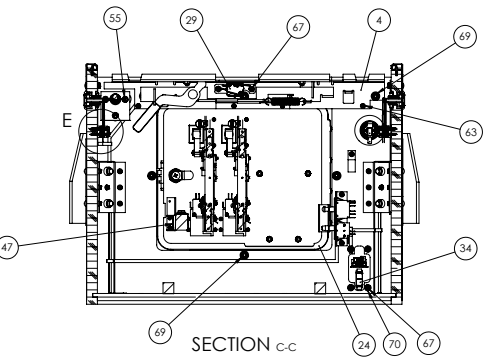
# GF LOWER CABINET ASSEMBLY, LE



# GF LOWER CABINET ASSEMBLY, LE

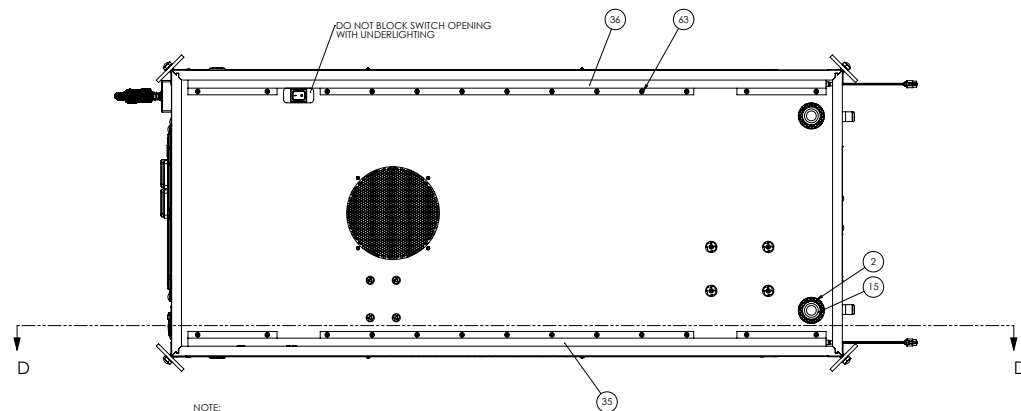
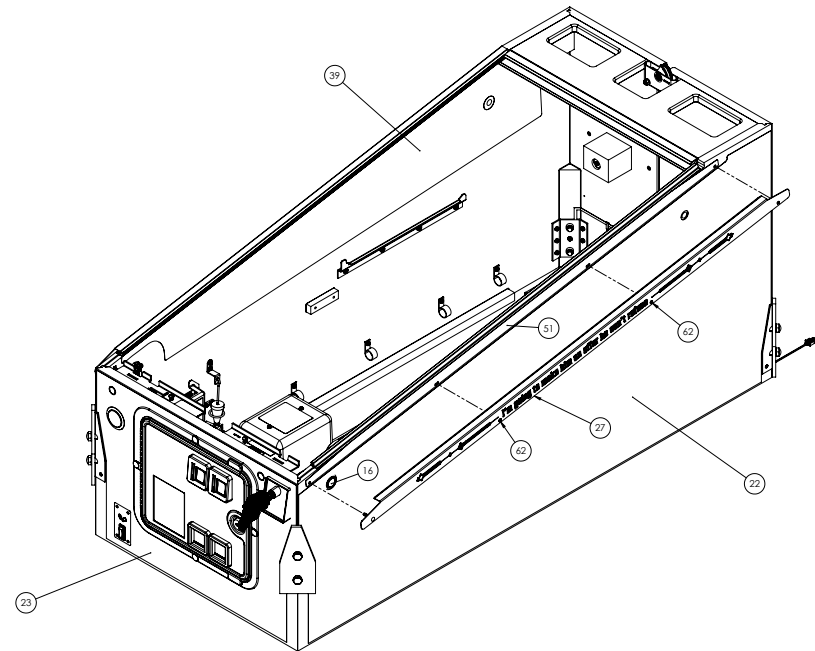
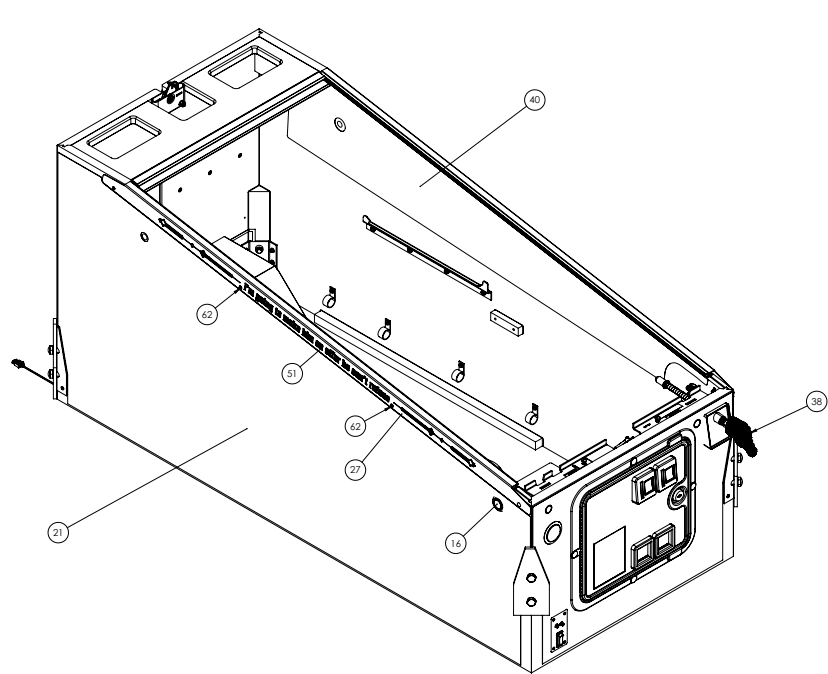


DETAIL E  
SCALE 2:1



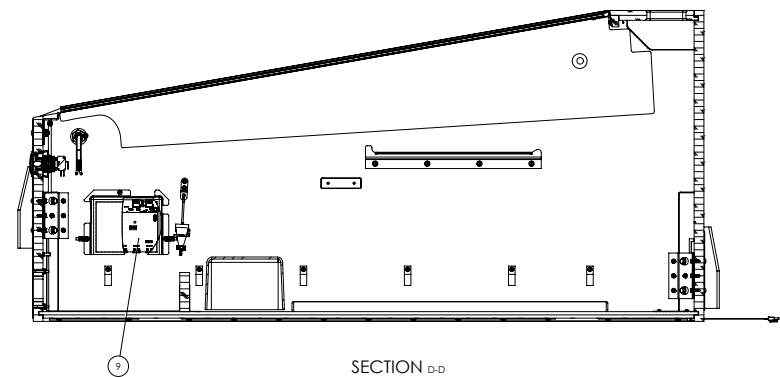


50-100039-02  
GF LOWER CABINET ASSEMBLY, CE  
SAME AS LE BUILD EXCEPT FOR  
PARTS POINTED OUT ON THIS PAGE



NOTE:  
UNDERLIGHTING STRIPS TO BE ALIGNED AND  
MOUNTED AGAINST THE STEP IN BOTTOM OF THE  
CABINET AS SHOWN. THE BOTTOM OF THE CABINET  
DOES NOT HAVE SPOTTING HOLES. END CABLES  
WILL BE DRESSED TO GO THROUGH THE  
GROMMETS (ITEM 5, CE ONLY).

BOTTOM VIEW



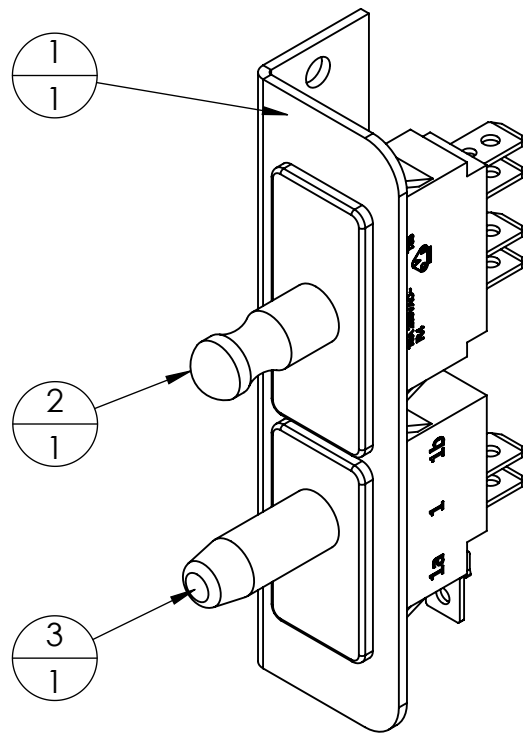
PART 19-100104-00 (NOT SHOWN)  
PLUGS INTO 15-100042-01

# GF LOWER CABINET ASSEMBLY

ITEM NO.	PART NUMBER	DESCRIPTION	50-100039-00 LE / QTY.	50-100039-02 CE / QTY.	INTERNATIONAL QTY.	NOT SHOWN
1	10-000003-01	CABINET VENT GRILL	2	-	-	
2	10-000003-02	VENT GRILL WITH GROMMET	-	2	-	
3	10-000022-01	CURVED SWITCH PLATE	2	2	-	
4	10-008001-00	LOCKDOWN BAR RECEIVER ASSY, NOTCHED	1	1	-	
5	15-000017-00	UK Coin Door Interface	-	-	1	X
6	15-000055-00	BLUETOOTH 4.0 DONGLE	1	1	-	X
7	15-100028-00	USB WiFi DONGLE	1	1	-	X
8	15-100036-00	CABINET CONTROLLER BD, 480 MPS	1	1	-	
9	15-100042-01	CE CABINET LED BD, 4-RAIL	-	1	-	
10	19-003011-00	European Coin Door Cable	-	-	1	X
11	19-003100-10	USB CABLE, 2.0 A TO MINI-B, M-M, SHIELDED, 10FT	1	1	-	X
12	19-003115-02	CABINET HEADPHONE BD JUMPER	1	1	-	X
13	19-100104-00	GN'R CE EXTERIOR LIGHTING HARNESS	-	1	-	X
14	19-100117-00	220V AC VOLTAGE CONVERTER CABLE	-	-	1	X
15	25-100008-00	GROMMET .75 ID, 1.38 OD, .06 MATERIAL	-	2	-	
16	30-000009-02	FLIPPER BUTTON, RED	-	2	-	
17	30-000009-04	FLIPPER BUTTON, YELLOW	2	-	-	
18	30-000050-06	6" WIRE TIE, SCREW DOWN	2	2	-	
19	30-000125-00	LINE FILTER BOX ASSY COVER	1	1	-	
20	30-100066-00	COVER CAB CONTROLLER	1	1	-	
21	30-100128-01	ZEUS, CABINET RAD-CAL, LEFT, FRANCHI	-	1	-	
22	30-100128-02	ZEUS CABINET RAD-CAL, RIGHT, FRANCHI	-	1	-	
23	30-100128-03	ZEUS CABINET RAD-CAL, FRONT, FRANCHI	-	1	-	
24	40-000006-20	STANDARD USA COIN DOOR ASSY, 12V, NO HEADPHONE	1	1	-	
25	40-000011-74	STANDARD EUROPEAN COIN DOOR ASSY, NO HEADPHONE	-	-	1	X
26	42-007004-01	Cabinet Side Rail, Ford Tuxedo	2	-	-	
27	42-007013-01	CABINET SIDE RAIL, ZEUS CE, SUBTLE GOLD	-	2	-	
28	50-005040-02	LOWER CABINET BASE ASSY STANDARD	1	1	-	
29	51-000066-10	CABINET LOCK DOWN SWITCH ASSY, 11/17	1	1	-	
30	51-005027-01	SHAKER MOTOR ASSEMBLY	1	1	-	
31	51-006000-01	Cabinet Flipper Switches & Cable Assy, Double Contact Left	1	1	-	
32	51-006001-02	CABINET POWER BOX & CABLE ASSY US 7/20	1	1	-	
33	51-006001-11	CABINET POWER BOX AND CABLE ASSY INTL 8/20	-	-	1	X
34	51-100113-00	CAB BT AND HDPHONE JACK ASSY	1	1	-	
35	51-100145-01	UNDERLIGHT LED STRIP WITH MOUNTING ASM LEFT	-	1	-	

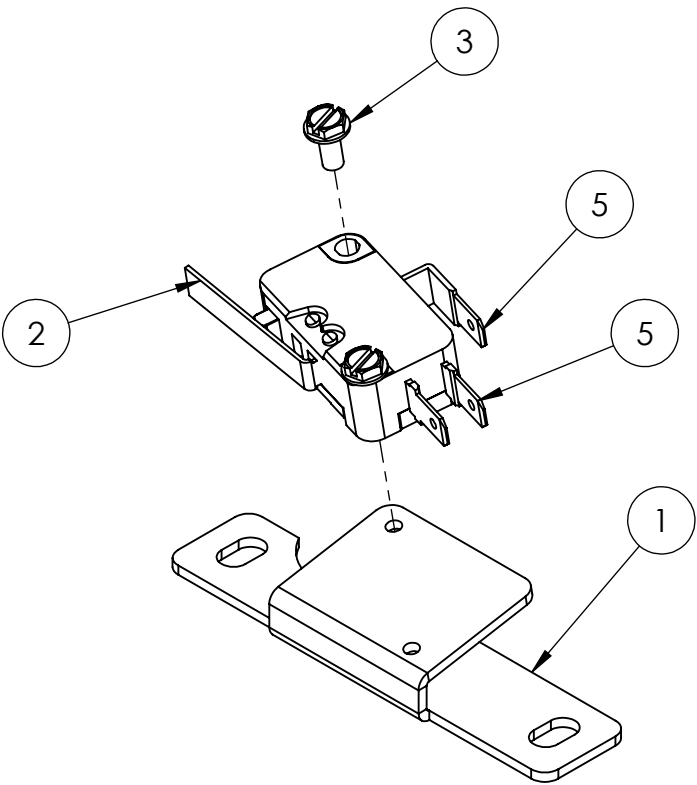
ITEM NO.	PART NUMBER	DESCRIPTION	50-100039-00 LE / QTY.	50-100039-02 CE / QTY.	INTERNATIONAL QTY.	NOT SHOWN
36	51-100145-02	UNDERLIGHT LED STRIP WITH MOUNTING ASM RIGHT	-	1	-	
37	51-100351-01	Assembly, Ball Shooter w/ Bushings, Zeus LE	1	-	-	
38	51-100351-02	Assembly, Ball Shooter w/ Bushings, Zeus CE	-	1	-	
39	61-100020-01	ZEUS CE SIDE BLADE, LEFT	-	1	-	
40	61-100020-02	ZEUS CE SIDE BLADE, RIGHT	-	1	-	
41	61-100022-01	ZEUS CABINET DECAL, LEFT, FRANCHI CABINET	1	-	-	
42	61-100022-02	ZEUS CABINET DECAL, RIGHT, FRANCHI CABINET	1	-	-	
43	61-100022-03	ZEUS CABINET DECAL, FRONT, FRANCHI CABINET	1	-	-	
44	62-000034-10	DECAL, CAUTION HIGH VOLTAGE UNDER PLAYFIELD, SHORT	1	1	-	
45	62-000034-11	DECAL, INSTALL 6 BALLS	1	1	-	
46	62-100025-00	DECAL COVER CAB CONTROLLER	1	1	-	
47	62-100028-00	DECAL, BACK - + ENTER	1	1	-	
48	70-009003-00	HEAVY, FELT CABINET PROTECTORS	4	4	-	
49	72-000004-16	FOAM SHIPPING BLOCK, BACK PANEL PROTECT, SCREW-IN, 1-HOLE	1	1	-	
50	72-100054-00	CAUTION LABEL, STOP BLOCK	1	1	-	
51	72-100067-00	Film, Decorative, Side Rail, Zeus, CE	-	2	-	
52	80-000008-44	#8-32 X 2-3/4" PPH MS, ZINC PLATED	1	1	-	
53	80-002008-04	#8-32 x 1/4" HWH PHILLIPS SERRATED	2	2	-	
54	80-002008-10	#8-32 x 5/8" HWH PHILLIPS MS, SERRATED	4	4	-	
55	80-002010-08	#10-32 X 1/2" HWH MS, SERRATED	3	3	-	
56	81-005108-16	#8-32 x 1" CARRIAGE BOLT, BLACK OXIDE	2	2	-	
57	81-005125-20	#1/4 - 20 x 1-1/4" CARRIAGE BOLT, BLACK	6	6	-	
58	82-000004-10	#4 x 5/8" PPH SMS	4	4	-	
59	82-000106-08	#6X1/2" PPH SMS, BLK	4	-	-	
60	82-002006-20	#6 X 1-1/4" HWH SMS	4	4	-	
61	82-006104-08	#4 x 1/2" PFH SMS, BLACK	2	2	-	
62	82-008306-08	#6 X ½" PHILLIPS DECORATIVE ROUND HEAD WOOD SCREW, BRASS	-	4	-	
63	82-009008-08	#8X1/2" AB SPECIAL HWH PHILLIPS SMS	23	49	-	
64	83-000006-04	#6-32 x 1/4" PPH TYPE 25 TCS	-	-	1	X
65	90-003038-40	LEG BOLT, ACORN HEAD, 3/8-16X2-3/4"	8	8	-	
66	91-000001-10	FLIPPER BUTTON PAL NUT, HEX	2	2	-	
67	91-000008-00	8-32 NYLON STOP NUT THIN	6	6	-	
68	91-001008-00	#8-32 KEPS NUT, ZINC PLATED	2	2	-	
69	91-002025-00	#1/4-20 FLANGE NUT	6	6	1	
70	92-000008-00	#8 FLAT WASHER, .19 ID, .443 OD, .06 TH	4	4	-	
71	92-000008-02	FLAT FENDER WASHER .188 I.D. x .750 O.D.	1	1	-	
72	92-000238-00	3/8" Flat Washer, 0.390" ID, 0.625" OD, 0.032" TH, Stainless	8	8	-	

**DOOR & INTERLOCK SWITCH ASSY**  
**51-000035-00**

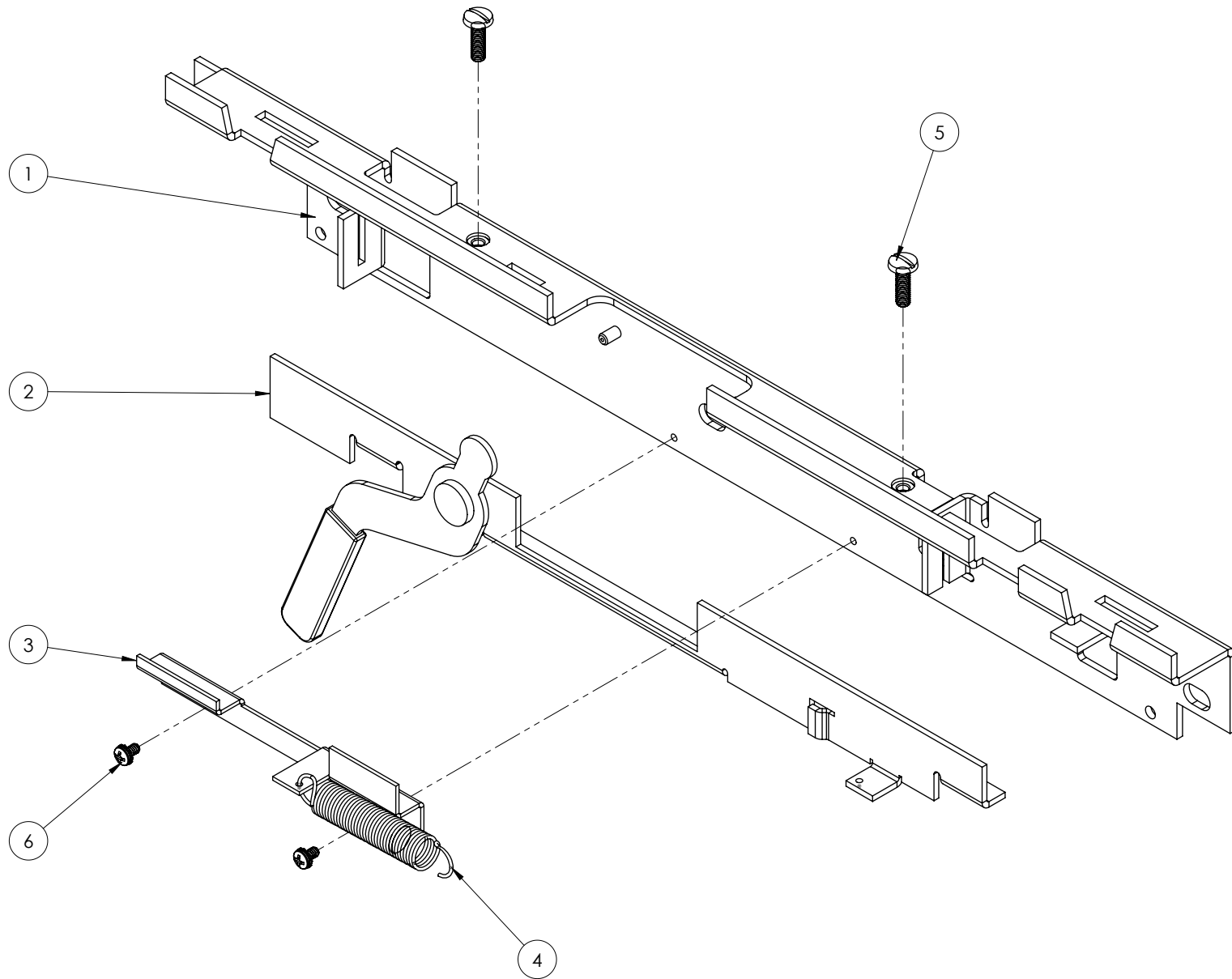


Item	Part Number	Description	Qty
1	10-000089-00	Door & Interlock Switch Brkt	1
2	18-003007-01	Safety Interlock Switch	1
3	18-003008-00	Coin Door Switch	1

**CABINET LOCK DOWN SWITCH ASSY**  
**51-000066-10**



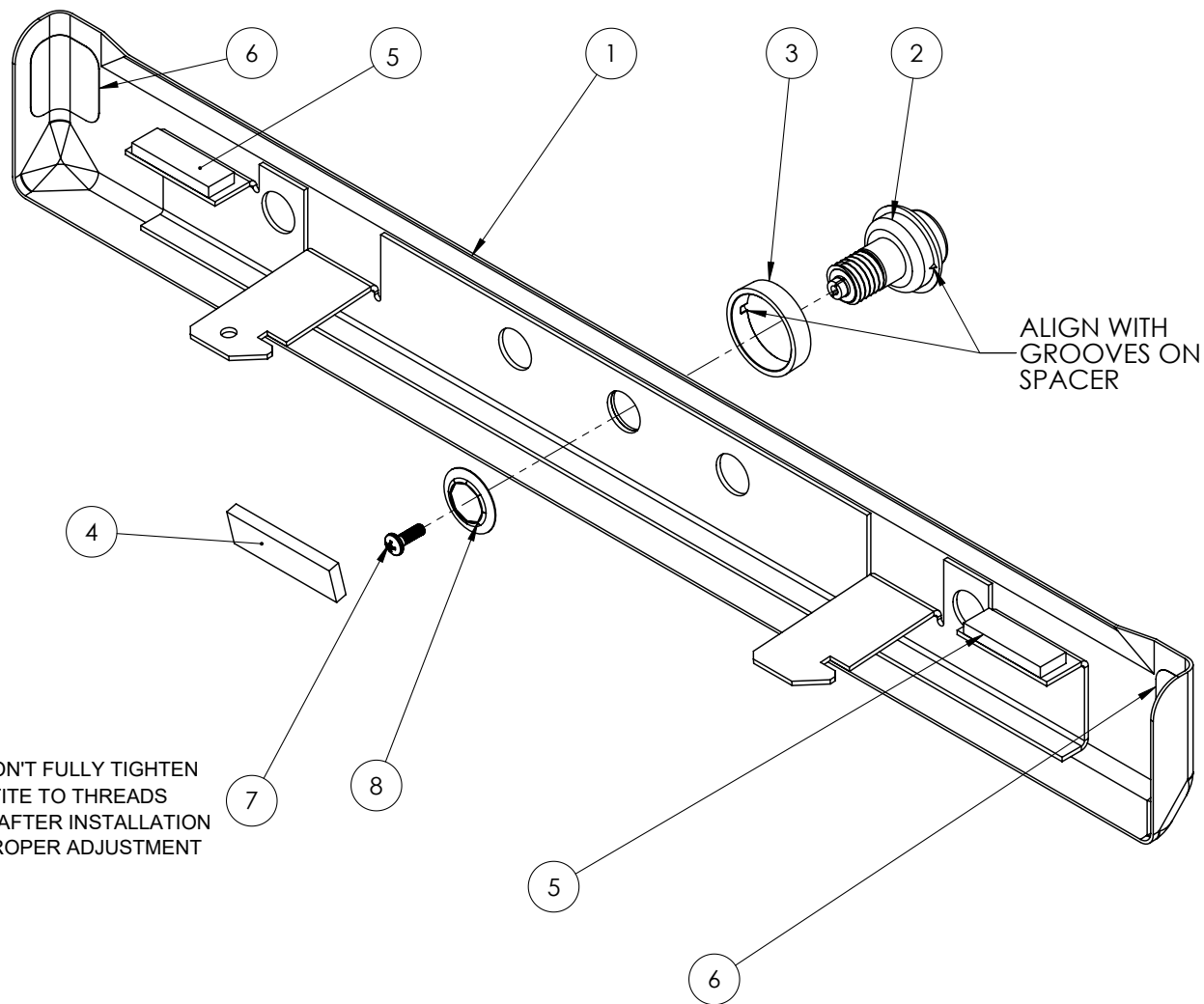
Item	Part Number	Description	Qty
1	10-000167-10	LOCK DOWN SWITCH BRACKET	1
2	18-003015-00	LOCKDOWN SWITCH	1
3	80-002104-08	4-40 x 3/8" HWH MS BLK	2
4	19-003107-10	LOCKDOWN BAR SWITCH CABLE	1
5	25-100011-04	HEAT SHRINK TUBING ( 2 x 1.0")	2"



**LOCKDOWN BAR RECEIVER ASSY, NOTCHED**  
**10-008001-00**

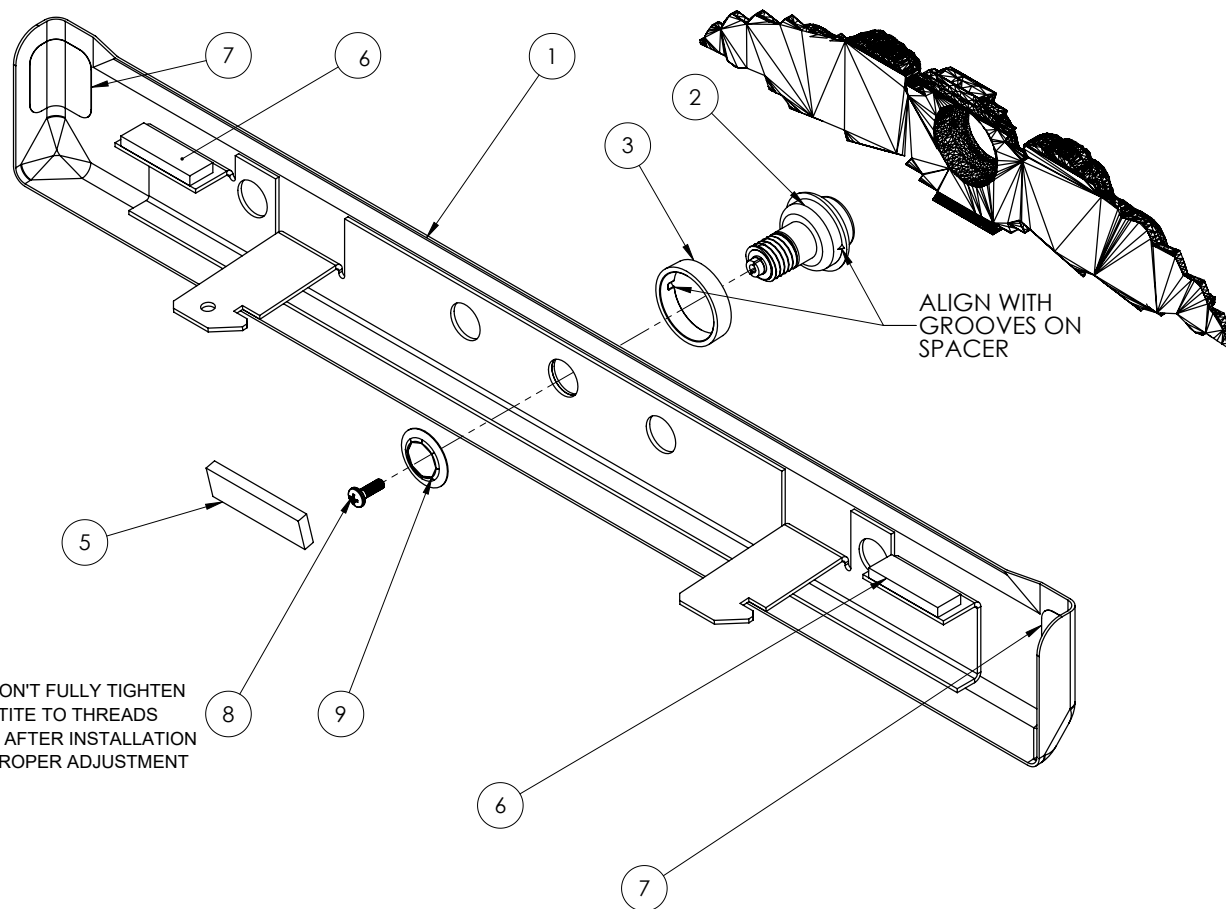
Item	Part Number	Description	Qty
1	10-005029-00	Lockdown Bar, Brkt Assy, Notched	1
2	10-005030-00	Lockdown Bar, Recvr Assy, Notched	1
3	10-000157-00	Recvr Slide Support Bracket, Notched	1
4	13-007017-00	Lockdown Bar Recvr Spring	1
5	80-000310-10	#10-32 x 5/8" Slot Head MS, Brass	1
6	80-001006-04	#6-32 x 1/4" PPH MS, SEMS	1





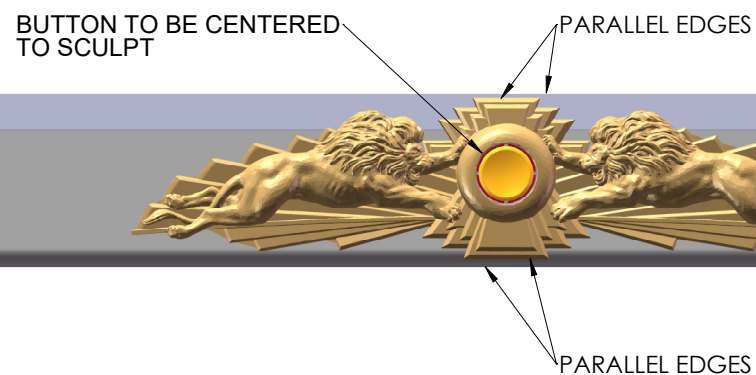
## STANDARD LOCKDOWN BAR ASSY W/ ACTION BUTTON 51-100288-00

Item	Part Number	Description	Qty
1	10-000282-06	Lockdown Bar, Standard, w/ Button Hole, Gold	1
2	30-000124-13	FLIPPER BUTTON, 1.375" CLEAR	1
3	30-000126-00	ACTION BUTTON SPACER	1
4	61-009003-00	FOAM ADHESIVE TAPE, LOCKDOWN BAR SEAL	1
5	61-009003-01	FOAM ADH TAPE, QUICK-RECOVERY, 1/2" x 3/16"	2
6	62-100066-00	MYLAR SIDE RAIL PROTECTOR	2
7	80-000008-08	#8-32 x 1/2" PPH MS, ZINC PLATED	1
8	94-100000-00	PUSH NUT 5/8" SHAFT BLACK	1



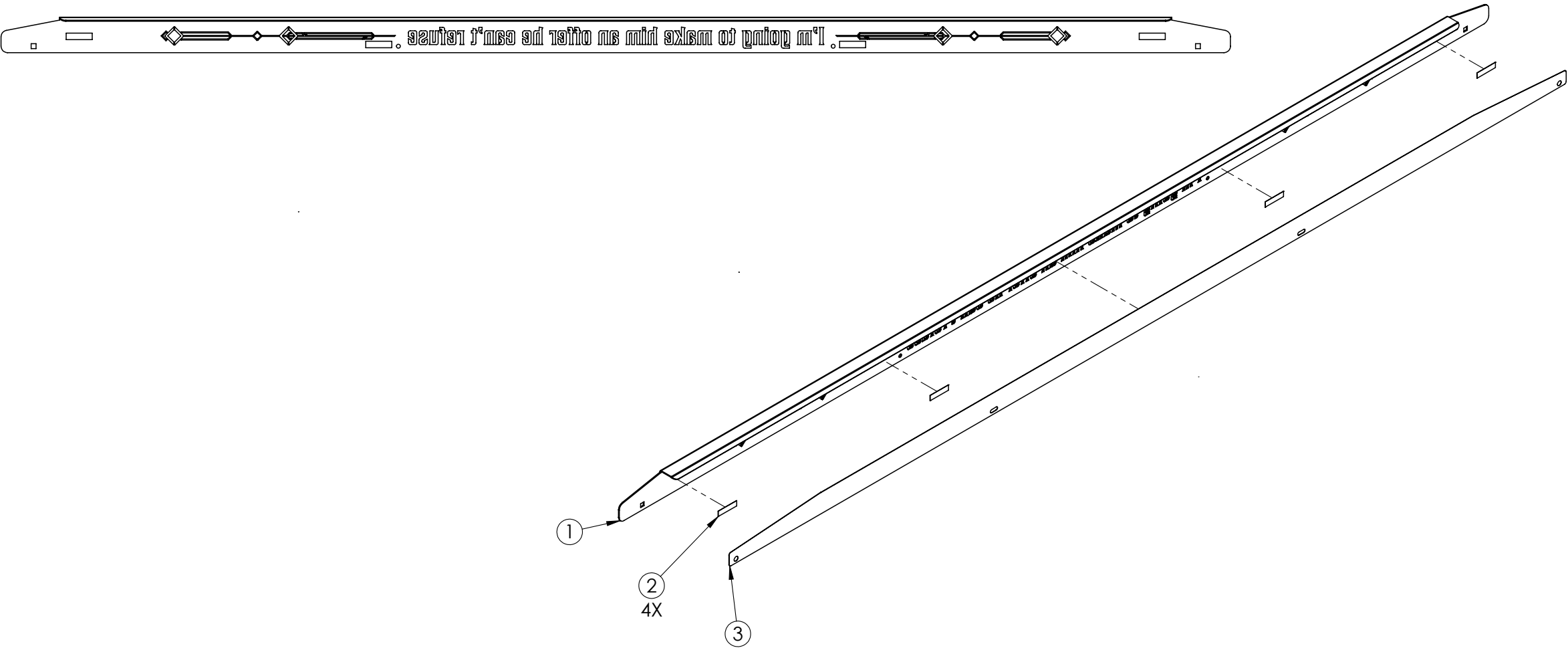
## ASSY, LOCKDOWN BAR, GODFATHER CE 51-100289-00

Item	Part Number	Description	Qty
1	10-000282-06	Lockdown Bar, Standard, w/ Button Hole, Gold	1
2	30-000124-13	FLIPPER BUTTON, 1.375" CLEAR	1
3	30-000126-00	ACTION BUTTON SPACER	1
4	32-100016-00	SCULPTURE, LOCKDOWN BAR, GODFATHER CE	1
5	61-009003-00	FOAM ADHESIVE TAPE, LOCKDOWN BAR SEAL	1
6	61-009003-01	FOAM ADH TAPE, QUICK-RECOVERY, 1/2" x 3/16"	2
7	62-100066-00	MYLAR SIDE RAIL PROTECTOR	2
8	80-000008-08	#8-32 x 1/2" PPH MS, ZINC PLATED	1
9	94-100000-00	PUSH NUT 5/8" SHAFT BLACK	1



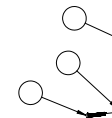
ASSY, SIDE RAIL, GODFATHER CE  
51-100316-00

Item	Part Number	Description	Qty
1	42-007013-01	CABINET SIDE RAIL, GODFATHER CE, GOLD	1
2	61-100025-00	FILM TAPE, DOUBLE-SIDED, 1/4" WIDE	4
3	72-100067-00	FILM DECORATIVE, SIDE RAIL, CE	1



50-100028-00

Backbox Left Mtg Hinge 42-007001-41





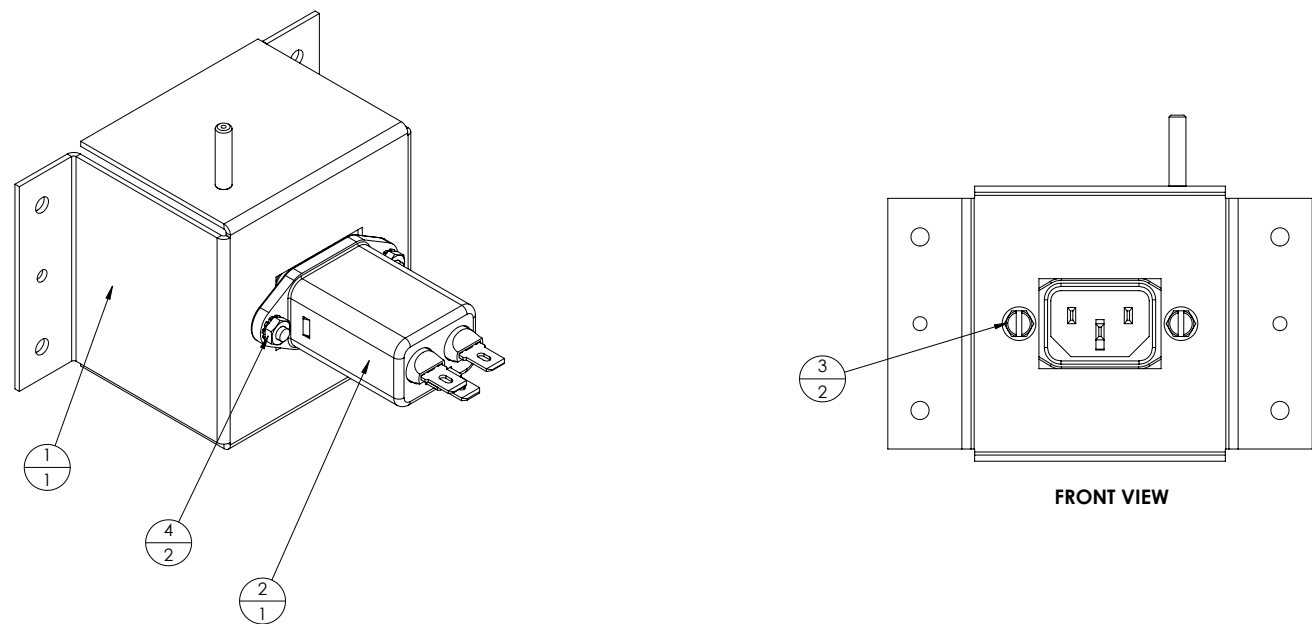
BACKBOX BASE ASSY

50-100028-00

Item	Part Number	Description	Qty
1	51-100191-00	BACKBOX WOOD ASSY, STANDARD	1
2	23-005004-02	FAN, 12VDC MOTOR, 120MM, 25MM WIDE	1
3	10-000110-01	FAN GUARD, 4.69in	1
4	19-000030-22	CRIMP PIN, FEMALE, 22-30AWG, 2.54MM	2
5	30-002105-03	HOUSING, FEMALE, 3-PIN, 2.54MM, W/RAMP	1
6	10-000234-00	BACKBOX VENT HOLE COVER, LOUVERED	1
7	10-000207-00	SPEAKER PANEL MTG BRKT, LEFT	1
8	10-000207-01	SPEAKER PANEL MTG BRKT, RIGHT	1
9	51-100051-00	BACKBOX SPEAKER BAR & CABLE ASSY 2/19	1
10	17-006003-00	5.25" MIDRANGE SPEAKER 8 OHM	2
11	19-003116-10	SPEAKER BAR CABLE, RIGHT	1
12	19-003116-11	SPEAKER BAR CABLE, LEFT	1
13	51-006014-25	KNOCKER & CABLE ASSY, VERTICAL MOUNT, 25"	1
14	11-000011-00	KNOCKER PLUNGER ASSY	1
15	51-100050-00	ASSEMBLY, MAGNET LATCH	2
16	51-100041-01	BACKBOX MOUNT PCB ASSY	1
17	51-100238-00	ASSEMBLY, EMI SHIELD LID W/ LED STRIP, 2021 MOBO	1
18	51-100040-00	27" LCD PIVOT/SWING ASSY	1
19	51-005044-03	BACKBOX MOUNT SOLID STATE DRIVE ASSY 120GB	1
20	10-100077-00	SCREEN BRACE	2
21	51-005041-00	USB CAMERA ASSY	1
22	30-000094-00	USB CAMERA COVER	1

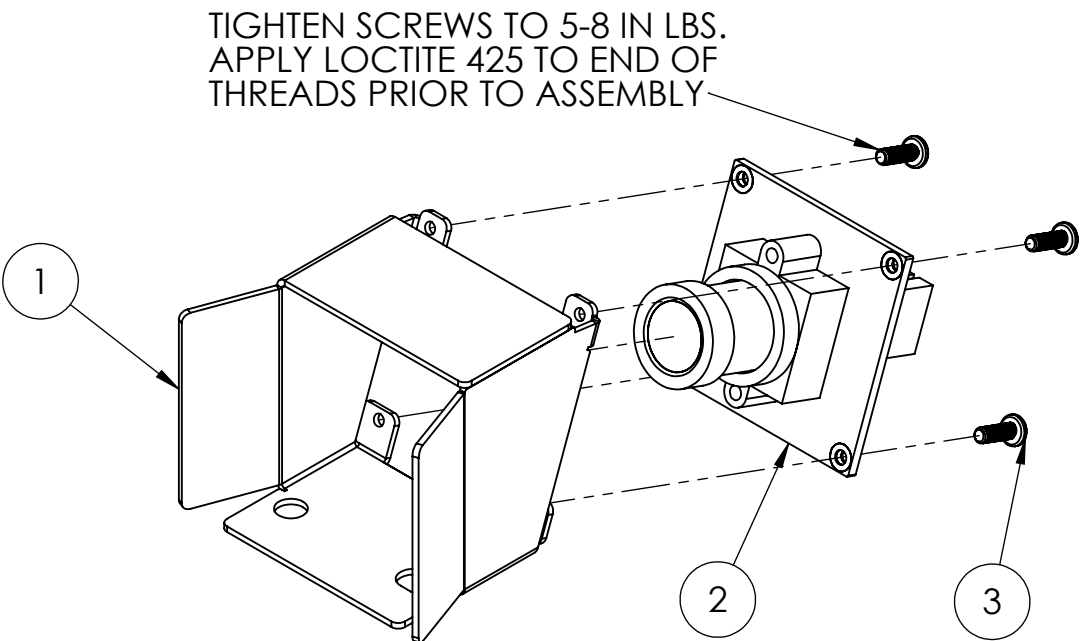
Item	Part Number	Description	Qty
23	51-100021-00	27" LCD MONITOR ASSY, BACKBOX PCB'S	1
24	61-009004-01	FOAM ADHESIVE TAPE MEDIUM DENSITY 3/8 x 3/16	8in
25	80-000108-32	#8-32 x 2" PPH MS, BLACK OXIDE	4
26	80-002008-04	#8-32 x 1/4" HWH PHILLIPS SERRATED	4
27	80-002008-08	8-32 X 1/2" HWH PHILLIPS MS, SERRATED, ZINC PLATED	8
28	80-002010-06	10-32 x 3/8" HWH PHILLIPS MS, SERRATED, ZINC PLATED	6
29	80-002025-12	1/4-20 x 3/4" HWH PHILLIPS MS, SERRATED, ZINC PLATED	3
30	80-008108-16	8-32 X 1" TP TORX MS, BLACK	2
31	82-006008-08	#8 X 1/2" PFH SMS, 82 DEG CA, ZINC PLATED	2
32	82-009008-08	#8X1/2" AB SPECIAL HWH PHILLIPS SMS	17
33	91-000008-00	8-32 NYLON STOP NUT THIN	4
34	91-001006-00	#6-32 KEPS NUT, ZINC PLATED	2
35	91-002025-00	#1/4-20 FLANGE NUT	4
36	92-000008-00	#8 FLAT WASHER, .19 ID, .443 OD, .06 TH	4
37	92-000108-00	#8 FLAT WASHER, BLACK	2
38	62-100044-00	IO FUSING VALUE DECAL	1
39	62-100012-00	LCD PULL HERE, DECAL	2
40	62-000034-08	DECAL WARNING FIRE	1
41	62-000034-03	DECAL, WARNING, SHOCK HAZARD, SMALL	1
42	62-000034-02	DECAL WARNING SHOCK HAZARD LARGE	2
43	30-000115-06	1.1" CABLE TIE MOUNT, #6 SCREW, WHITE	2
44	30-000051-08	8" WIRE TIE, NATURAL	11
45	16-005001-00	GROUND LOOP ISOLATOR	1

LINE FILTER BOX ASSY  
51-005023-00



Item	Part Number	Description	Qty
1	10-000009-00	Mounting Bracket	1
2	22-000000-01	Line Filter with Resistor	1
3	80-002006-06	#6-32 x 3/8" MS	2
4	91-001006-00	#6-32 Keps Nut	2

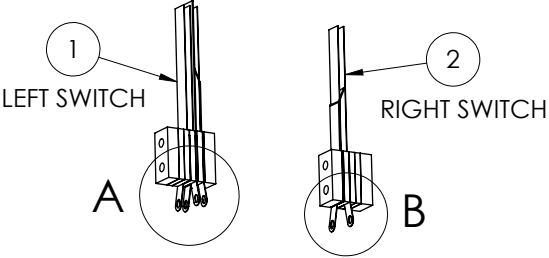
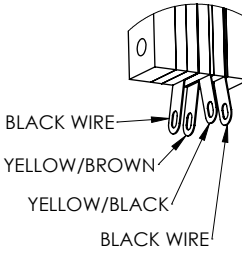
ASSY, USB CAMERA, COVERED  
51-005041-01



Item	Part Number	Description	Qty
1	10-000226-01	Bracket, USB Camera, Cover	1
2	15-005034-00	Camera Module, 1mp, 720p, 3.6mm	1
3	80-000002-04	2-56 x 1/4" PPH MS	4

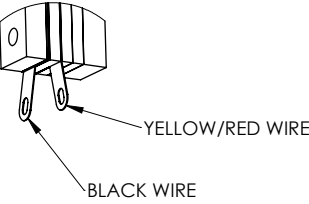
CABINET FLIPPER SWITCHES & CABLE ASSY  
51-006000-01

DETAIL A  
SCALE 1 : 1

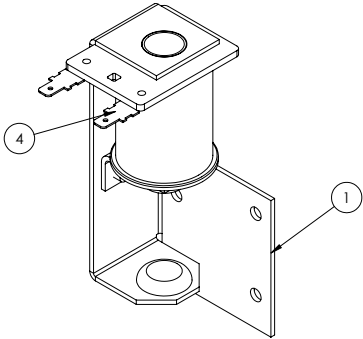
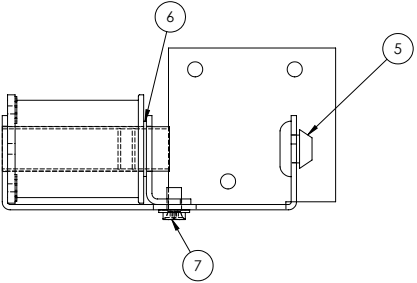
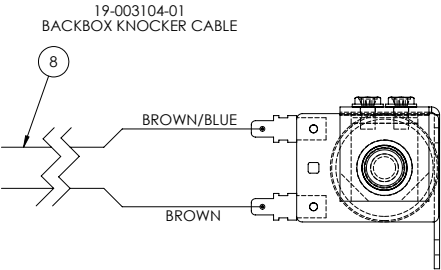
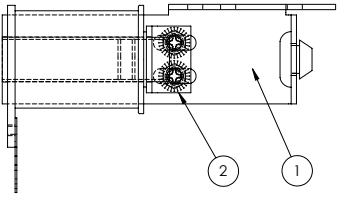


SOLDER HARNESS (19-005009-10)  
TO LEFT AND RIGHT SWITCHES  
APPLY HEAT SHRINK TUBING  
(25-100011-02) TO ALL UNUSED  
SWITCH WIRES INDIVIDUALLY

DETAIL B  
SCALE 1 : 1



KNOCKER & CABLE ASSY, VERTICAL MOUNT, 25"  
51-006014-25



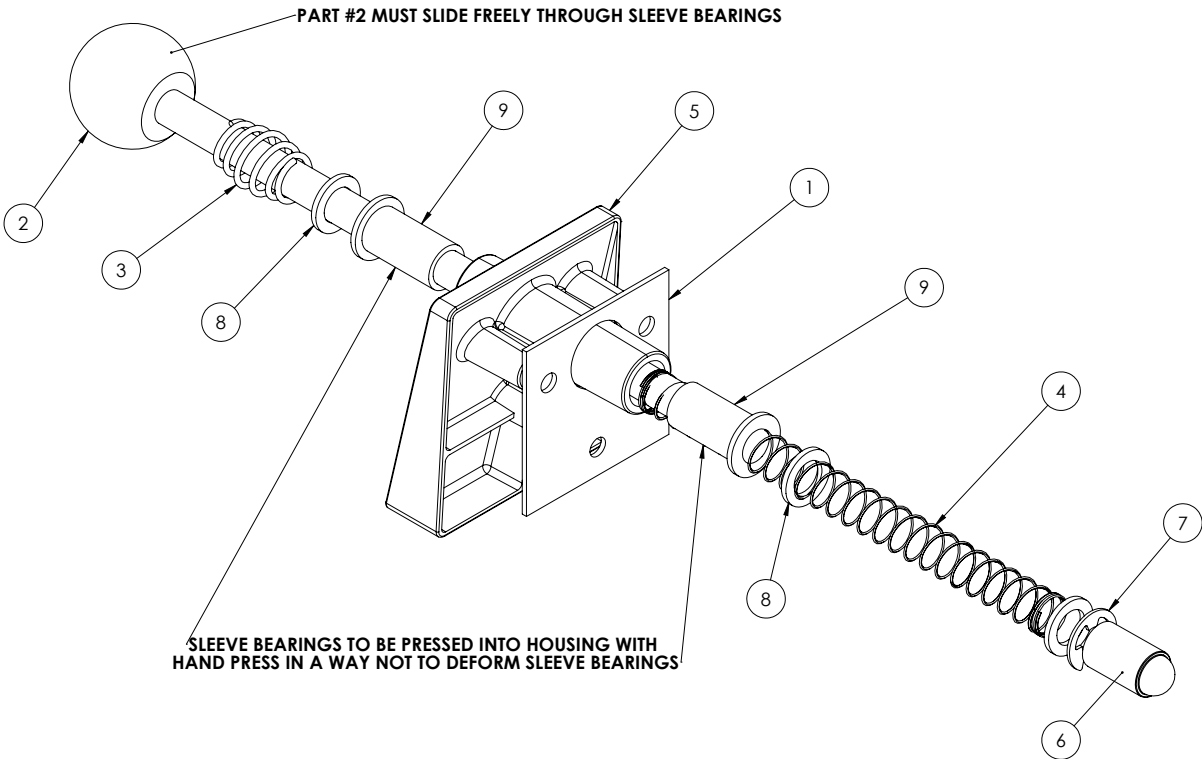
Item	Part Number	Description	Qty
1	18-000005-01	Flipper Leaf Switch, Double Contact	1
2	18-000005-00	Flipper Switch, Single Contact	1
3	19-005009-10	Universal Lower Cabinet Harness	1
4	25-100011-02	Heat Shrink Thin-Wall Flexible, 1/8"	1

Item	Part Number	Description	Qty
1	10-005007-00	KICKBACK-KNOCKER COIL BRKT LT MOUNT	1
2	10-007000-00	COIL RETAINING BRACKET "T" TYPE	1
3	19-003104-01	BACKBOX KNOCKER COIL CABLE, BACKBOX PCBs	1
4	23-000003-00	23-800 STANDARD COIL	1
5	25-009001-00	RUBBER BUMPER PLUG, BLACK	1
6	30-000014-30-1	1-7/8" COIL TUBING, FLANGED	1
7	80-002008-04	#8-32 x 1/4" HWH PHILLIPS SERRATED	2

BALL SHOOTER ASSEMBLY

LE = 51-100351-01

CE = 51-100351-02

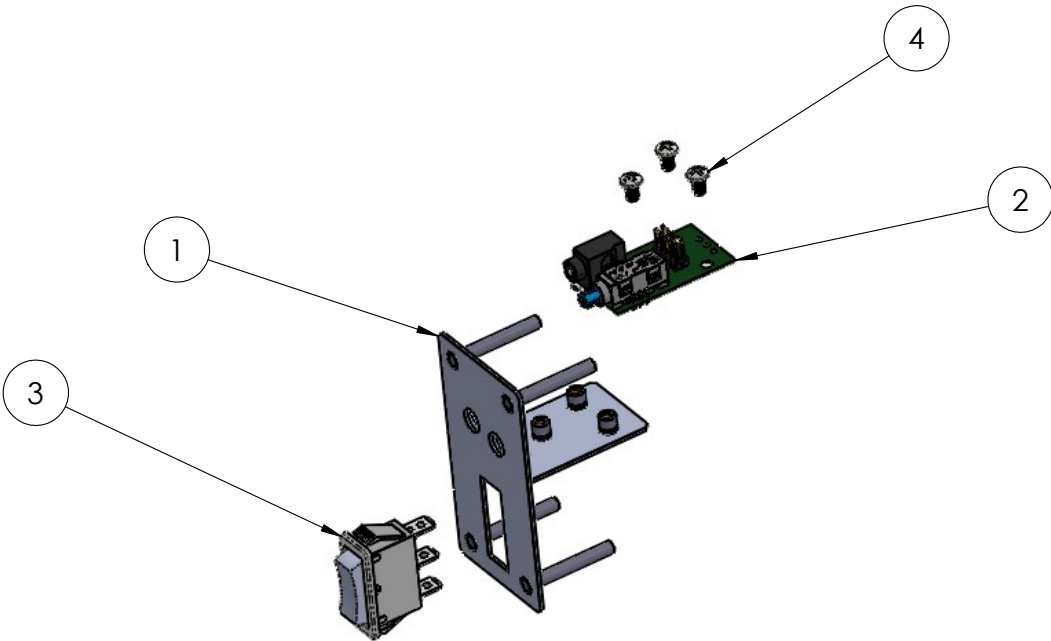


ASSEMBLY CHART				
ASSEMBLY P/N	DESCRIPTION	ITEM 2	ITEM 5	ITEM 4
51-100351-01	ASSEMBLY, BALL SHOOTER W/ BUSHINGS, FORD TUXEDO	11-000007-00	14-000003-01	13-007007-07
51-100351-02	ASSEMBLY, BALL SHOOTER W/ BUSHINGS, ILLUSION CHARRY	11-100069-00	14-000003-02	13-007007-07

Item	Part Number	Description	Qty
1	10-000025-00	Ball Shooter Cabinet MTG Plate	1
2	11-XXXXXX-XX	Shooter Rod	1
3	13-007006-00	Ball Shooter Outer Spring	1
4	13-007007-XX	Ball Shooter Power Spring	1
5	14-000003-XX	Ball Shooter Housing	1
6	25-009003-00	Ball Shooter Tip-Rubber	1
7	94-004011-12	3/8" Shaft E-Clip	1
8	95-002564-58-16	25/64" x 5/8" x 16 Gauge Flat Washer	3
9	96-000002-16	Sleeve Bearing, Flanged, 3/8"	2

HEADPHONE & BLUETOOTH ASSY.

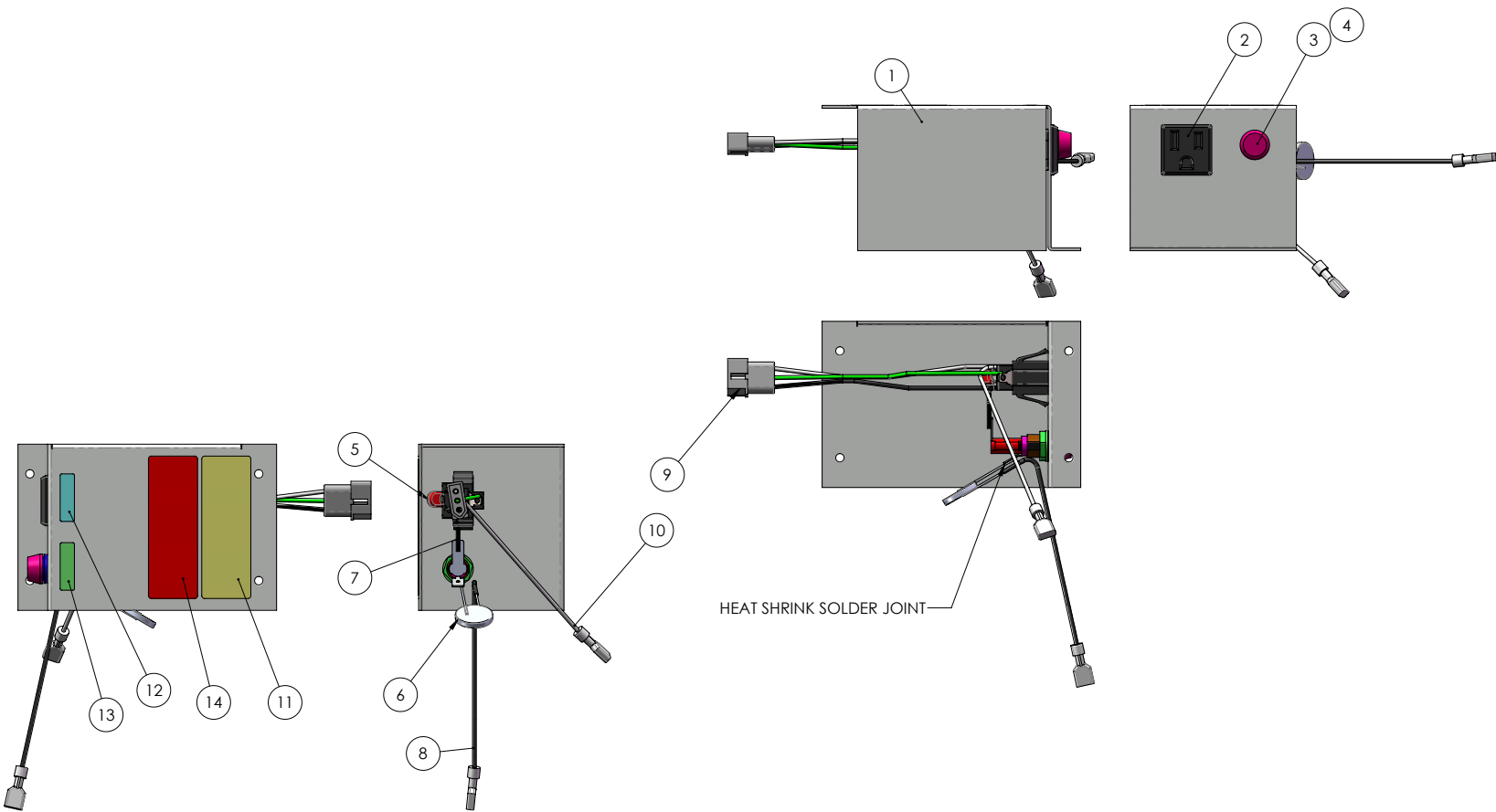
51-100113-00



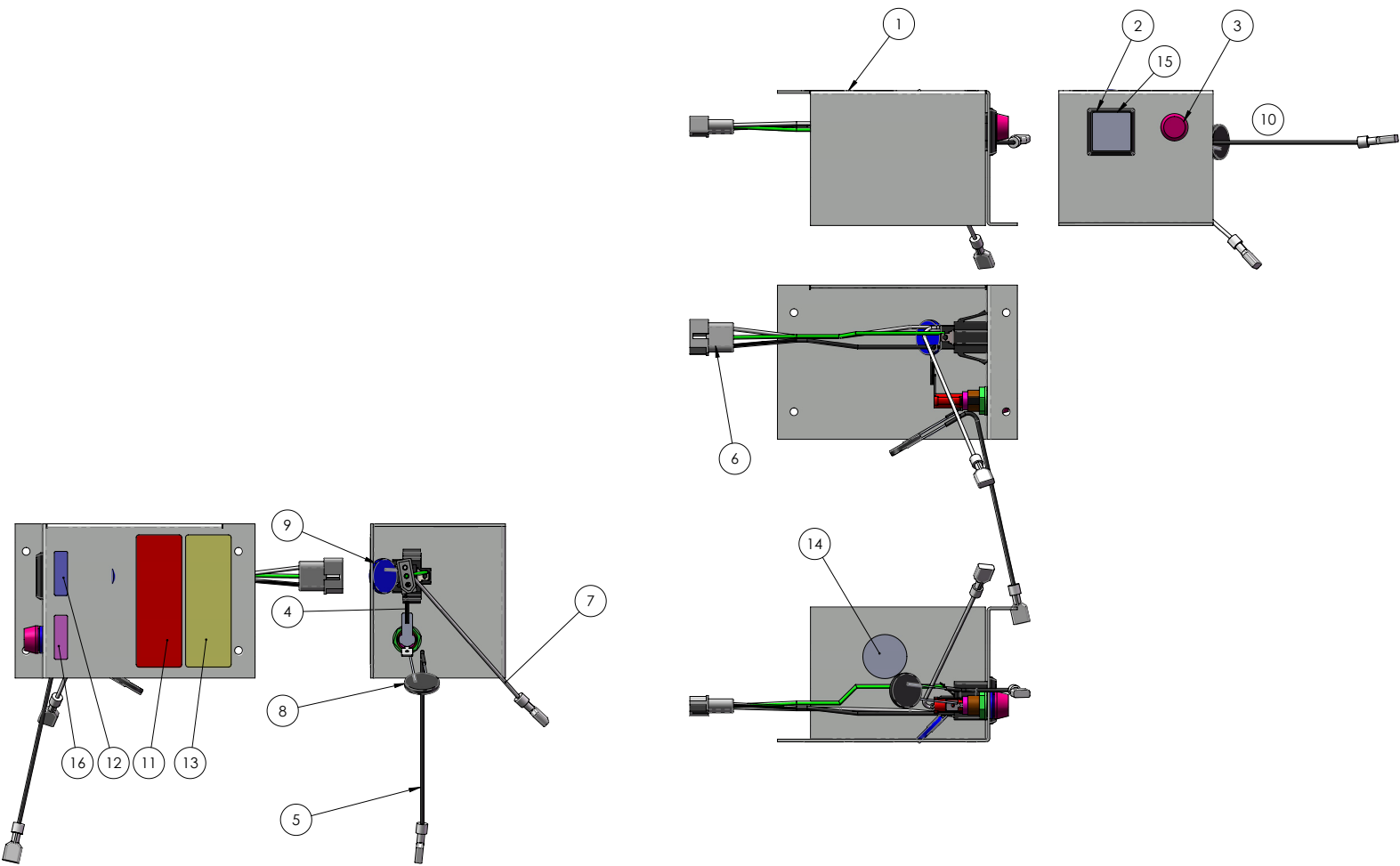
Item	Part Number	Description	Qty
1	10-100168-00	Mounting Plate	1
2	15-100025-00	PCB	1
3	18-003006-01	Volume Switch	1
4	80-000006-04	6-32 x 1/4" MSS	3
5	19-003115-01	Harness (Not Shown)	1



CABINET POWER BOX ASSY U.S.  
51-006001-02

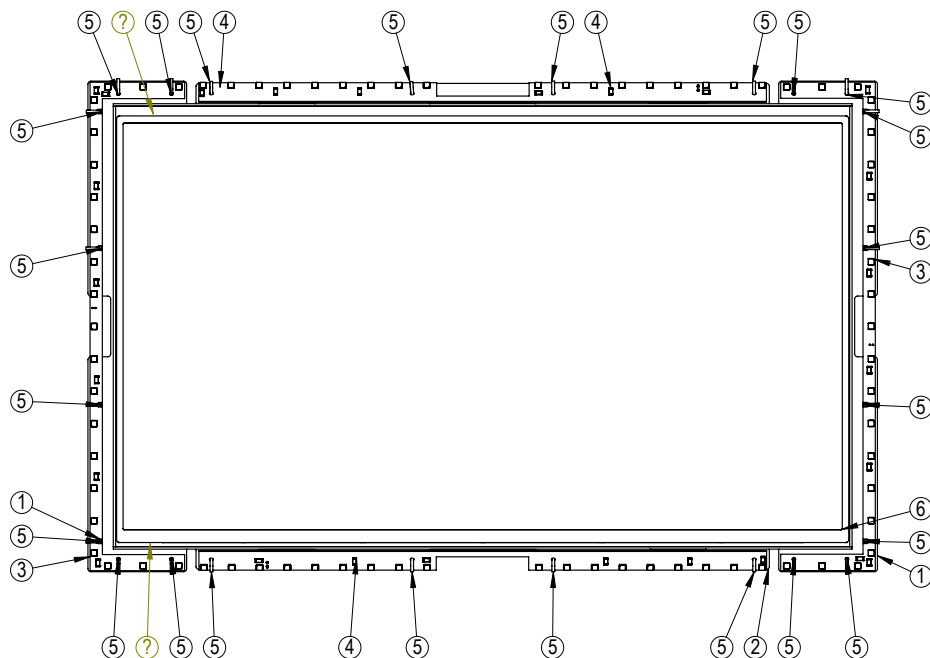


Item	Part Number	Description	Qty
1	10-000008-01	Power Box	1
2	22-000001-00	Service Outlet	1
3	22-008000-00	Line Fuse Holder	1
4	170-000110-SR	Fuse Slow Blow 10A 125V	1
5	180-000001-00	Thermistor	1
6	180-000000-00	Varistor	1
7	19-001000-18	Wire, 18 AWG, Black	3"
8	19-003052-00	Jump Wire 18AWG, Black	1
9	19-100115-00	Cabinet Power Cable AC	1
10	19-003053-00	Jump Wire 18AWG, White	1
11	62-000034-02	Decal Warning Shock Hazard	1
12	62-000034-05	Decal Amperage US	1
13	62-000034-04	Decal Fuse US	1
14	62-000034-08	Decal Warning Fire	1



**CABINET POWER BOX ASSY INT**  
**51-006001-11**

Item	Part Number	Description	Qty
1	10-000008-01	Power Box	1
2	22-000001-00	Service Outlet	1
3	22-008000-00	Line Fuse Holder	1
4	19-001000-18	Wire 18AWG, Black	3"
5	19-003052-00	Jump Wire 18AWG, Black	1
6	19-100115-00	Cabinet Power Cable	1
7	19-003053-00	Jump Wire, 18 AWG, White	1
8	180-000002-00	European Varistor	1
9	180-000003-01	European Thermistor	1
10	170-000205-SR	Fuse Slow Blow 5A 250V	1
11	62-000034-08	Decal Warning Fire	1
12	62-000034-06	Decal Fuse International	1
13	62-000034-02	Decal Warning Shock Hazard	1
14	62-000040-00	Decal AC 220 VAC	1
15	62-000039-00	Decal AC Socket Cover 220 VAC	1
16	62-000034-07	Decal Amperage International	1

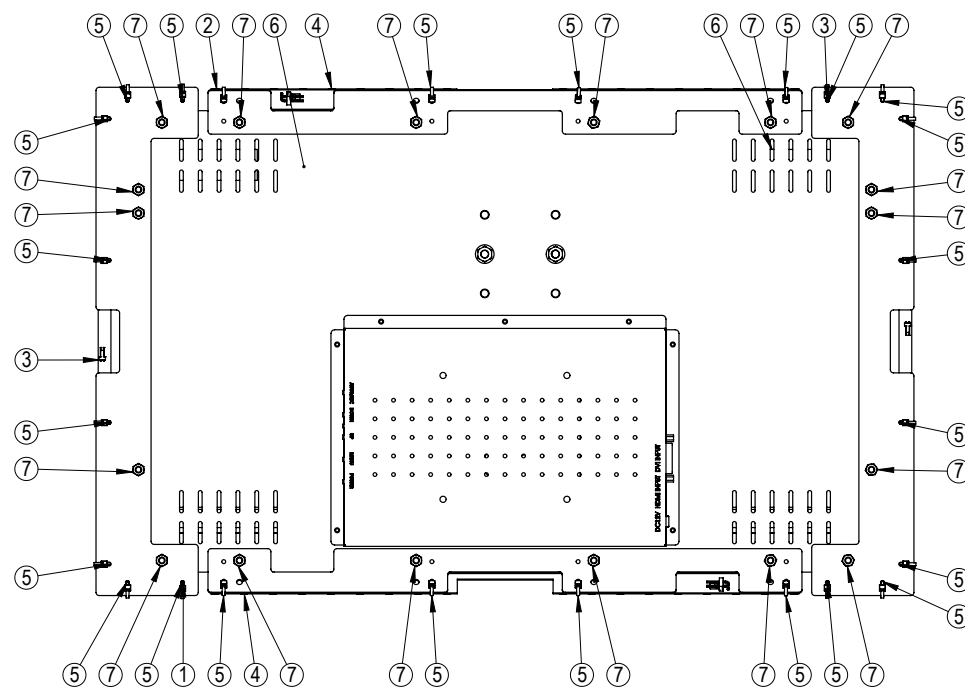
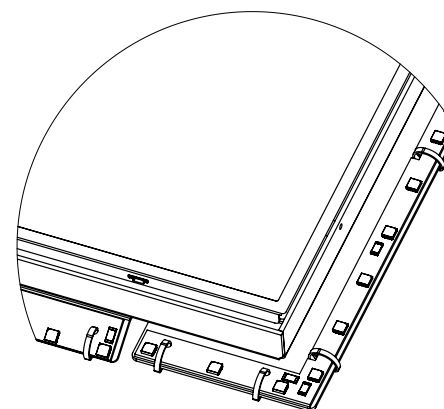
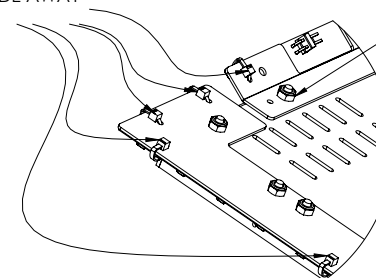


## 27" LCD MONITOR ASSY W/ STUDS, BRACKETS, LEDS 51-100021-03

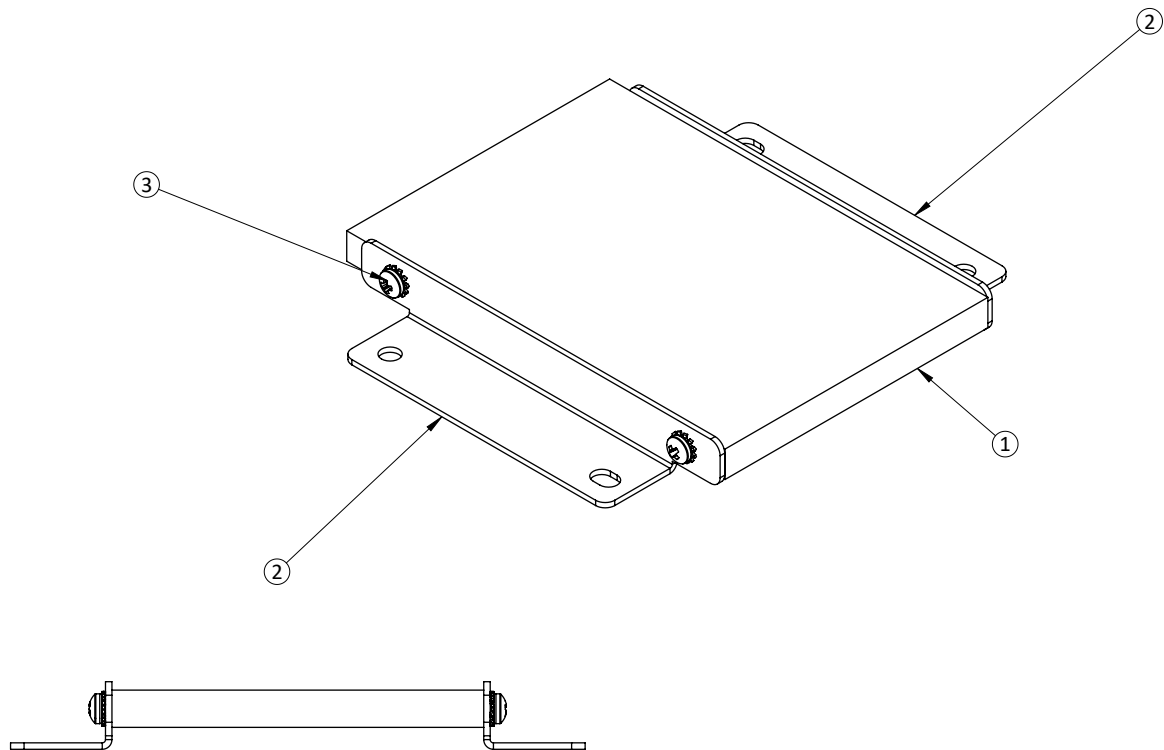
Item	Part Number	Description	Qty
1	10-100387-00	Bracket, Monitor LED Side	2
2	10-100387-01	Bracket, Monitor LED Top and Bottom	2
3	15-100058-00	Monitor Side LED Strip	2
4	15-100058-01	Monitor U-L LED Strip	2
5	30-000051-08	8" Wire Tie, Natural, Thin (18lbs)	24
6	51-100021-01	27" LCD Monitor Assy w/ Studs	1
7	91-000008-00	8-32 Nylon Stop Nut, Thin	18

WIRE TIES TO BE INSTALLED AS SHOWN  
WITH KNUCKLE ON BACK SIDE AWAY  
FROM LED BOARD

TO BE TIGHTENED TO 15 IN/LBS. 18 LOCATIONS

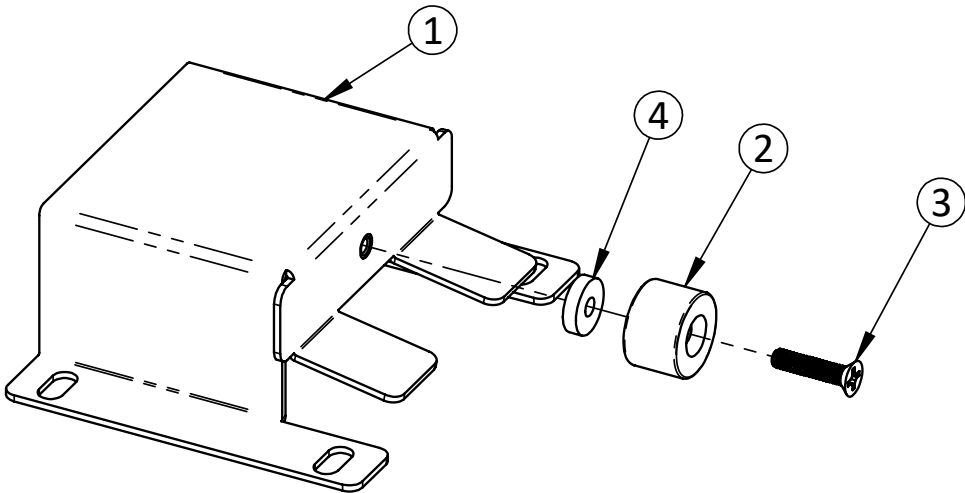


SSD BACKBOX MOUNT  
51-005044-03



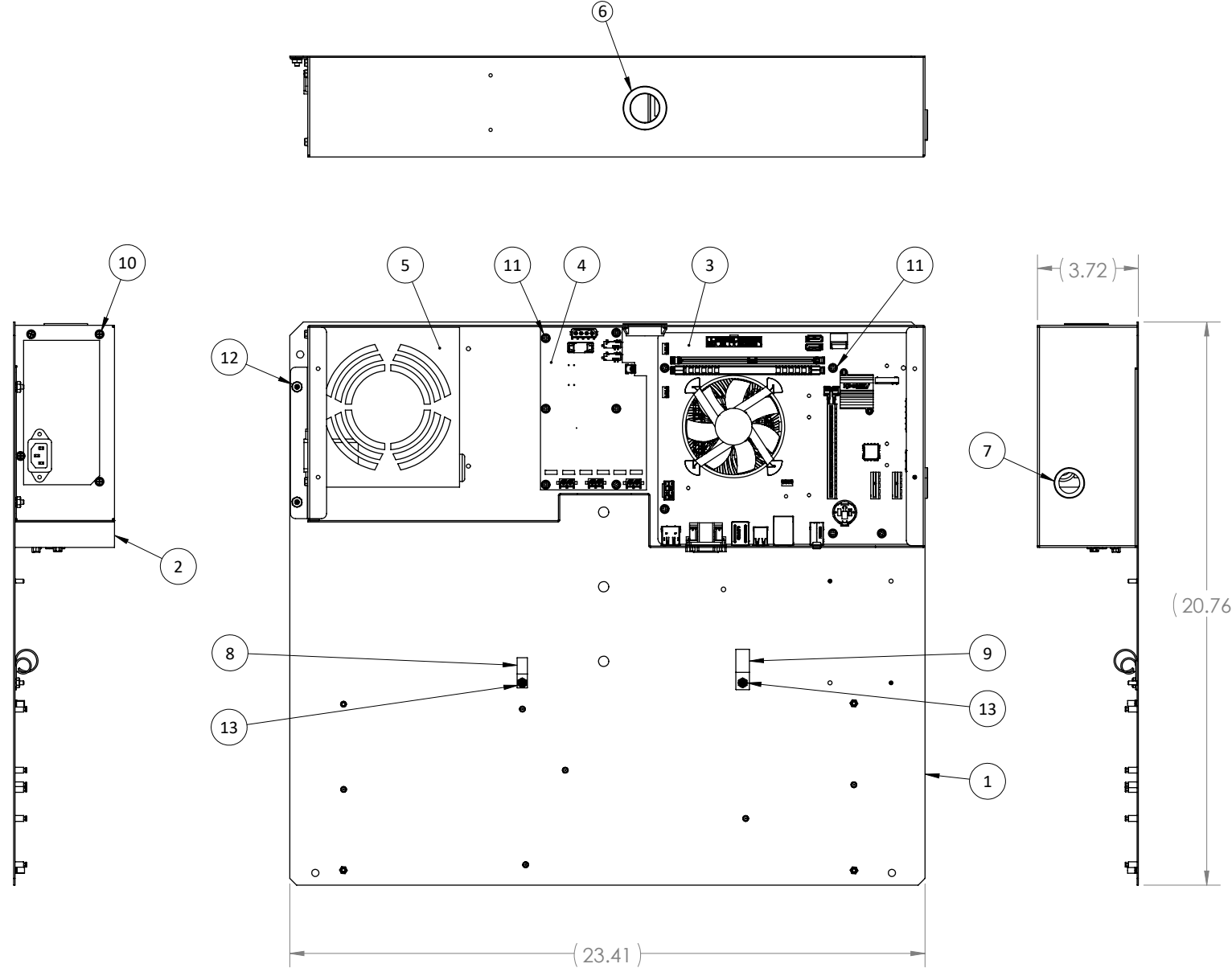
Item	Part Number	Description	Qty
1	15-000003-03	Solid State Drive	1
2	10-000209-00	SSD Mounting Bracket	2
3	80-001003-03	M3 x 5MM (3/16")	4

MONITOR MAGNETIC LATCH  
51-100050-00



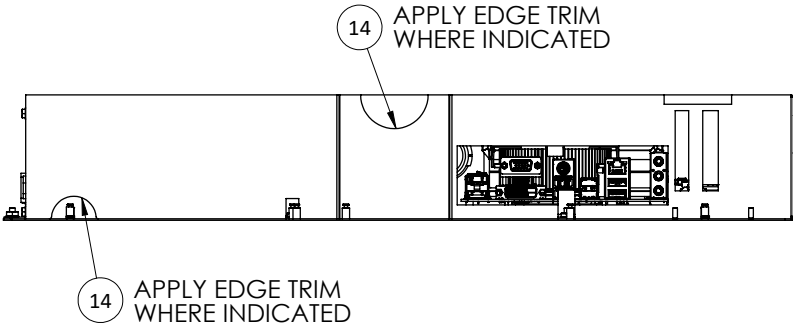
Item	Part Number	Description	Qty
1	10-100065-00	Bracket Screen Lock	1
2	23-100003-00	Magnet, .75 in x .50 thk, #8 hole	1
3	80-006008-12	#8-32 x 3/4" MS	1
4	92-000633-00	Nylon Washer, 0.166" ID, 0.500" OD, 0.125" TH	1

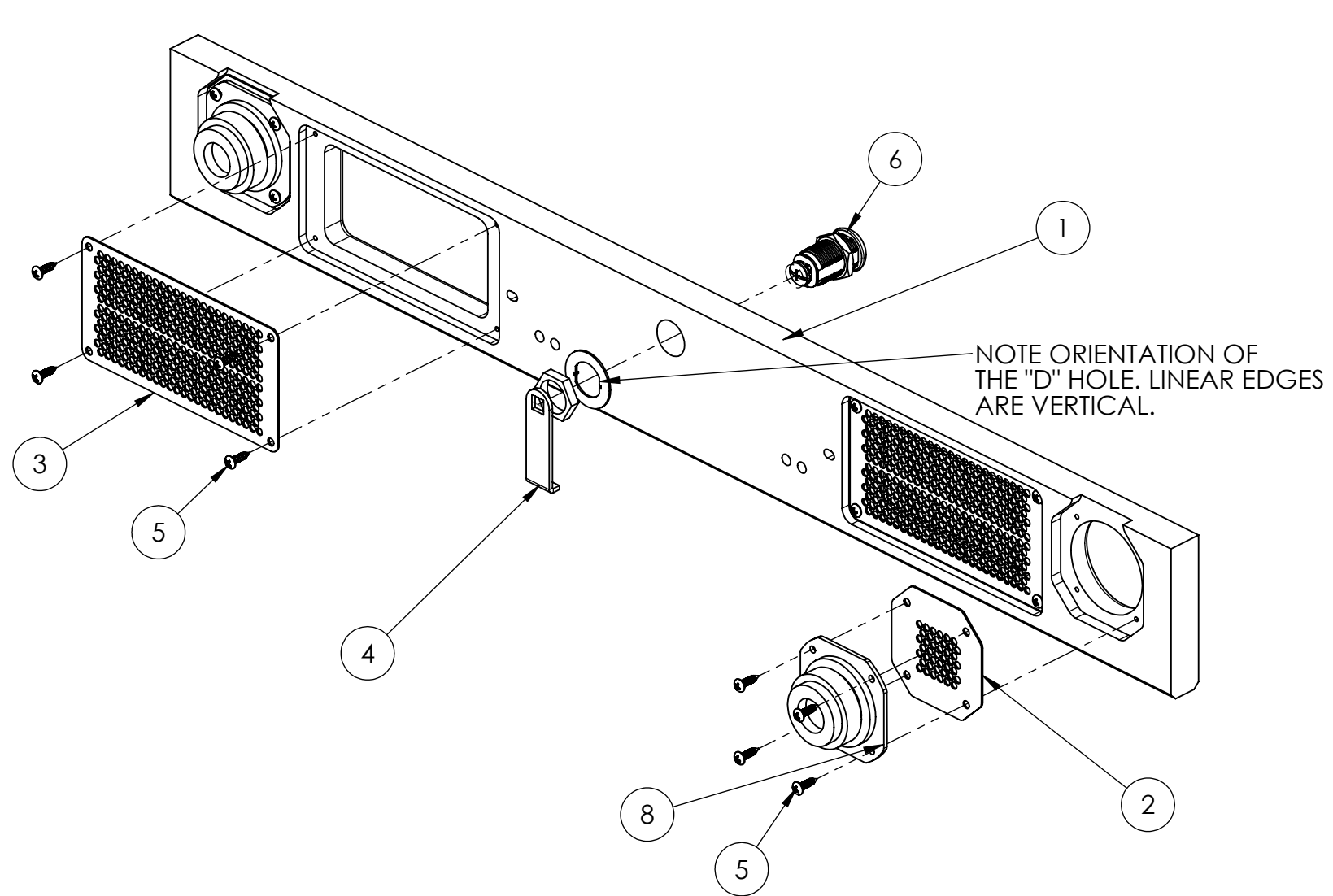




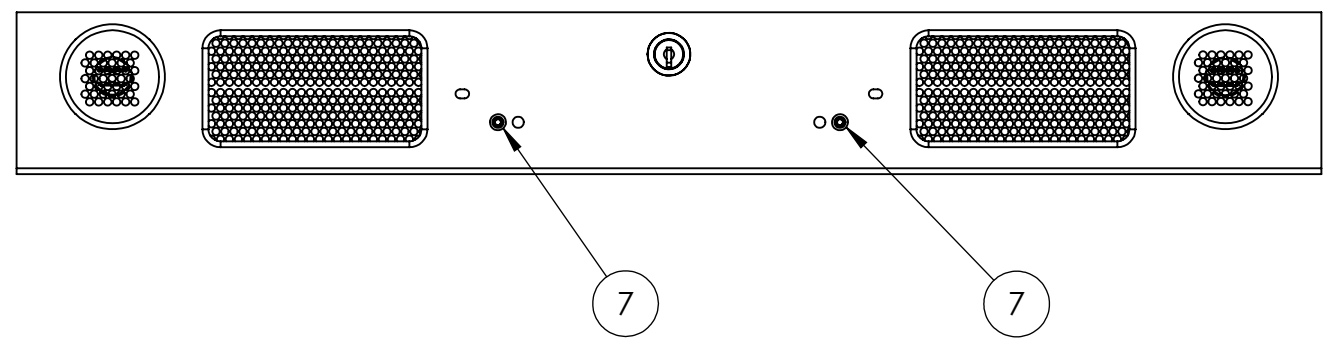
**BACKBOX MOUNT PCB BASE ASSY 2021**  
**51-100041-02**

Item	Part Number	Description	Qty
1	10-100082-00	Backbox PEM Plate	1
2	10-100295-00	Backbox PCB's EMI Shield	1
3	51-100177-01	B560M Computer Assembly	1
4	15-004002-01	Sound Amplifier PCB, Analog In	1
5	16-000013-00	ATX Power Supply, 450 Watts	1
6	30-000108-02	Locking Grommet, 1-1/2"	1
7	25-009013-00	PCB Chassis CPU Grommet 1"	1
8	30-000049-08	Nylon Cable Clamp, 1/2"	1
9	30-000049-12	Nylon Cable Clamp, 3/4"	1
10	SUPPLIED W/ ATX	6-32 x 1/4" HWH Phillips SMS Serr	4
11	80-002006-06	#6-32 x 3/8" HWH MS	11
12	91-001008-00	#8-32 Keps Nut, Zinc Plated	4
13	91-001006-00	6-32 Keps Nut	2
14	30-008005-00	Plastic Edge Trim w/ Adhesive	7"
15	19-003043-01	3.5mm Audio Cable, M-M 3ft	1
16	19-003072-03	27" LCD Power Cable, Backbox PCB's	1
17	19-003100-01	USB Cable 2.0 A to Mini-B, Shld 1ft	1
18	19-003127-03	Adapter Cable, DVI-D to HDMI, 3ft	1
19	19-009015-02	Sound Amp BD Input Power Cable	1
20	19-100002-00	ATX Power Cable, 093 to C-13"	1
21	30-000051-08	8" Wire Tie, Natural	2





FRONT VIEW

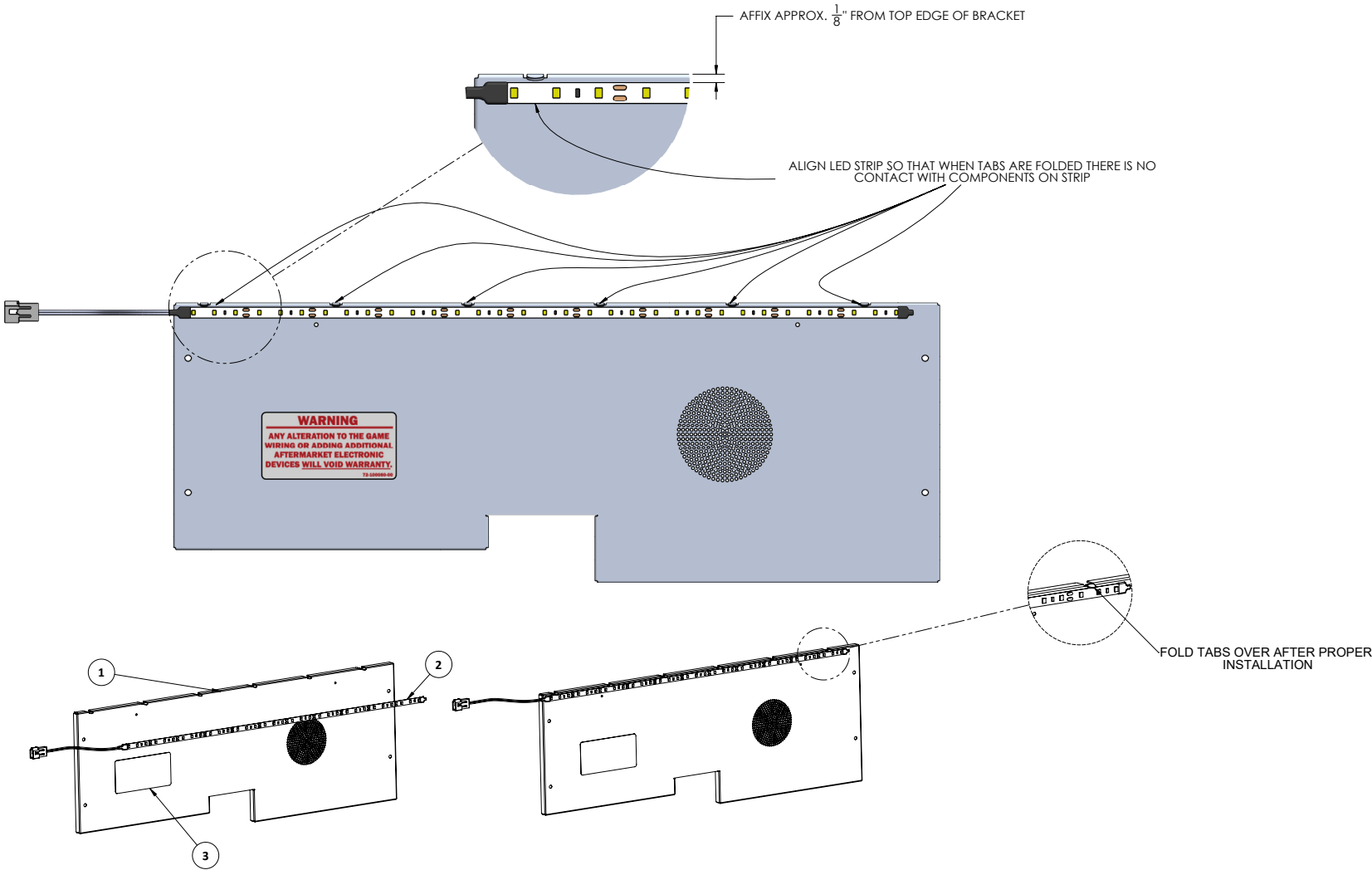


INSERT ITEM 7 FROM FRONT AS SHOWN

**BACKBOX SPEAKER BAR ASSY.**  
**51-100051-00**

Item	Part Number	Description	Qty
1	05-100014-00	Speaker Bar Front Panel	1
2	10-000002-10	Tweeter Speaker Grill	2
3	10-000002-11	Mid-Range Speaker Grill	2
4	10-000224-00	Cam, Lock	1
5	82-000106-08	#6 x 1/2" SMS	16
6	51-005012-02	Lock Assy. 1 1/8" 1 1/4" Cam	1
7	91-005008-00	#8-32 Hex Drive	2
8	17-006000-00	Sound Bar 2" Dome Tweeter	2

ASSY, EMI SHIELD LID W/LED STRIP, 2021 MOBO  
51-100238-00



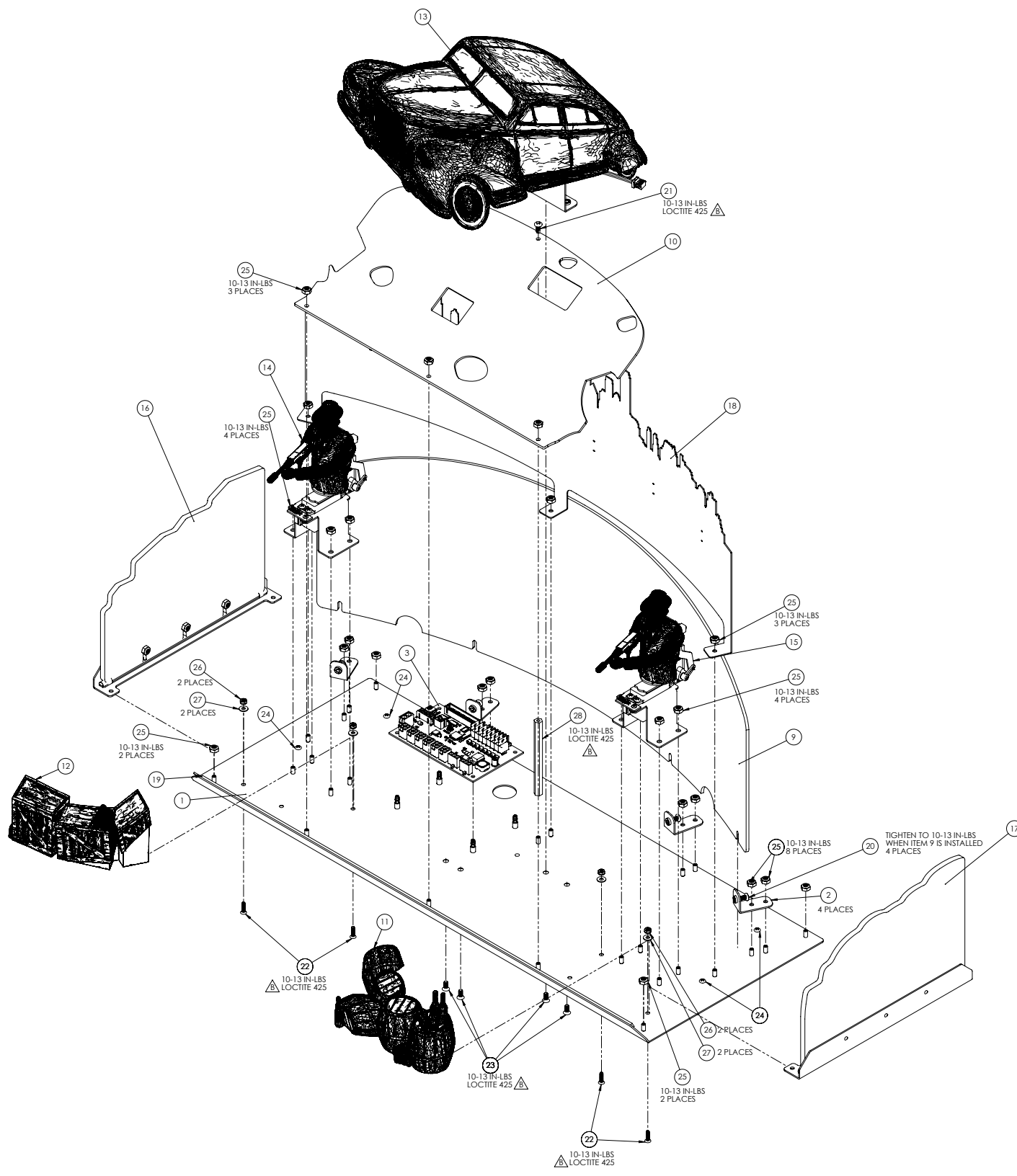
Item	Part Number	Description	Qty
1	10-100296-00	Backbox PCBs EMI Shield Lid, 2021 Mobo	1
2	51-005042-00	Backbox LED Strip Assy w/ Cable	1
3	72-100060-00	Warning, Void Warranty Label	1



# COLLECTOR'S EDITION TOPPER





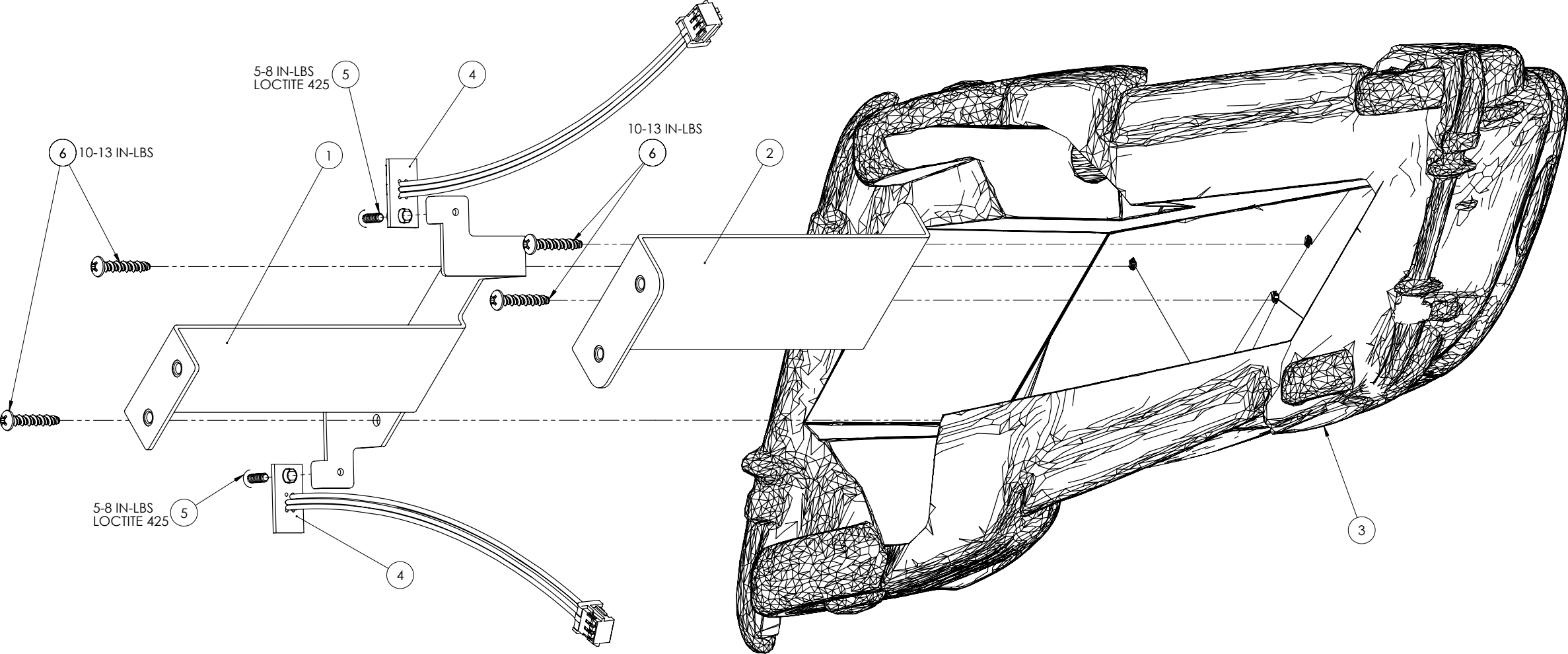


TOPPER, THE GODFATHER, CE MODEL  
51-100269-00

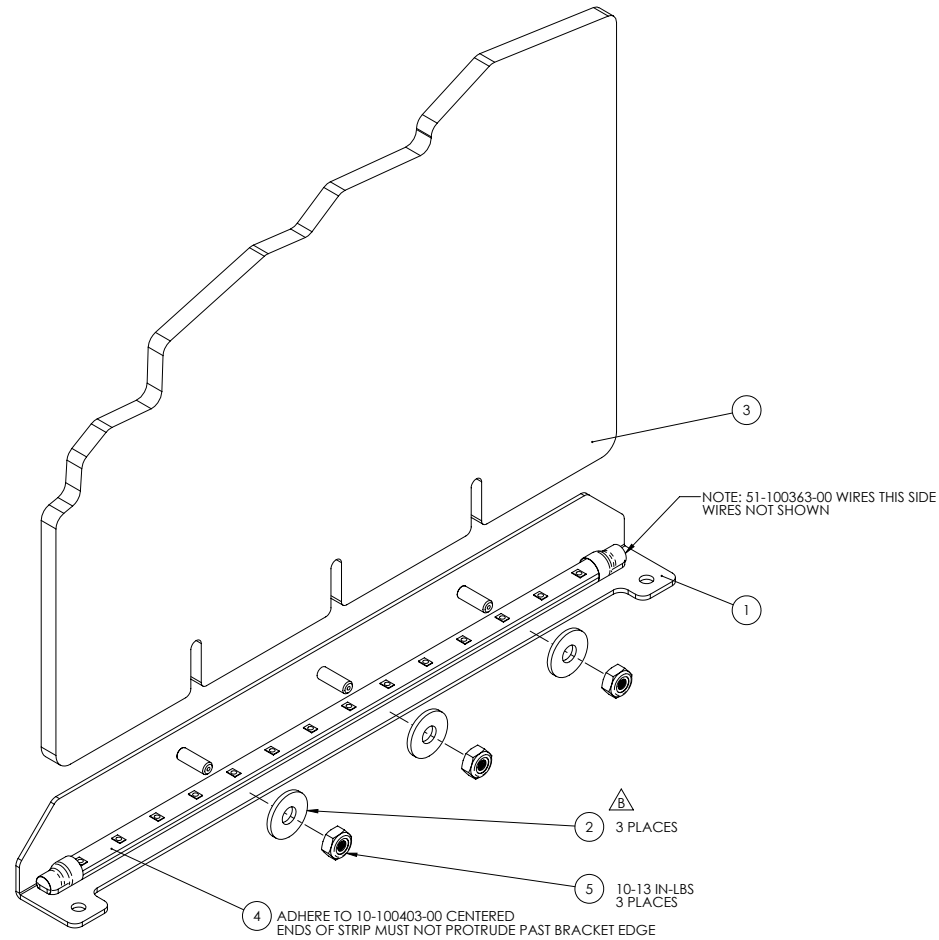
Item	Part Number	Description	Qty
1	10-100396-00	PLATE, TOPPER MOUNTING	1
2	10-100402-00	BRACKET, SKY, TOPPER	4
3	15-100040-00	TOPPER CONTROLLER BD	1
4	19-003100-10	USB CABLE, 2.0 A TO MINI-B, M-M, 10FT	1
5	19-100053-01	TOPPER SERVO CONTROL CABLE	1
6	19-100166-04	CE TOPPER POWER CABLE	1
7	19-100178-00	CE TOPPER COIL CABLE	1
8	19-100179-00	CE TOPPER RGB SPLITTER CABLE	1
9	30-100155-00	ACRYLIC, SKY BACKGROUND, TOPPER	1
10	30-100161-00	PLASTIC, TERRAIN, TOPPER	1
11	32-100025-00	SCULPTURE, BARRELS, TOPPER	1
12	32-100026-00	SCULPTURE, CRATES, TOPPER	1
13	51-100356-00	SSEMBLY, CAR SCULPTURE, TOPPER	1
14	51-100357-00	ASSEMBLY, THUG SCULPTURE, LEFT, TOPPER	1
15	51-100357-01	ASSEMBLY, THUG SCULPTURE, RIGHT, TOPPER	1
16	51-100358-00	ASSEMBLY, SKY SIDE, LEFT, TOPPER	1
17	51-100358-01	ASSEMBLY, SKY SIDE, RIGHT, TOPPER	1
18	51-100359-00	ASSEMBLY, SKYLINE BACKGROUND, TOPPER	1
19	51-100364-00	ASSEMBLY, CE TOPPER RGB LED STRIP	1
20	80-000008-08	#8-32 x 1/2" PPH MS, ZINC PLATED	4
21	80-000108-06	8-32 X 3/8" PPH MS, BLACK OXIDE	1
22	80-006006-08U	6-32 x 1/2" PFH MS, 82° CA, UC, ZINC PLATED	4
23	80-006008-06U	#8-32 x .375 PFH MS, 82 DEG CA, UC, ZINC	4
24	82-000106-12	#6 X 3/4" PPH SMS, BLACK	4
25	91-000008-00	8-32 NYLON STOP NUT THIN	26
26	91-001006-00	#6-32 KEPS NUT, ZINC PLATED	4
27	92-000006-00	#6 FLAT WASHER, .156" ID x .375" OD	4
28	95-001508-60	5/16" X 3-3/4" HEX SPACER, F-F, 8-32	1

TOPPER, CAR SCULPTURE, CE MODEL  
51-100356-00

Item	Part Number	Description	Qty
1	10-100397-00	BRACKET, HEADLIGHT, CE	1
2	10-100398-00	BRACKET, CAR MOUNTING, CE	1
3	32-100027-00	SCULPTURE, CAR, CE	1
4	51-100235-00	RGBW FLOODLIGHT & CABLE ASSY	2
5	80-000004-05	#4-40 x 5/16" L PPH MS	2
6	83-001006-12	#6 X 3/4" THD FORMING PLASTIC PHL-HD SCREW	4

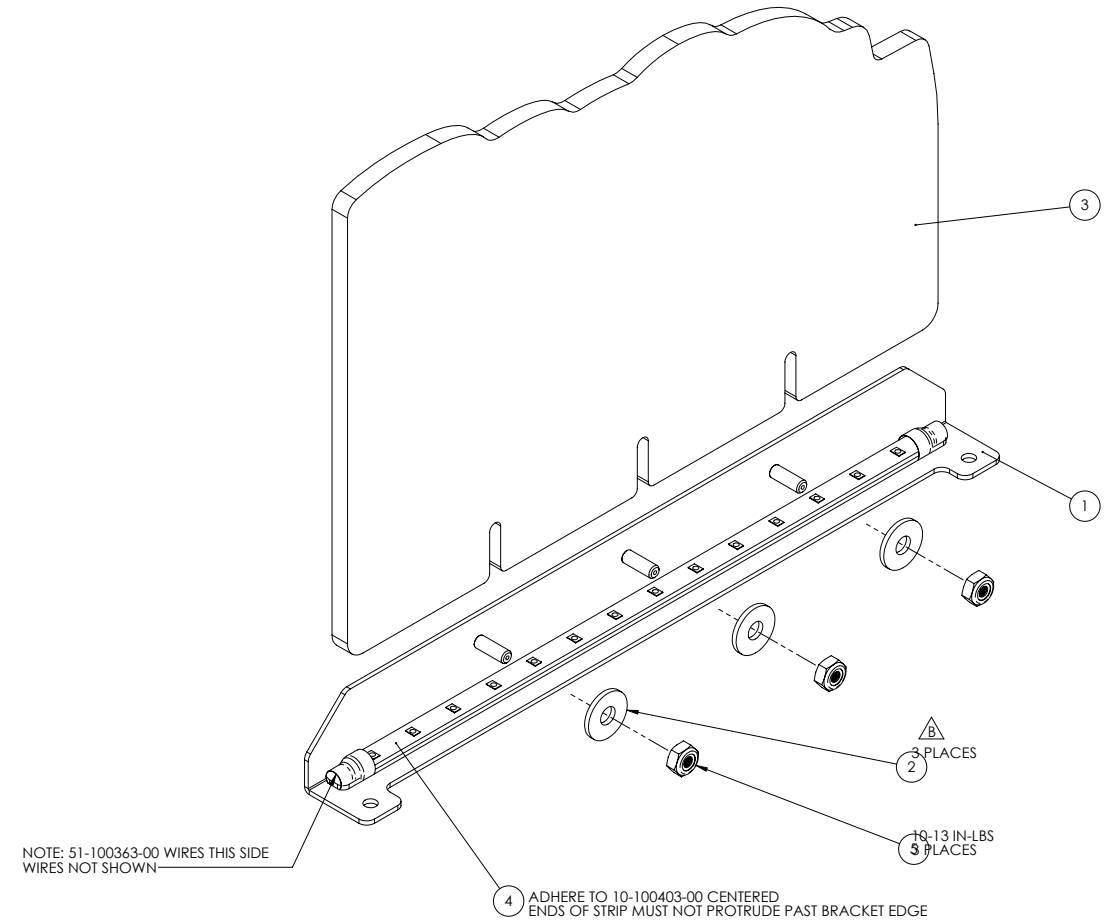






**TOPPER, SKY SIDE LEFT, CE MODEL**  
**51-100358-00**

Item	Part Number	Description	Qty
1	10-100403-00	BRACKET, SKY SIDE TOPPER	1
2	30-100103-10	WASHER .234ID, .625OD, NYLON BLK, .063 THK	3
3	30-100156-00	ACRYLIC, SKY SIDE LEFT	1
4	51-100363-00	ASSY, LED STRIP ACRYLIC, 9-INCH	1
5	91-000008-00	8-32 NYLON STOP NUT THIN	3



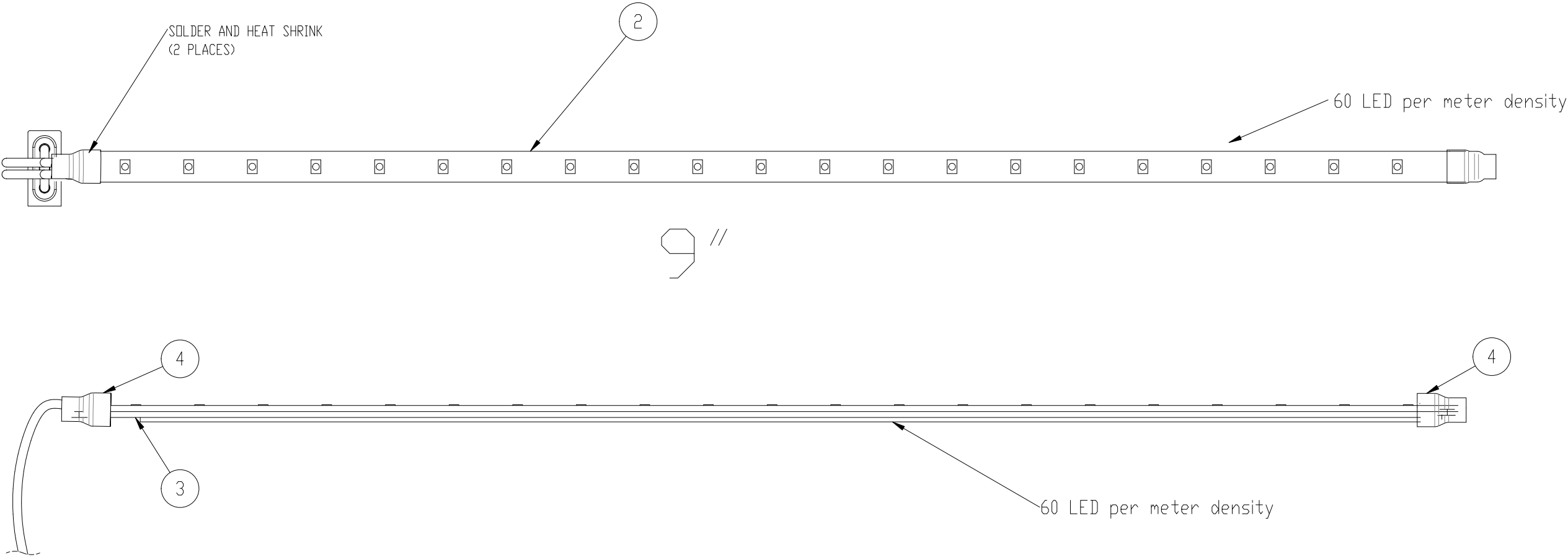
**TOPPER, SKY SIDE RIGHT, CE MODEL**  
**51-100358-01**

Item	Part Number	Description	Qty
1	10-100403-00	BRACKET, SKY SIDE TOPPER	1
2	30-100103-10	WASHER .234ID, .625OD, NYLON BLK, .063 THK	3
3	30-100156-01	ACRYLIC, SKY SIDE RIGHT	1
4	51-100363-00	ASSY, LED STRIP ACRYLIC, 9-INCH	1
5	91-000008-00	8-32 NYLON STOP NUT THIN	3



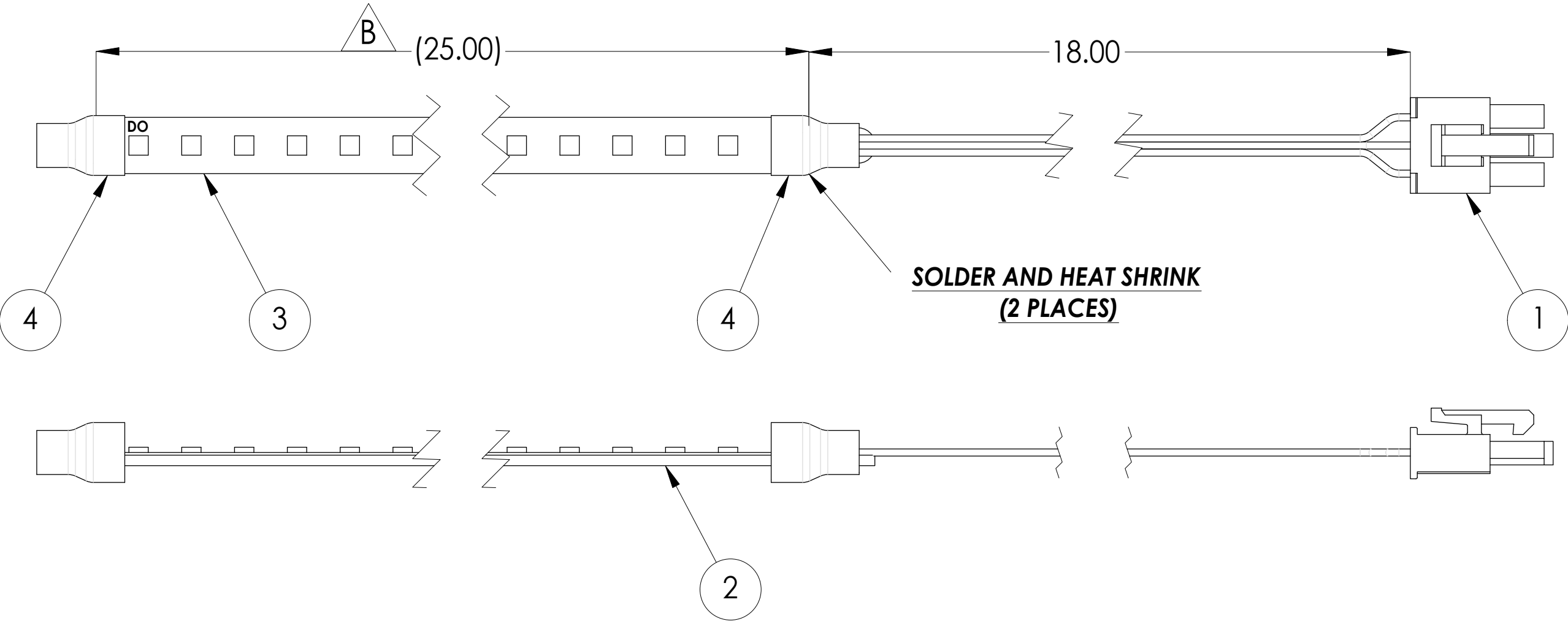
TOPPER, LED STRIP ASSY, CE MODEL  
51-100363-00

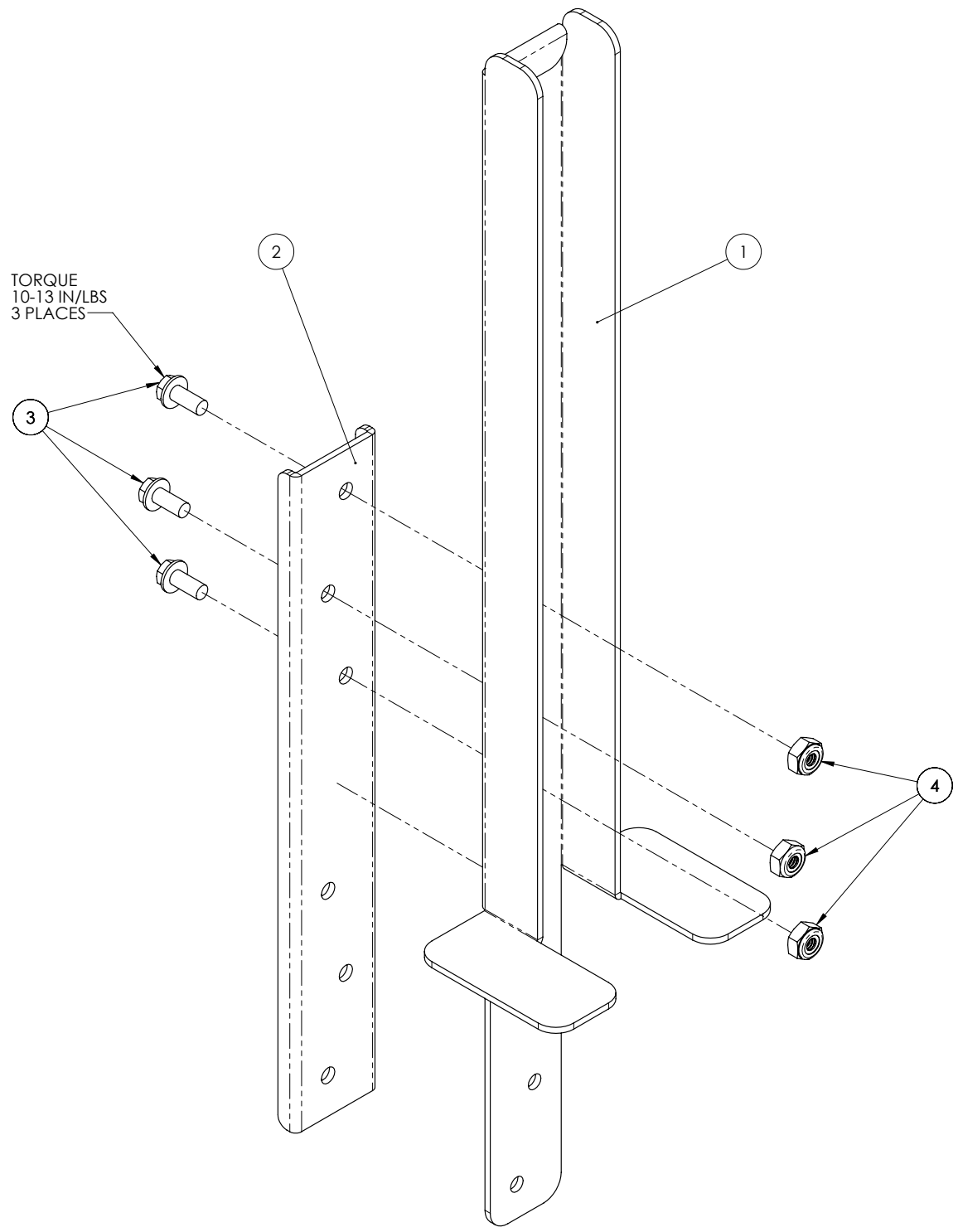
Item	Part Number	Description	Qty
1	19-100167-00	18in 12v PIGTAIL, 2-PIN	1
2	24-000001-13	LED STRIP COOL WHITE	9in
3	30-100102-00	LED STRIP BACKER, ACRY TOPPER, GEN	1
5	Q5-3X-1 4-01-QB48IN-25	1/2" Length of 1/4" Dia Heat Shrink	2



TOPPER, RGB LED STRIP ASSY, CE MODEL  
51-100364-00

Item	Part Number	Description	Qty
1	19-100160-18	18in 12v PIGTAIL, 2-PIN	1
2	30-100091-01	LED STRIP COOL WHITE	1
3	F6C5050RGB5W-GY23P5	RGB LED STRIP 25" LENGTH	1
4	Q5-3X-1 4-01-QB48IN-25	1/2" Length of 1/4" Dia Heat Shrink	2





**TOPPER, SHIP STRAP GUIDE, CE MODEL**  
**51-100367-00**

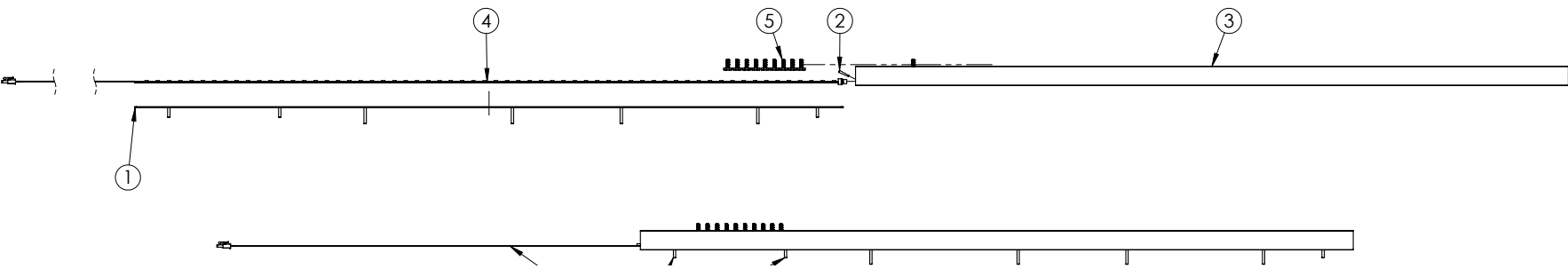
Item	Part Number	Description	Qty
1	10-100418-00	BRKT, MAIN, STRAP GUIDE	1
2	10-100418-01	BRKT, SUPPORT, STRAP GUIDE	1
3	80-002008-06	8-32 x 3/8" HWH PHILLIPS MS SERRATED	3
4	91-000008-00	8-32 NYLON STOP NUT THIN	3





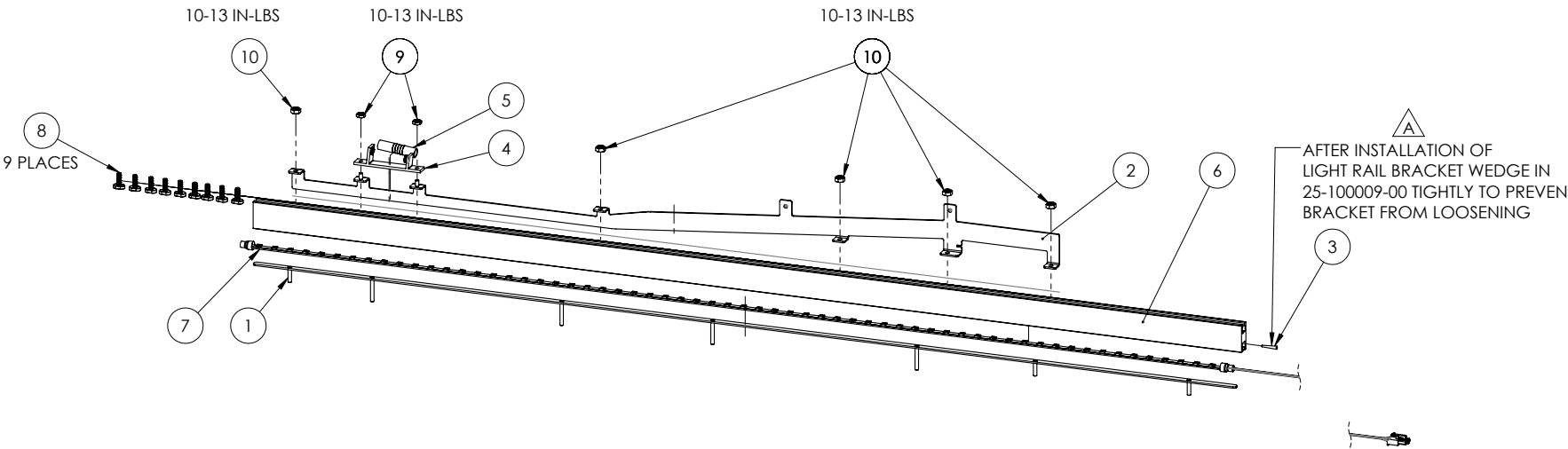


LIGHT RAIL ASSY, LEFT  
51-100252-00



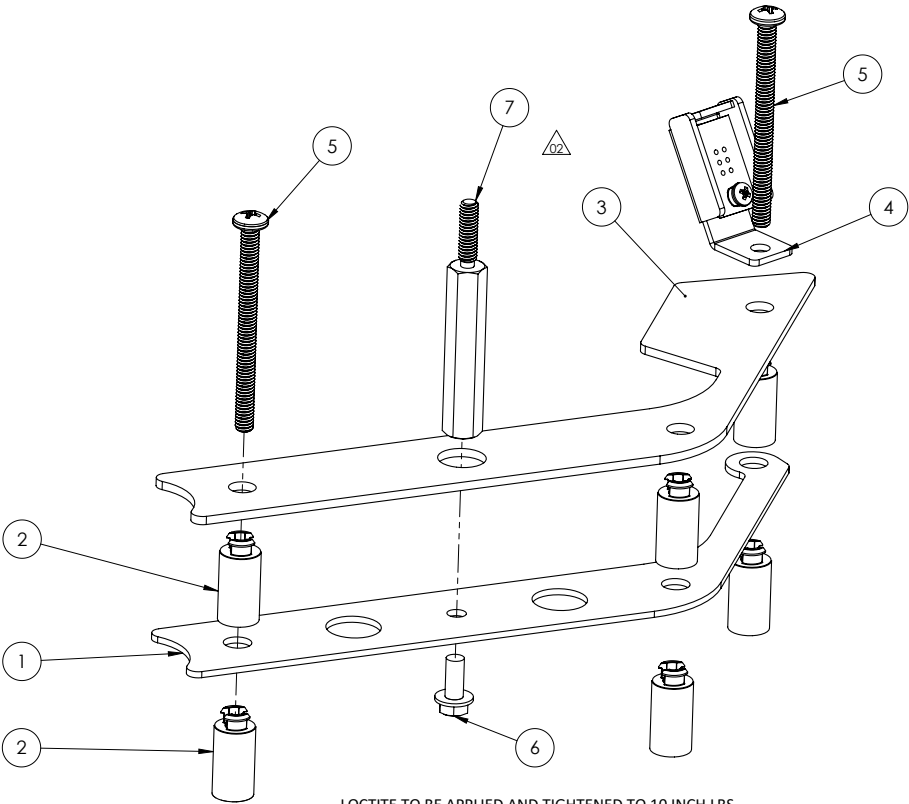
Item	Part Number	Description	Qty
1	10-100166-01	Bracket, Light Rail, Long	1
2	25-100009-00	Plug Rubber, Tapered	1
3	30-100030-00	Extrusion, Siderail 41.75 inch	1
4	51-100102-01	Asst, Light Rail Bracket Long (RGB)	1
5	85-009008-08	8-32 x 1/2" Screw, Rect Head	10

LIGHT RAIL ASSY, RIGHT  
51-100253-00



Item	Part Number	Description	Qty
1	10-100166-01	Bracket, Light Rail, Long	1
2	12-100038-00	Right Ball Guide Shooter Lane	1
3	25-100009-00	Plug Rubber, Tapered	1
4	30-000087-00	Playfield Bubble Level Bracket	1
5	30-000087-01	Playfield Bubble Level Vial	1
6	30-100030-00	Extrusion, Siderail 41.75 inch	1
7	51-100102-01	Asst, Light Rail Bracket Long (RGB)	1
8	85-009008-08	8-32 x 1/2" Screw, Rect Head	9
9	91-000006-00	6-32 Nylon Locknut, Zinc Plated	2
10	91-000008-00	8-32 Nylon Stop Nut, Thin	5

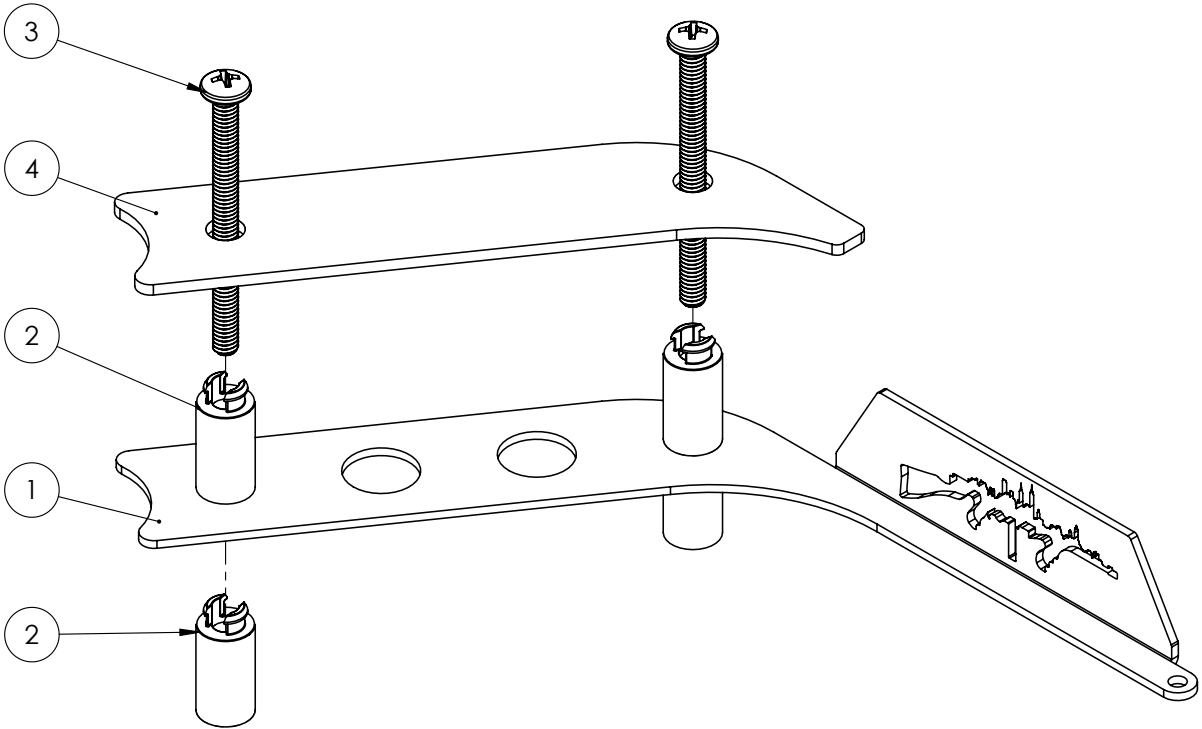
**RIGHT FLIPPER GUIDE ASSY (LE)**  
**51-100213-00**



LOCTITE TO BE APPLIED AND TIGHTENED TO 10 INCH LBS

Item	Part Number	Description	Qty
1	12-100039-01	Flipper Guide, Right	1
2	30-000083-04	#8 Nylon Spacer, Snap-In, Blk, .666"	6
3	30-100113-03	Playfield Plastic, GF LE, -03	1
4	51-100276-00	Floodlight Assy, 120 Degree Brkt	1
5	80-000008-32	#8-32 x 2" PPH MS, Zinc Plated	2
6	80-002008-06	8-32 x 3/8" HWH Phillips MS, Serr	1
7	95-001528-26	5-16" - 1.25" Hex Spacer, 8-32 Zinc	1

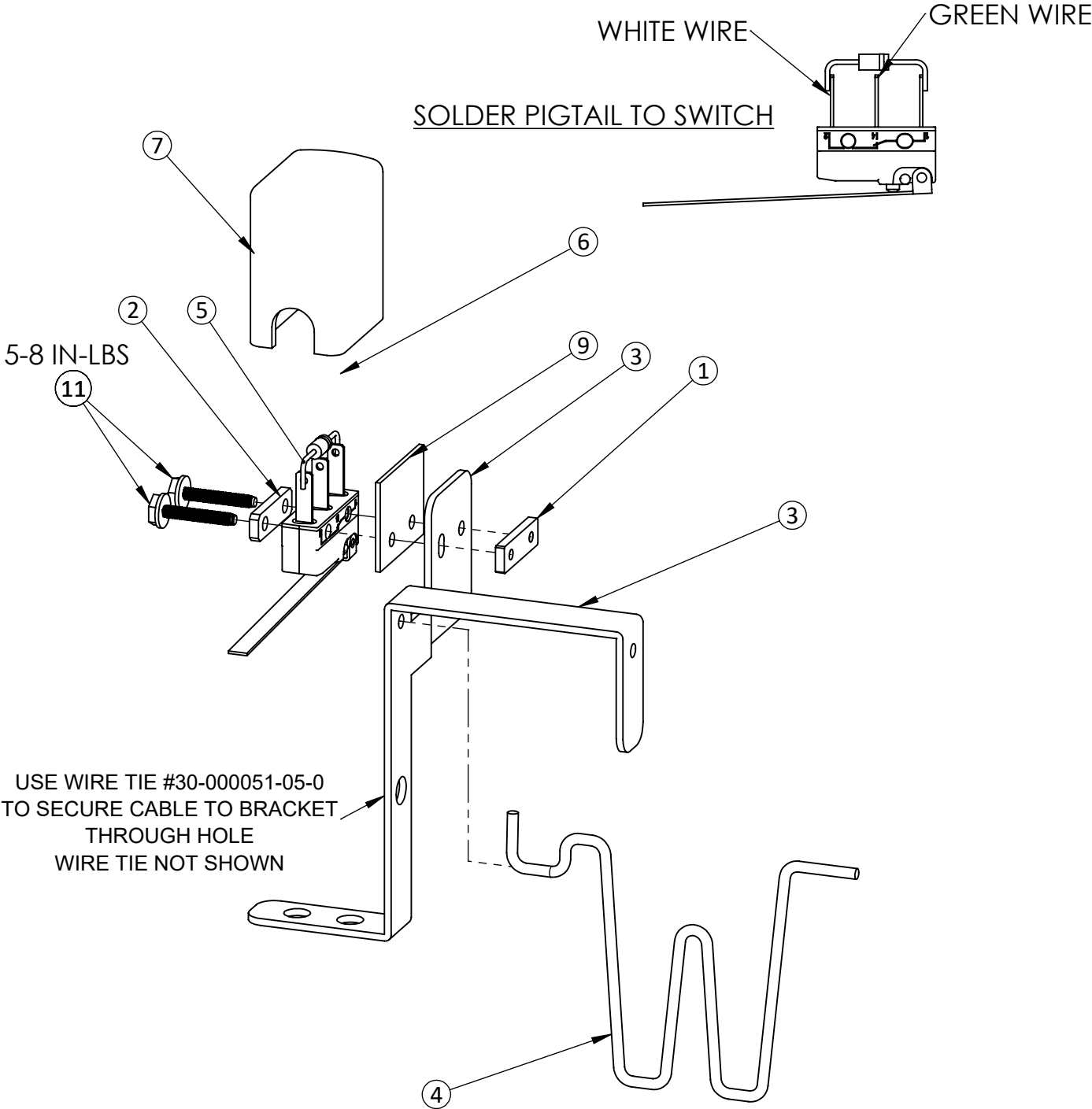
**LEFT FLIPPER GUIDE ASSY (LE)**  
**51-100213-01**



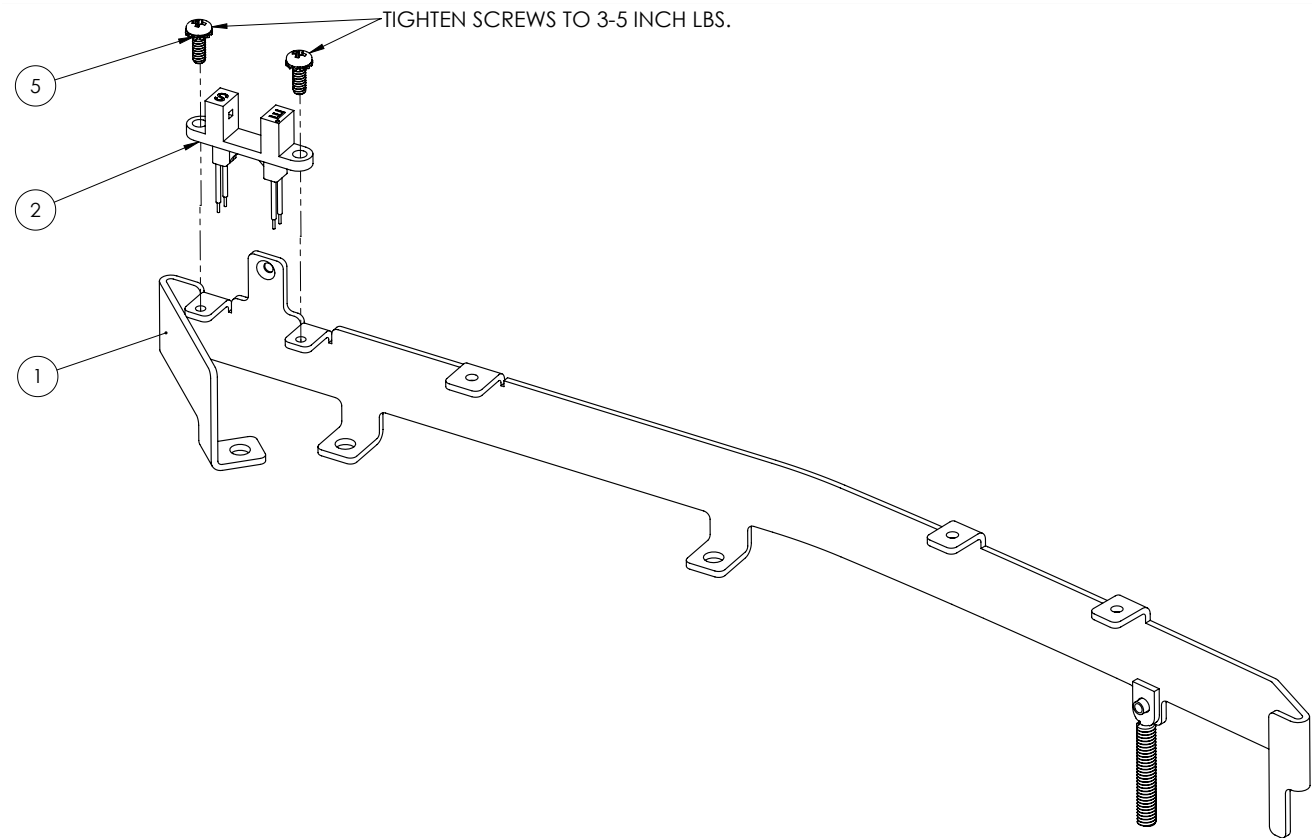
Item	Part Number	Description	Qty
1	12-100039-00	Flipper Guide, Left	1
2	30-000083-04	#8 Nylon Spacer, Snap-In, Blk, .666"	6
3	80-000008-32	#8-32 x 2" PPH MS, Zinc Plated	1
4	30-100113-02	Playfield Plastic, GF LE, -02	1

**ASSY, ROLL UNDER GATE, 18" PIGTAIL**  
**51-100178-01**

Item	Part Number	Description	Qty
1	10-000024-00	Microswitch Nut Plate, 2-56	1
2	10-000024-01	Microswitch Protector Plate, #2	1
3	10-100227-00	Bracket, Roll Under Switch	1
4	13-100030-00	Wire, Roll Under Gate	1
5	18-003002-00	1-Bank Drop Tgt Switch & Wireform	1
6	19-100156-00	Microswitch Pigtail, 18-inch	1
7	25-007001-02	Viny Microswitch Cover Black	1
8	30-000051-05-0	5.6" Wire Tie Black	1
9	70-009002-00	Microswitch Insulator, Fish Paper	1
11	80-002102-08	2-56 x 1/2" HWH MS, Black	2

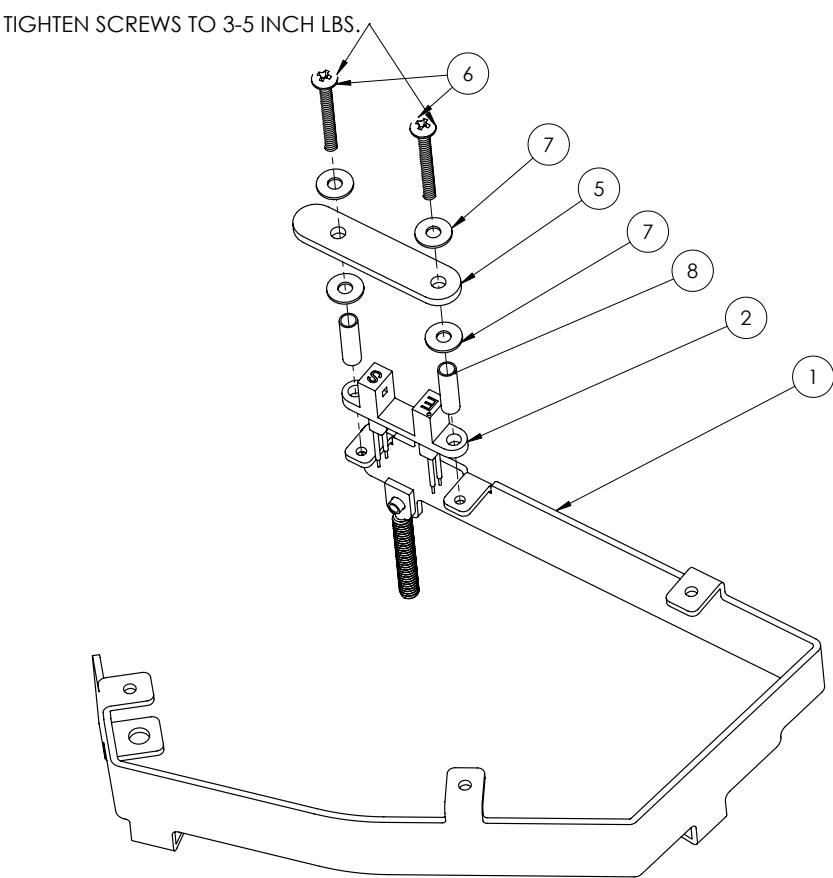


**GF BALL GUIDE #4**  
**51-100210-00**



Item	Part Number	Description	Qty
1	12-100039-04	GF Flat Rail 4	1
2	18-005003-00	U-Shaped Opto, OPB812W	1
3	19-000013-22R	Crimp Pin Female, 22-28AWG, MFJ	4
4	30-002011-04	Receptacle, 4-Pin, 2 Rows, 4.2MM	1
5	80-001004-05	4-40 x 5/16 PPH MS, Sems, Zinc	2

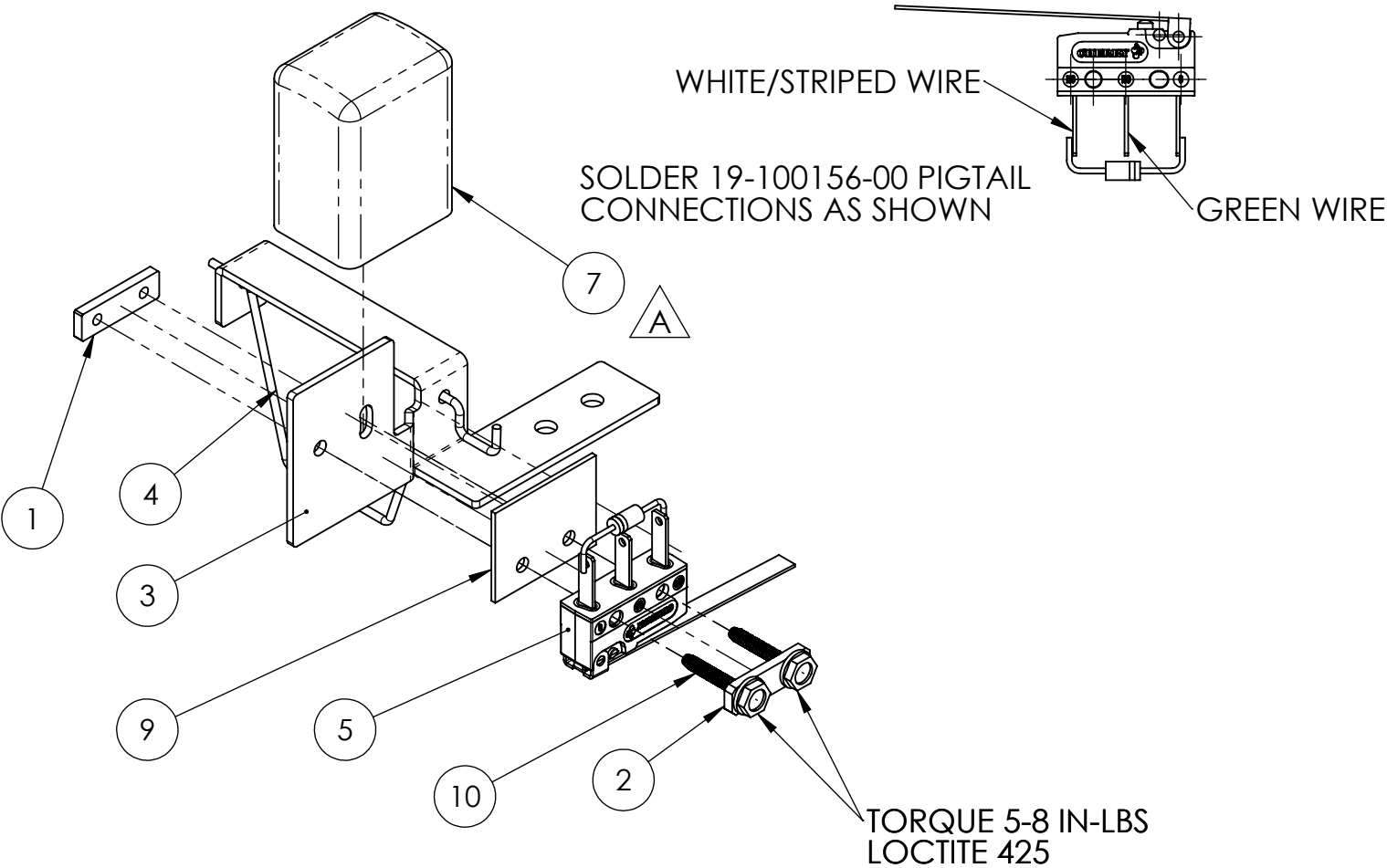
**GF BALL GUIDE #9**  
**51-100211-00**



Item	Part Number	Description	Qty
1	12-100039-09	GF Flatrail #09 w/ Spade Lug	1
2	18-005003-00	U-Shaped Opto, OPB812W	1
3	19-000013-22R	Crimp Pin, Female, 22-28AWG MFJ	4
4	30-002011-04	Receptacle, 4-Pin, 2 Rows, 4.2MM	1
5	30-100122-33	GF Stand Up Target Ball Trap Plastic	1
6	80-000004-14	Pan Head, Silver, #4-40, 0.875" Long	2
7	92-000004-00	#4 SAE Flat Washer, Zinc Plated	4
8	94-003204-08	#4 x 1/2" Round Spacer, 0.16"OD, Alum	2

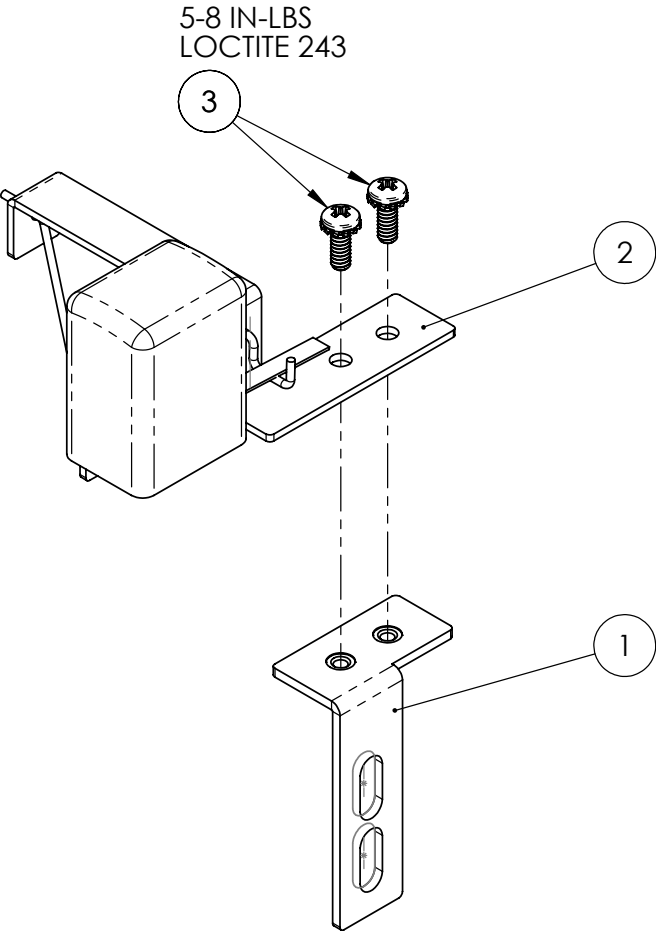


ASSY, ROLL UNDER SWITCH, RAMP MOUNT  
51-100231-00



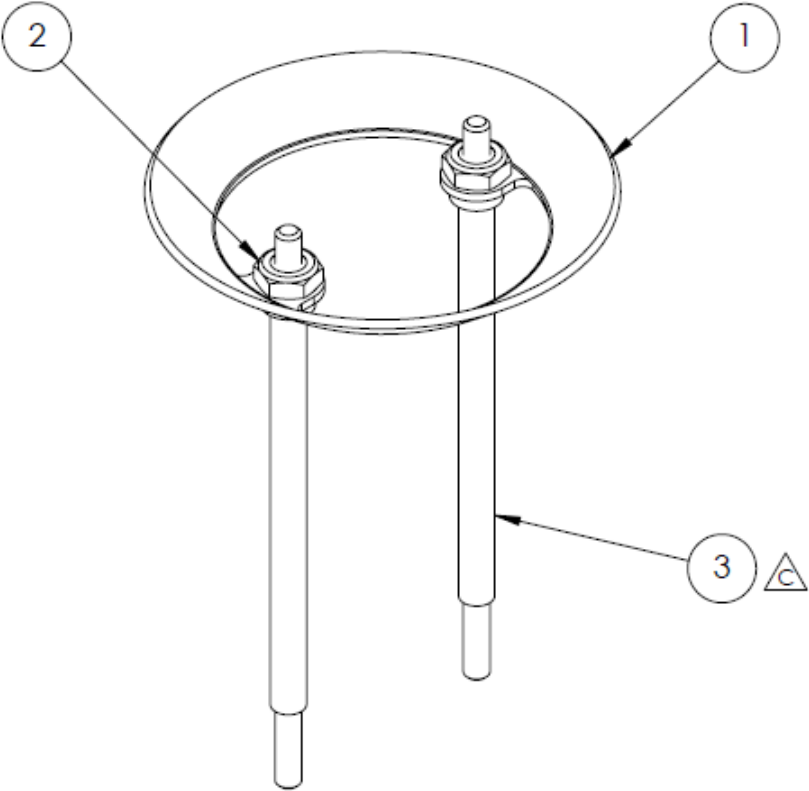
Item	Part Number	Description	Qty
1	10-000024-00	Microswitch Nut Plate, 2-56	1
2	10-000024-01	Microswitch Protector Plate, #2	1
3	10-100287-00	Bracket, Roll-Under Switch, Ramp	1
4	13-003011-00	Roll Under Gate Wireform	1
5	18-003011-00	Microswitch & Wireform 3 Ball Lock	1
6	19-100156-00	Microswitch Pigtail, 18-inch	1
7	25-007001-02	Vinyl Microswitch Cover, Blk Tall Cut	1
8	30-000051-05-0	5.6" Wire Tie, Black	1
9	70-009002-00	Microswitch Insulator, Fish Paper	1
10	80-002102-08	2-56 x 1/2" HWH MS, Black	2

ASSY, ROLL UNDER SWITCH, BACK PANEL  
MOUNT  
51-100231-01



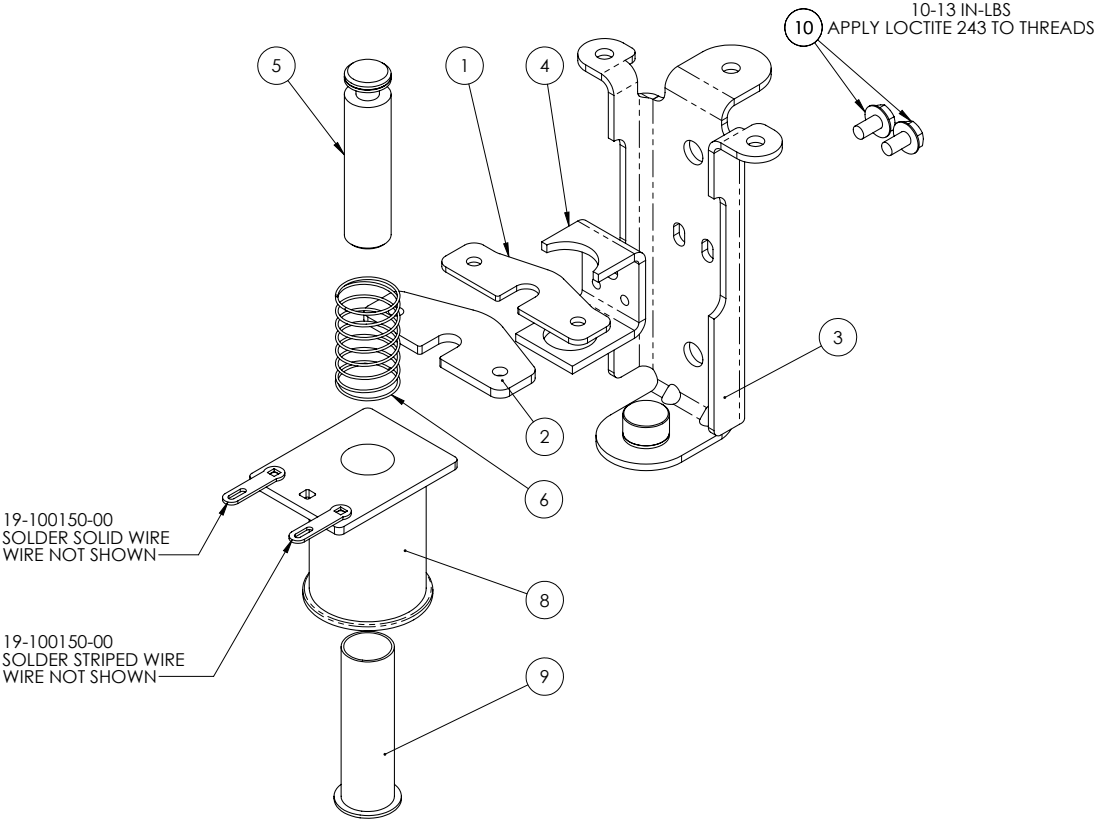
Item	Part Number	Description	Qty
1	10-100393-00	Bracket, Loop Switch Mount	1
2	51-100231-00	Assy, Roll Under Switch, Ramp	1
3	80-001004-05	4-40 x 5/16 PPH MS, Sems, Zinc	2

POP BUMPER RING ASSY.  
11-005004-01

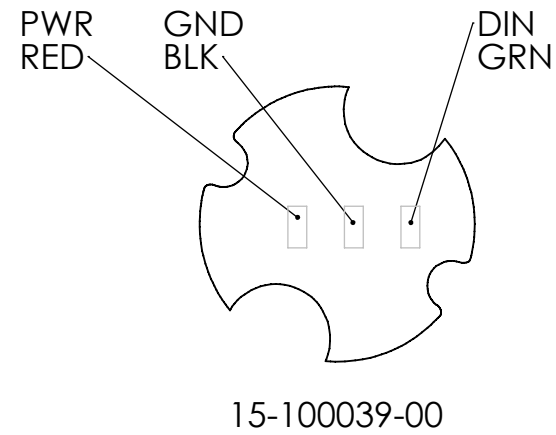
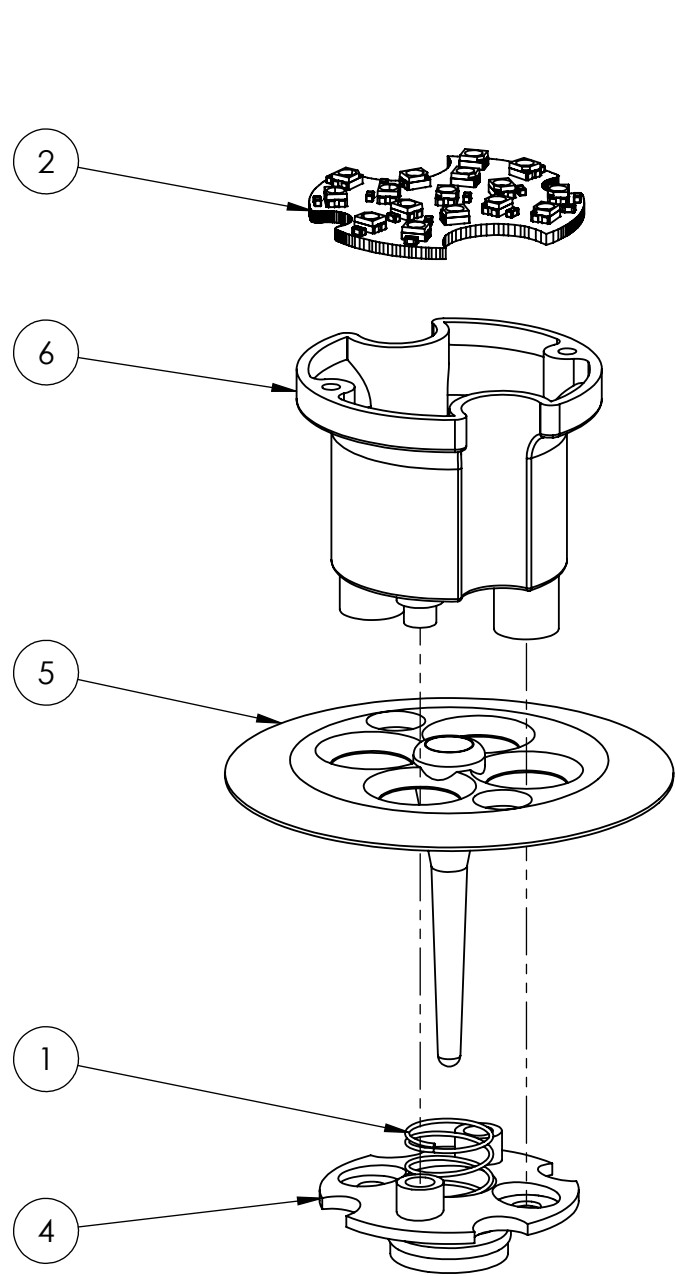


Item	Part Number	Description	Qty
1	11-000005-00	Pop Bumper Ring	1
2	91-000006-00	6-32 Nylon Stop Nut	2
3	11-100000-00	Bumper Rod	2

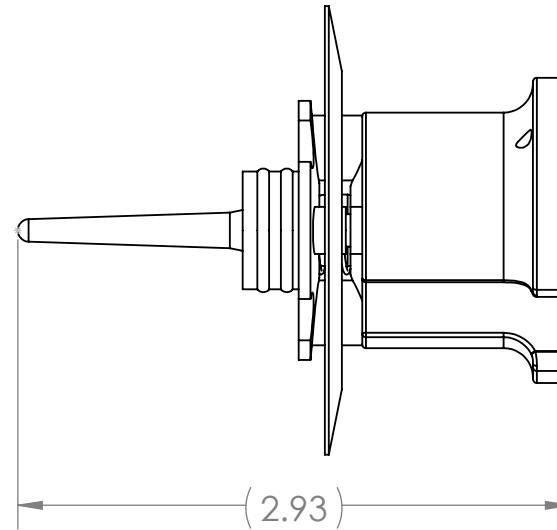
ASSY, POP BUMPER BOTTOM,  
26-1200 Coil w/ Pigtail  
51-100247-01



Item	Part Number	Description	Qty
1	10-000021-00	Pop Bumper Yoke, Steel	1
2	10-000021-01	Pop Bumper Yoke, Bakelite	1
3	10-005003-00	Pop Bumper Coil Brkt	1
4	10-007003-00	Pop Bumper Coil Centering Brkt	1
5	11-000004-00	Bumper Plunger	1
6	13-007002-00	Pop Bumper Spring	1
7	19-100150-00	Coil Pigtail, 2-Lug, 4"	1
8	23-000010-00	26-1200 Standard Coil	1
9	30-000014-28	1-3/4" Coil Tubing, Straight	1
10	80-002006-04	6-32 x 1/4" HWH Phillips MS Serr	2



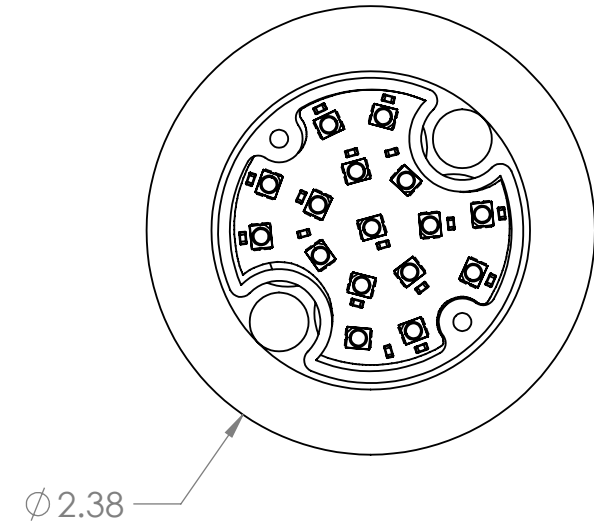
NOTE: RED WIRE THROUGH  
SMALL HOLE IN (6)  
BLK & GRN WIRES THROUGH  
OTHER SMALL HOLE IN (6)



## GF POP BUMPER ASSY 51-100251-00

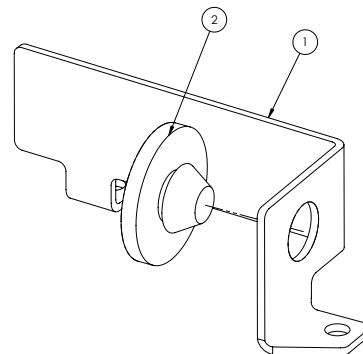
Item	Part Number	Description	Qty
1	13-007003-00	Pop Bumper Skirt Spring	1
2	15-100039-00	Glory Bumper LED Bd	1
3	19-100160-18	Universal Neo Pigtail, 18"	1
4	30-000003-09	Pop Bumper Base, White	1
5	30-000004-09	Pop Bumper Skirt, White	1
6	30-000005-09	Pop Bumper Body, White	1

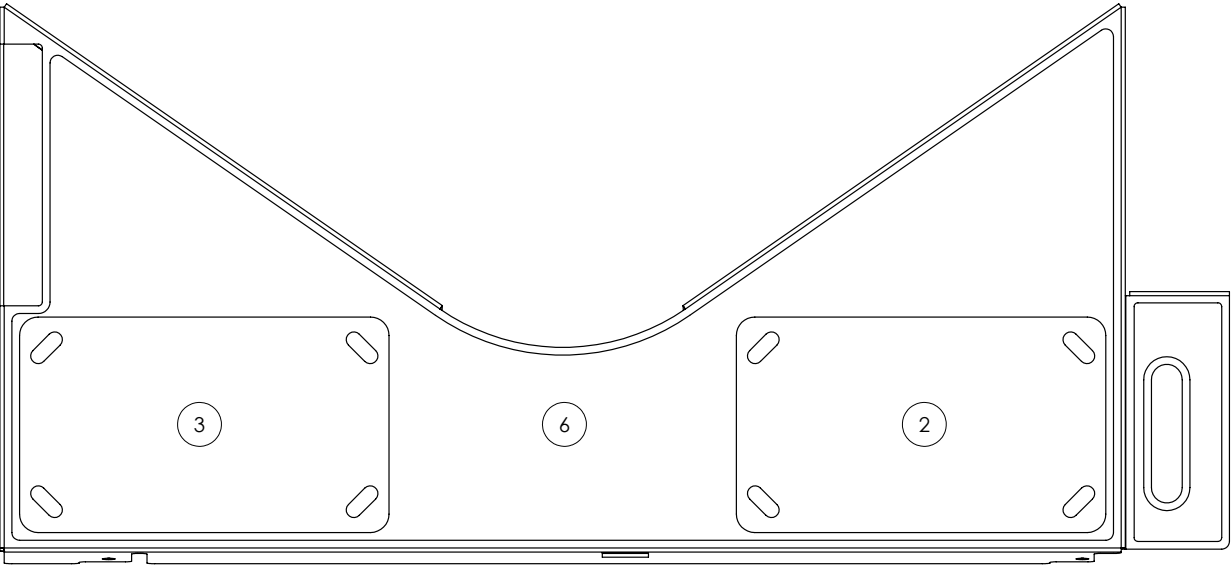
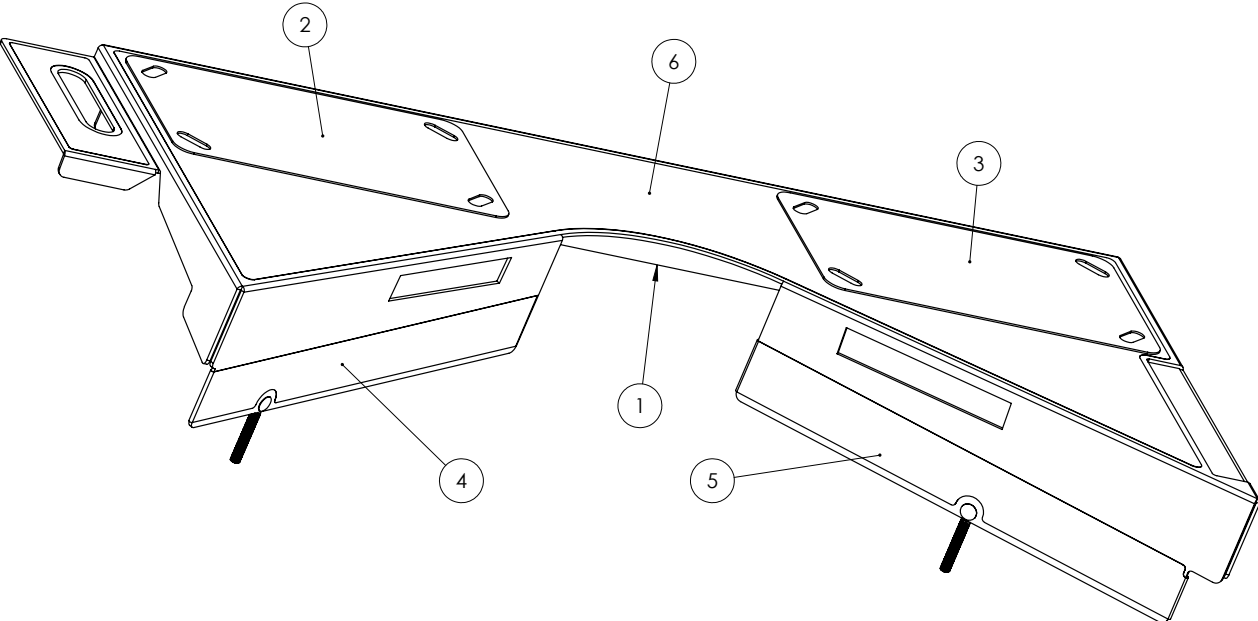
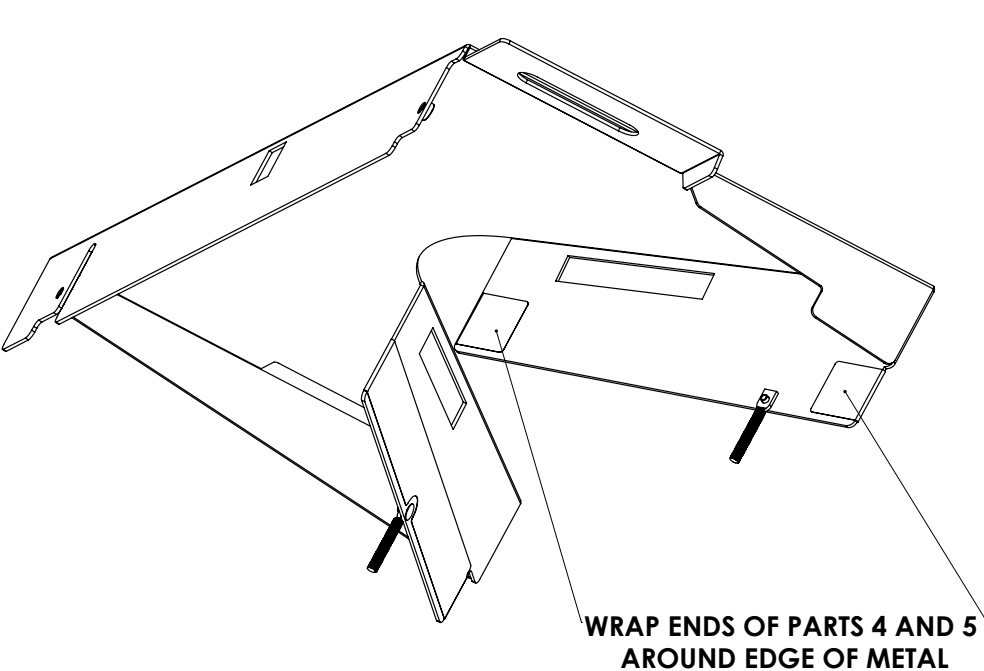
NOTE: 19-100160-18 NOT SHOWN



## ASSY, GF FLATRAIL, POP BUMPER LANE 51-100230-00

Item	Part Number	Description	Qty
1	12-100039-15	GF Flatrail, Pop Bumper Lane	1
2	25-009001-01	Ball Trough Bumper Plug, Blue	1

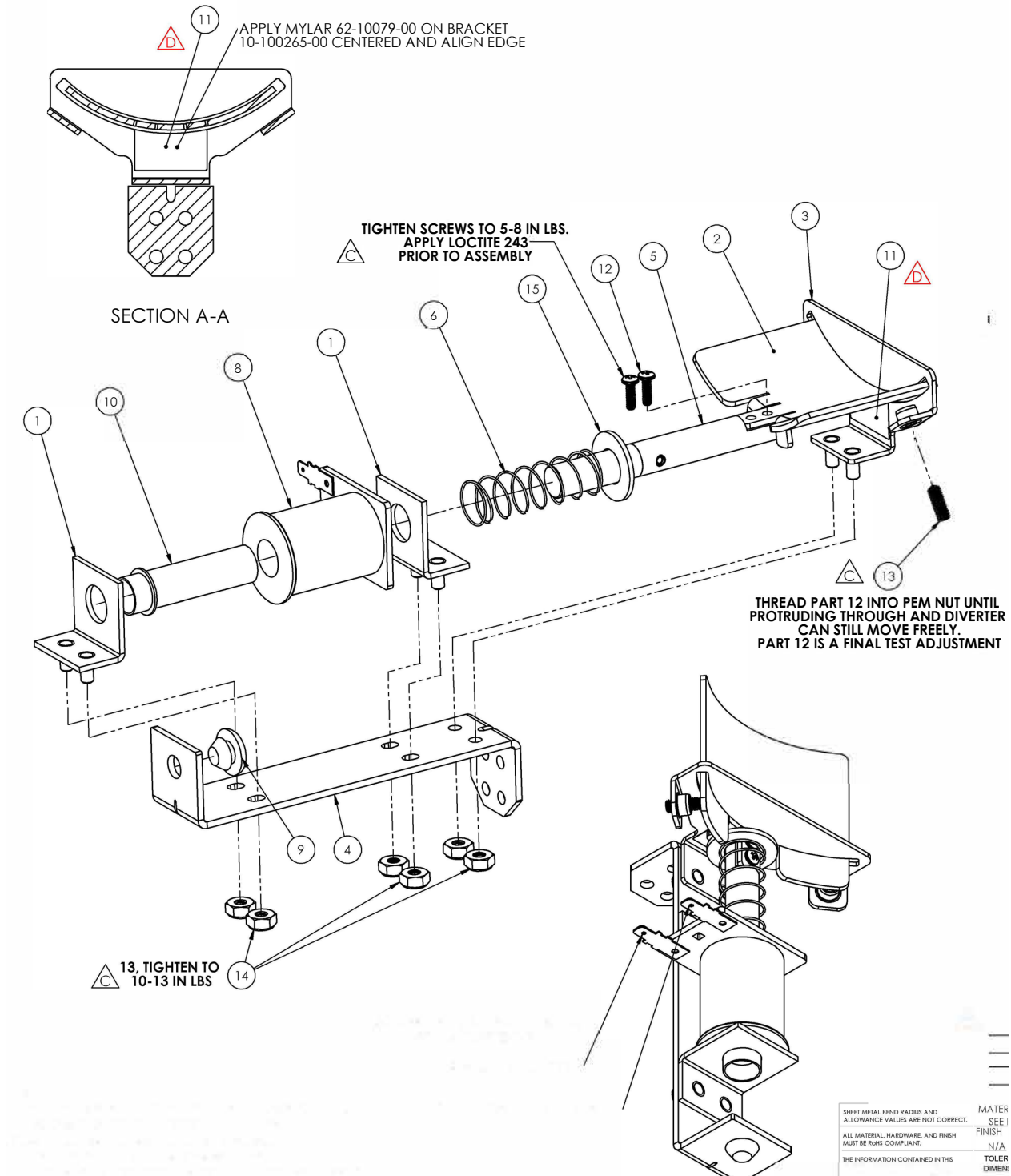




**GF BOTTOM ARCH ASSY, LE**  
**51-100183-00**

Item	Part Number	Description	Qty
1	10-100319-01	Bottom Arch, Ford Tuxedo	1
2	11-100068-00	GF Magnetic Price Card	1
3	11-100068-01	GF Magnetic Rule Card	1
4	62-100055-01	Mylar Protector, Apron, Right	1
5	62-100055-02	Mylar Protector, Apron, Left	1
6	62-100062-30	GF Bottom Arch Decal, LE	1
7	62-100062-31	GF Ball Launch Decal, LE	1

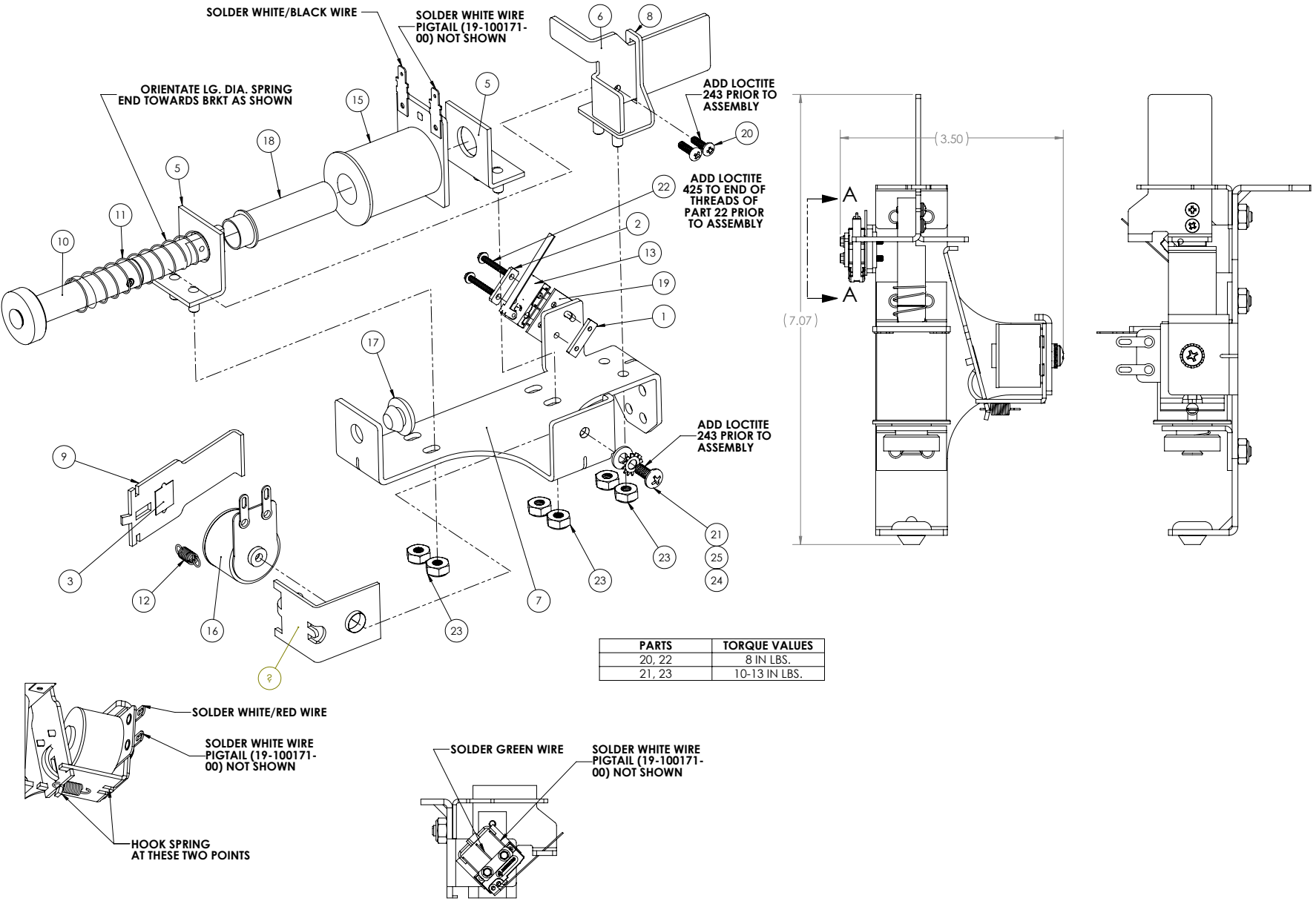




ASSY, DIVERTER, PULL DOWN, CURVED, 2"  
51-100215-00

Item	Part Number	Description	Qty
1	10-007004-00	COIL CENTERING BRKT, 5/8", 8-32 STUDS	2
2	10-100264-00	PLATE, DIVERT, CURVED	1
3	10-100265-00	BRACKET, DIVERTER, STABILIZER, CURVED, 2"	1
4	10-100266-00	BRACKET, PULL DOWN DIVERTER	1
5	11-100065-00	ASSY, DIVERTER, PLUNGER, PLATE MT, NYLON STOP	1
6	13-007002-00	POP BUMPER SPRING	1
7	19-100150-00	COIL PIGTAIL, 2-LUG, 4"	1
8	23-000010-00	26-1200 STANDARD COIL	1
9	25-009001-00	RUBBER BUMPER PLUG, BLACK	1
10	30-000014-30-1	1-7/8" COIL TUBING, FLANGED	1
11	62-100079-00	Mylar, Isolating, Up Down Mech	1
12	80-000004-06	4-40 X 3/8" PPH MS, ZINC PLATED	2
13	85-004908-00	8-32 Spring Plunger, Ball-Nose, High-Torque	2
14	91-000008-00	8-32 NYLON STOP NUT THIN	6
15	92-000044-02	7/16" FLAT WASHER, 0.469 ID, .922" OD, .065 THK	1

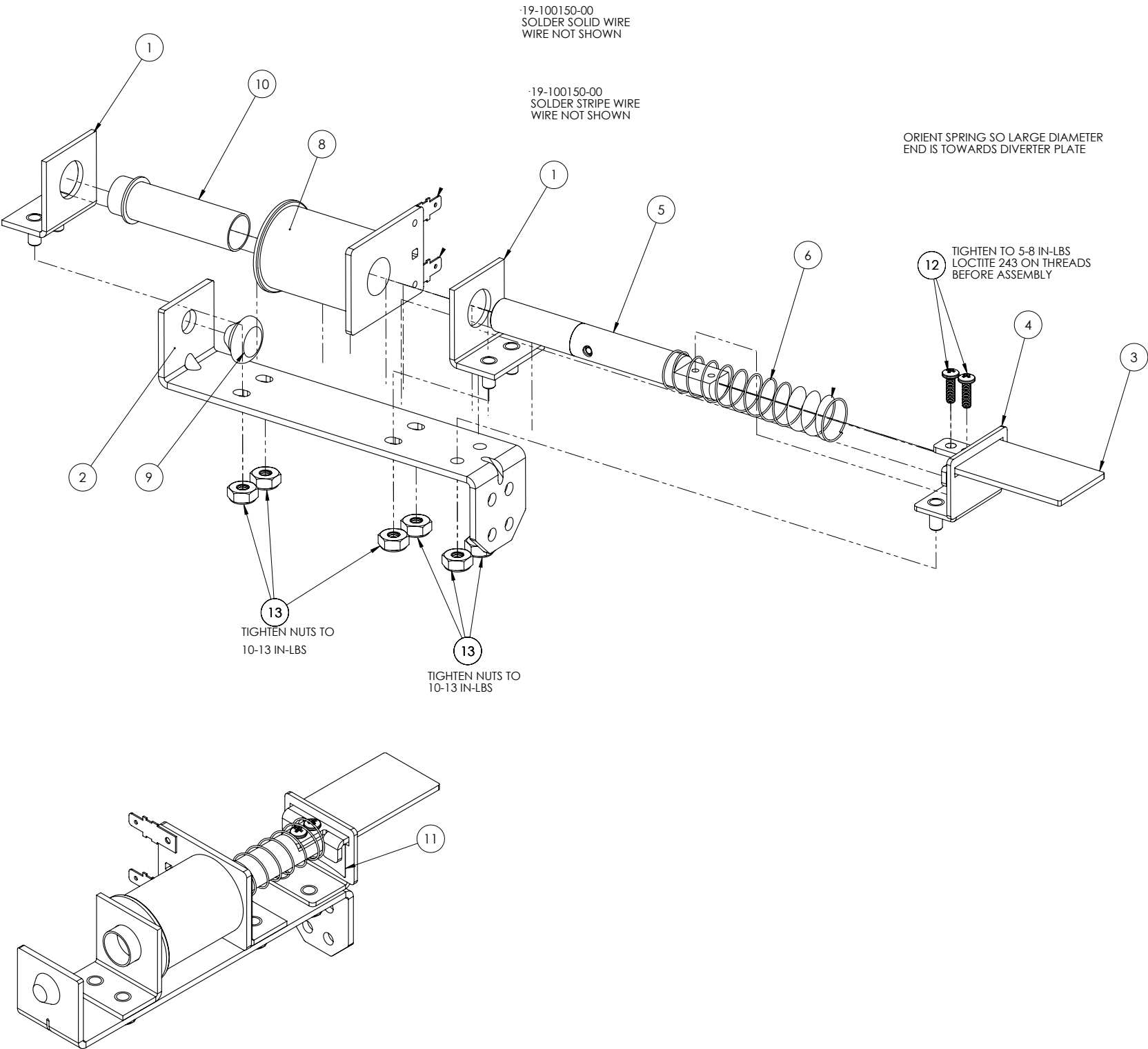
ASSY, DIVERTER, DUAL STATE, NEWTON  
51-100217-00



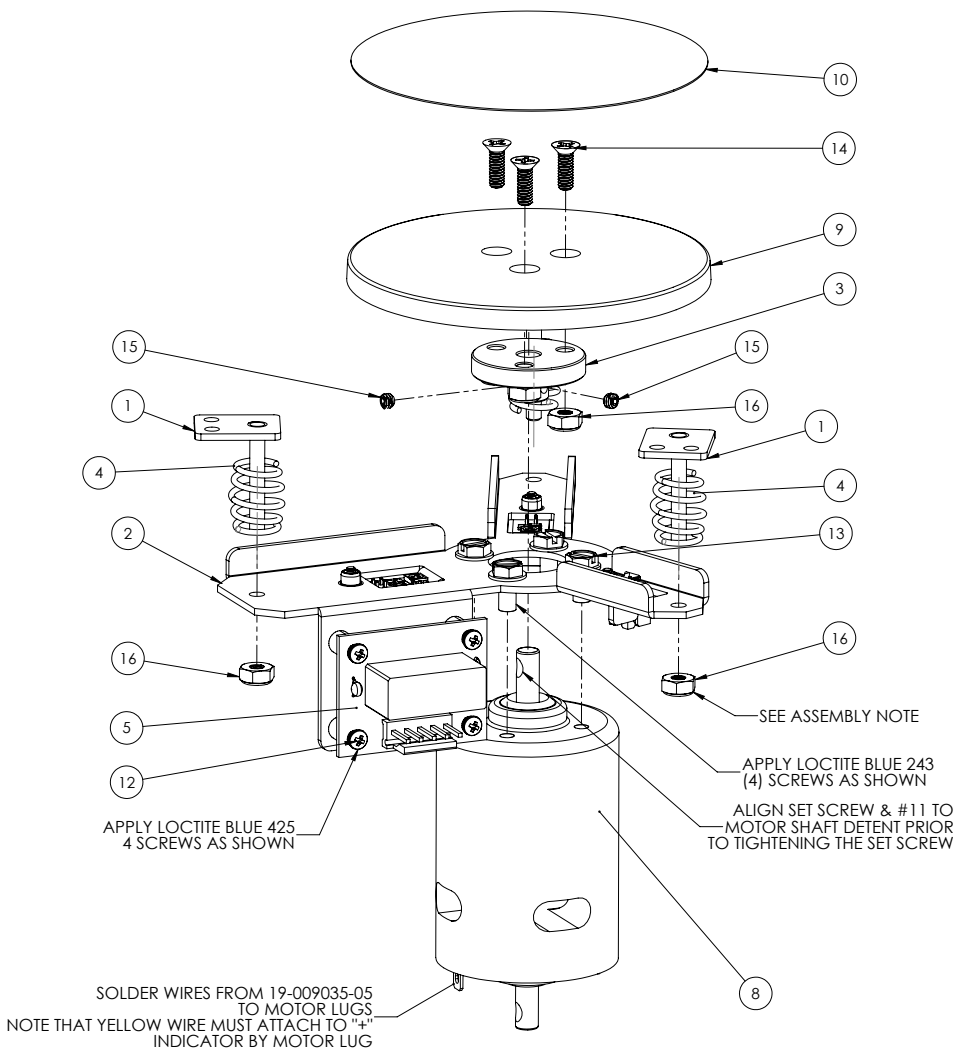
Item	Part Number	Description	Qty
1	10-000024-00	MICROSWITCH NUT PLATE, 2-56	1
2	10-000024-01	MICROSWITCH PROTECTOR PLATE, #2	1
3	10-000213-07	RESIDUAL ARMATURE PLATE	1
4	10-000213-09	TRAP DOOR LATCH TRIP COIL FRAME & EYELET	1
5	10-007004-00	COIL CENTERING BRKT, 5/8", 8-32 STUDS	2
6	10-100267-00	PLATE, DIVERTER, DUAL STATE, NEWTON	1
7	10-100268-00	BRACKET, DIVERTER, DUAL STATE, NEWTON	1
8	10-100269-00	BRACKET, DIVERTER, STABILIZER, NEWTON	1
9	10-100270-00	PLATE, DIVERTER, TRIP LATCH	1
10	11-100066-00	ASSY, DIVERTER, PLUNGER, PLATE MT, BELL ARM	1
11	13-007004-00	SLINGSHOT PLUNGER RETURN SPRING	1
12	13-007029-08	MINI COIL SPRING, 8oz TENSION	1
13	18-003003-00	MICROSWITCH & WIREFORM ASSY 3 BALL LOCK	1
14	19-100171-00	PIGTAIL, DUAL COIL, SINGLE SWITCH	1
15	23-000010-00	26-1200 STANDARD COIL	1
16	23-003008-01	26-600 MINI COIL ASSY, .0313" CORE	1
17	25-009001-00	RUBBER BUMPER PLUG, BLACK	1
18	30-000014-30-1	1-7/8" COIL TUBING, FLANGED	1
19	70-009002-00	MICROSWITCH INSULATOR, FISH PAPER	1
20	80-000004-06	4-40 X 3/8" PPH MS, ZINC PLATED	2
21	80-000308-06	#8-32 x 3/8" PPH MS, BRASS	1
22	80-002102-10	2-56 X 5/8" HWH MS BLK	2
23	91-000008-00	8-32 NYLON STOP NUT THIN	6
24	92-000308-00	#8 FLAT WASHER, 0.172"ID, 0.375"OD, BRASS	1
25	92-003108-00	#8 EXT-TOOTH LOCK-WASHER, 0.168"ID, 0.381"OD	1

ASSY, DIVERTER, PULL DOWN, STRAIGHT, 1”  
51-100219-00

Item	Part Number	Description	Qty
1	10-007004-00	COIL CENTERING BRKT, 5/8”, 8-32 STUDS	2
2	10-100266-00	BRACKET, PULL DOWN DIVERTER	1
3	10-100271-01	PLATE, DIVERTER, STRAIGHT, 1”	1
4	10-100272-00	BRACKET, DIVERTER, STABILIZER, STRAIGHT, 1”	1
5	11-100065-00	ASSY, DIVERTER, PLUNGER, PLATE MT, NYLON STOP	1
6	13-007004-00	SLINGSHOT PLUNGER RETURN SPRING	1
7	19-100150-00	COIL PIGTAIL, 2-LUG, 4”	1
8	23-000010-00	26-1200 STANDARD COIL	1
9	25-009001-00	RUBBER BUMPER PLUG, BLACK	1
10	30-000014-30-1	1-7/8” COIL TUBING, FLANGED	1
11	62-100079-00	Mylar, Isolating Up Down Mech	1
12	80-000004-06	4-40 X 3/8” PPH MS, ZINC PLATED	2
13	91-000008-00	8-32 NYLON STOP NUT THIN	6

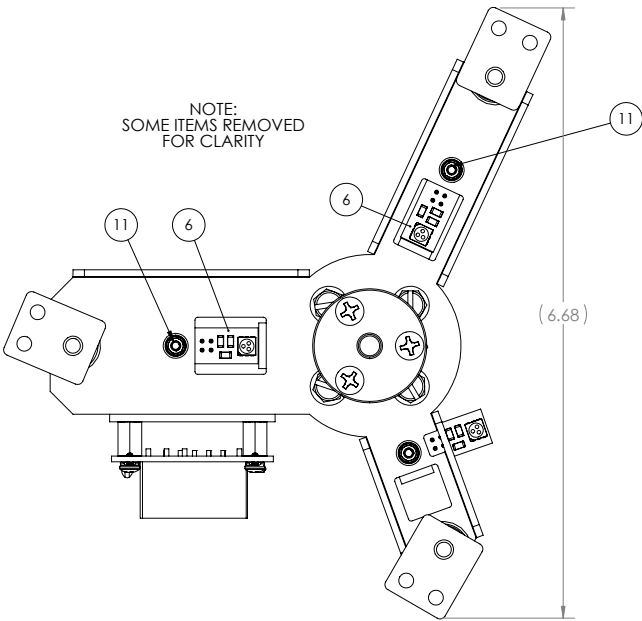


ASSY, SPINNING DISK, 3.97" DIA  
51-100222-00



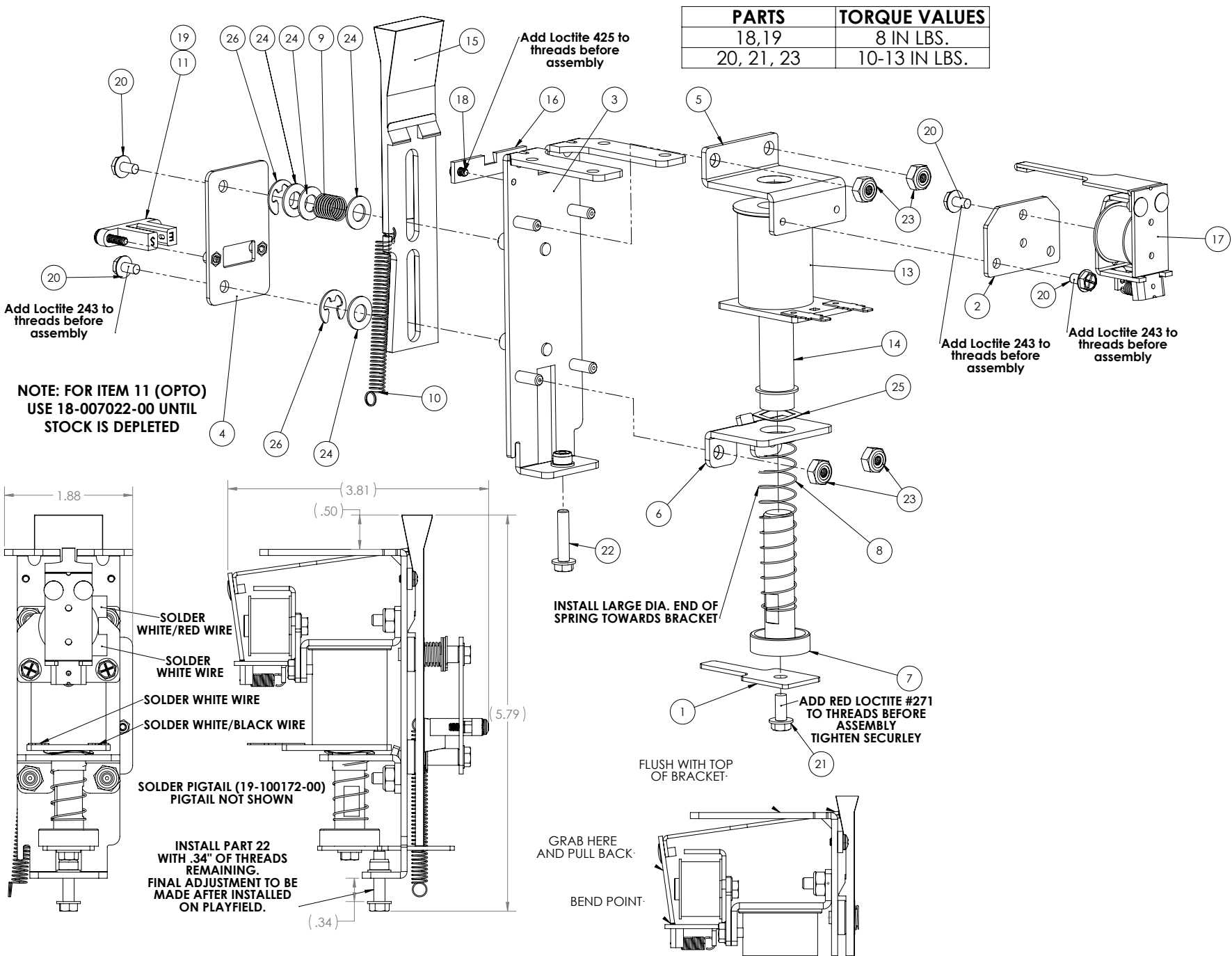
ASSEMBLY NOTE:  
NYLON STOP NUTS CAN BE THREADED ONTO MOUNTING BRACKETS FOR INITIAL ASSEMBLY, BUT NEED TO BE TIGHTENED AFTER THE ASSEMBLY IS INSTALLED SO THAT THE SPINNING DISC IS FLUSH WITH THE PLAYFIELD.

PARTS	TORQUE VALUES
11, 12	8 IN LBS.
13, 14, 15	10-13 IN LBS.



Item	Part Number	Description	Qty
1	10-100276-00	BRACKET, MOUNTING, 3.97" DISC	3
2	10-100277-00	SPINNING DISK MOTOR MOUNTING BRACKET	1
3	10-100307-00	BOSS SPINNING DISK MOUNT	1
4	13-100036-00	SPRING: .75 LG EXT BALL SHOOTER	3
5	15-000009-00	ASSY, MOTOR RELAY BOARD	1
6	15-100008-00	RGB GI 5050 TLED	3
7	19-009035-05	Spinning Map Single Motor Cable	1
8	23-005003-00	SHAKER MOTOR	1
9	30-100100-00	DISK, 3.97" OD, .25" ID	1
10	62-100064-00	DECAL, GF SPINNING DISC	1
11	80-000004-05	#4-40 x 5/16" L PPH MS	3
12	80-000004-10	4-40 x 5/8" PPH MS	4
13	80-002010-06	10-32 x 3/8" HWH PHILLIPS MS, SERR, ZINC PLATED	4
14	80-006008-08	8-32 x 1/2" PPH MS, 82 DEG CA, ZINC PLATED	3
15	85-004508-02	8-32 X 1/8" SET SCREW, CUP POINT, BLK, W/NYLON	2
16	91-000008-00	8-32 NYLON STOP NUT THIN	6



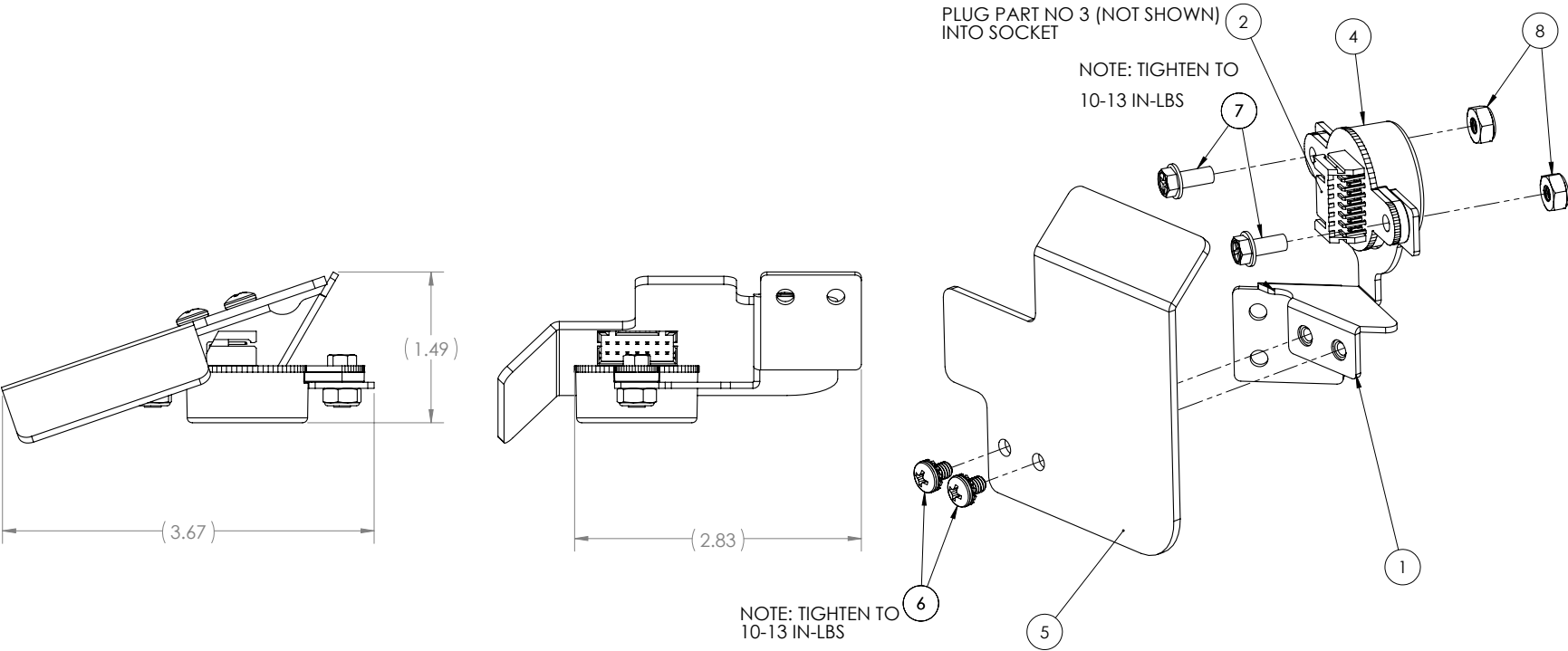


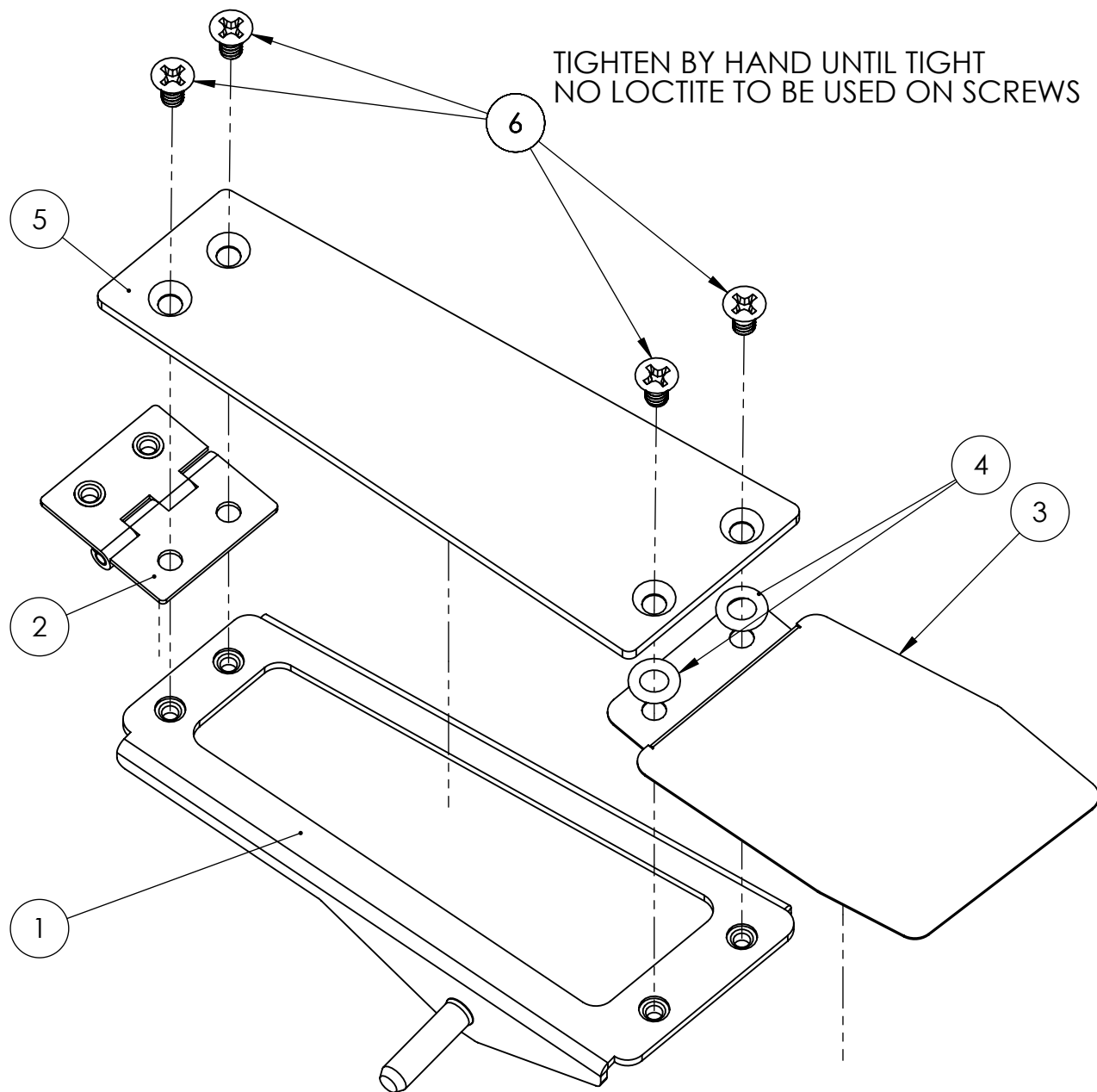
1-BANK DROP TARGET ASSY W/ TRIP COIL, BLK  
51-100280-00

Item	Part Number	Description	Qty
1	10-000063-00	1-BANK DROP TGT RESET BRKT	1
2	10-100223-00	COIL MOUNTING PLATE	1
3	10-100312-00	1-BANK DROP TARGET MTG BRKT	1
4	10-100313-00	MOUNTING PLATE, DROP TARGET SENSOR	1
5	10-100314-00	COIL CENTERING BRACKET	1
6	10-100315-00	COIL STOP BRACKET	1
7	11-100071-00	BELL ARMATURE ASSEMBLY, 2"	1
8	13-007004-00	SLINGSHOT PLUNGER RETURN SPRING	1
9	13-007008-00	DROP TGT COMPRESSION SPRING	1
10	13-007009-01	DROP TARGET EXT SPRING, 135DEG LOOP	1
11	18-007022-24	U-Shaped Opto Assy, OPB816Z, 24" Cable	1
12	19-100172-00	PIGTAIL, DUAL COIL	1
13	23-000003-00	23-800 STANDARD COIL	1
14	30-000014-30-1	1-7/8" COIL TUBING, FLANGED	1
15	30-100123-00	DROP TGT, ROLLOVER BLACK	1
16	30-100124-00	1-BANK DROP TARGET STOP	1
17	51-005037-00	DROP TARGET TRIP COIL	1
18	80-000004-03	#4-40 x 3/16"L PPH MS	2
19	80-001004-08	4-40 x 1/2 PPH MS, SEMS, ZINC PLATED	2
20	80-002006-04	6-32 X 1/4" HWH PHILLIPS MS, SERRATED	5
21	80-002008-06	8-32 X 3/8" HWH PHILLIPS MS, SERRATED	1
22	80-002008-12	8-32 X 3/4" HWH PHILLIPS MS, SERRATED	1
23	91-000008-00	8-32 NYLON STOP NUT THIN	4
24	92-000008-01	FLAT FENDER WASHER, 0.255" ID, 0.49" OD, 0.030" THK	4
25	92-100010-00	WAVE DISC SPRING, 0.531" ID, STAINLESS	1
26	94-004011-08	1/4" SHAFT E-RING	2

ASSY, ARC BEACON, MAIN RAMP  
51-100281-00

Item	Part Number	Description	Qty
1	10-100321-00	BRACKET, ARC BEACON, MAIN RAMP	1
2	15-100043-00	ARC BEACON BD	1
3	19-100162-00	14 PIN HIROSE EXTENSION CABLE, 24"	1
4	30-100141-13	FLASHER DOME W/ SCREW TABS, 1/2",CLEAR	1
5	30-100122-23	APARTMENT CHUTE BALL TRAP PLASTIC	1
6	80-001008-04	#8-32 X 1/4" PPH MS, SEMS, ZINC PLATED	2
7	80-002008-06	8-32 X 3/8" HWH PHILLIPS MS, SERRATED	2
8	91-000108-00	8-32 NYLON STOP NUT, THIN, BLACK ZINC	2



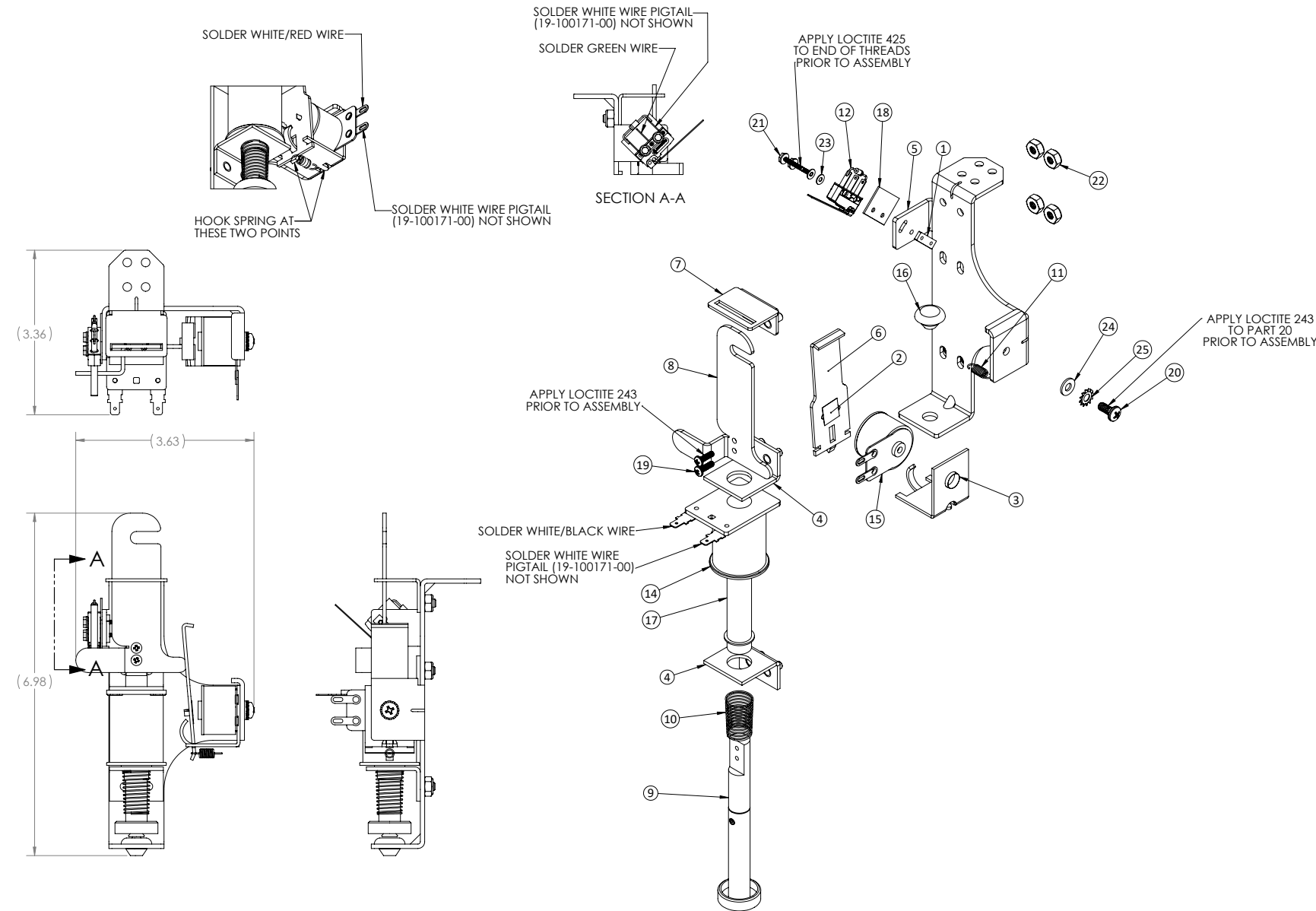


TIGHTEN BY HAND UNTIL TIGHT  
NO LOCTITE TO BE USED ON SCREWS

**ASSY, PLASTIC RAMP**  
**51-100223-00**

Item	Part Number	Description	Qty
1	10-100278-00	BRACKET, PLASTIC RAMP GUIDE	1
2	10-100320-00	HINGE, RAMP, 1 INCH WIDE	1
3	11-100059-00	FLAP, PLASTIC RAMP	1
4	25-100019-00	O-Ring, 1/16 Width, 3/16" ID, 5/16 OD	2
5	30-100101-00	RAMP, CLEAR PLASTIC	1
6	80-006006-04U	6-32 x 1/4" PFH MS, 82° CA, UNDERCUT, ZINC PLATED	4

ASSEMBLY, RAMP MECH  
51-100224-00

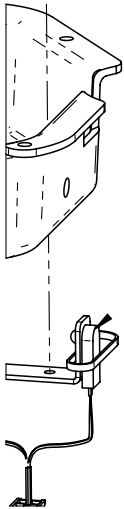
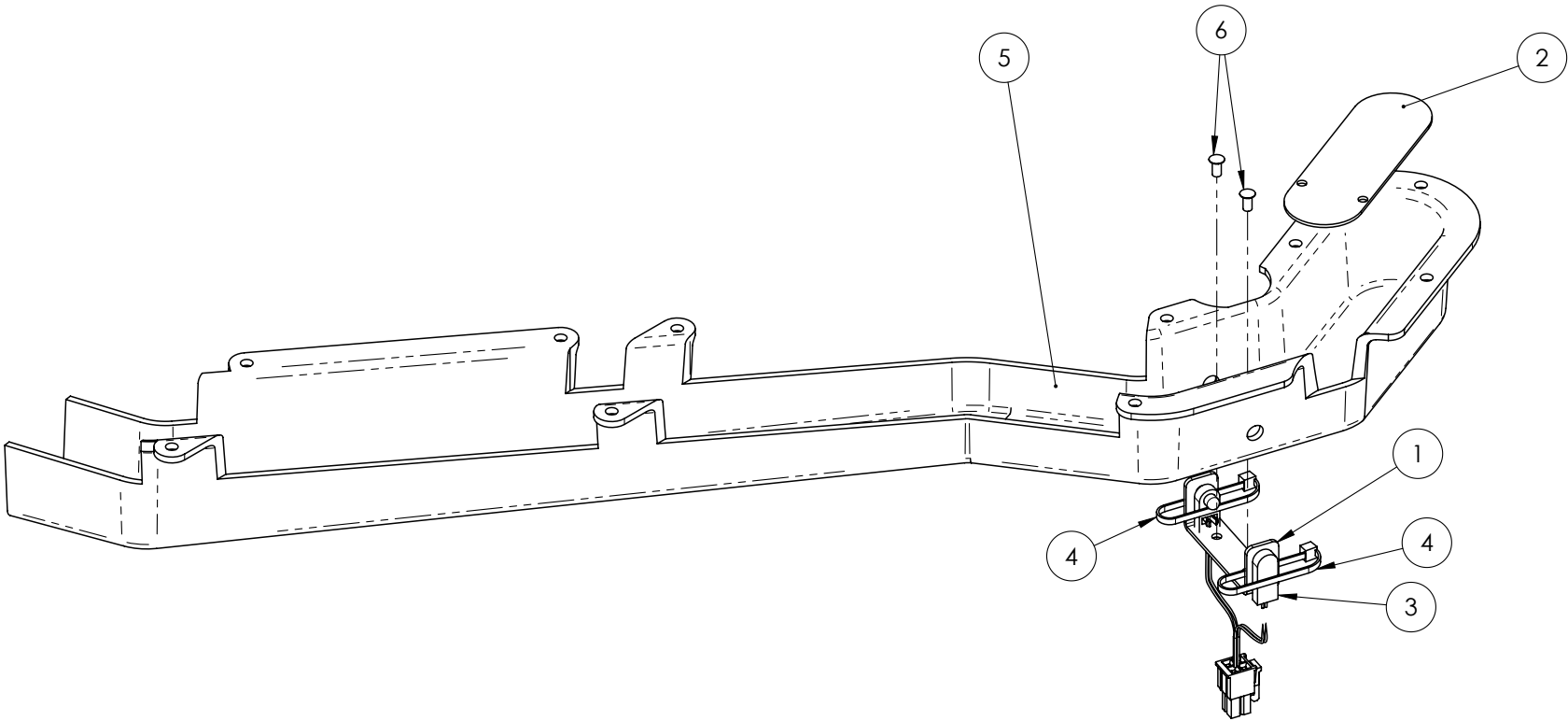


Item	Part Number	Description	Qty
1	10-000024-00	MICROSWITCH NUT PLATE, 2-56	1
2	10-000213-07	RESIDUAL ARMATURE PLATE	1
3	10-000213-09	TRAP DOOR LATCH TRIP COIL FRAME & EYELET	1
4	10-007004-00	COIL CENTERING BRKT, 5/8", 8-32 STUDS	2
5	10-100268-00	BRACKET, DIVERTER, DUAL STATE, NEWTON	1
6	10-100270-00	PLATE, DIVERTER, TRIP LATCH	1
7	10-100272-00	BRACKET, DIVERTER, STABILIZER, STRAIGHT, 1"	1
8	10-100279-00	ARM PLASTIC RAMP	1
9	11-100066-00	ASSY, DIVERTER, PLUNGER, PLATE MOUNT, BELL ARM	1
10	13-007004-00	SLING SHOT COIL SPRING	1
11	13-007029-08	MINI COIL SPRING, 8oz TENSION	1
12	18-003003-00	MICROSWITCH & WIREFORM ASSY 3 BALL LOCK	1
13	19-100171-00	PIGTAIL, DUAL COIL, SINGLE SWITCH	1
14	23-000010-00	26-1200 STANDARD COIL	1
15	23-003008-01	26-600 MINI COIL ASSY, .0313" CORE	1
16	25-009001-00	RUBBER BUMPER PLUG, BLACK	1
17	30-000014-30-1	1-7/8" COIL TUBING, FLANGED	1
18	70-009002-00	MICROSWITCH INSULATOR, FISH PAPER	1
19	80-000004-06	4-40 X 3/8" PPH MS, ZINC PLATED	2
20	80-000308-06	#8-32 X 3/8" PPH MS, BRASS	1
21	80-002102-08	2-56 X 1/2" HWH MS, BLACK	2
22	91-000008-00	8-32 NYLON STOP NUT THIN	6
23	92-000002-00	#2 SAE FLAT WASHER, ZINC PLATED	2
24	92-000308-00	#8 FLAT WASHER, 0.172"ID, 0.375"OD, BRASS	1
25	92-003108-00	#8 EXT-TOOTH LOCK-WASHER, 0.168"ID, 0.381"OD	1



ASSY, SUBWAY, PLASTIC  
51-100225-00

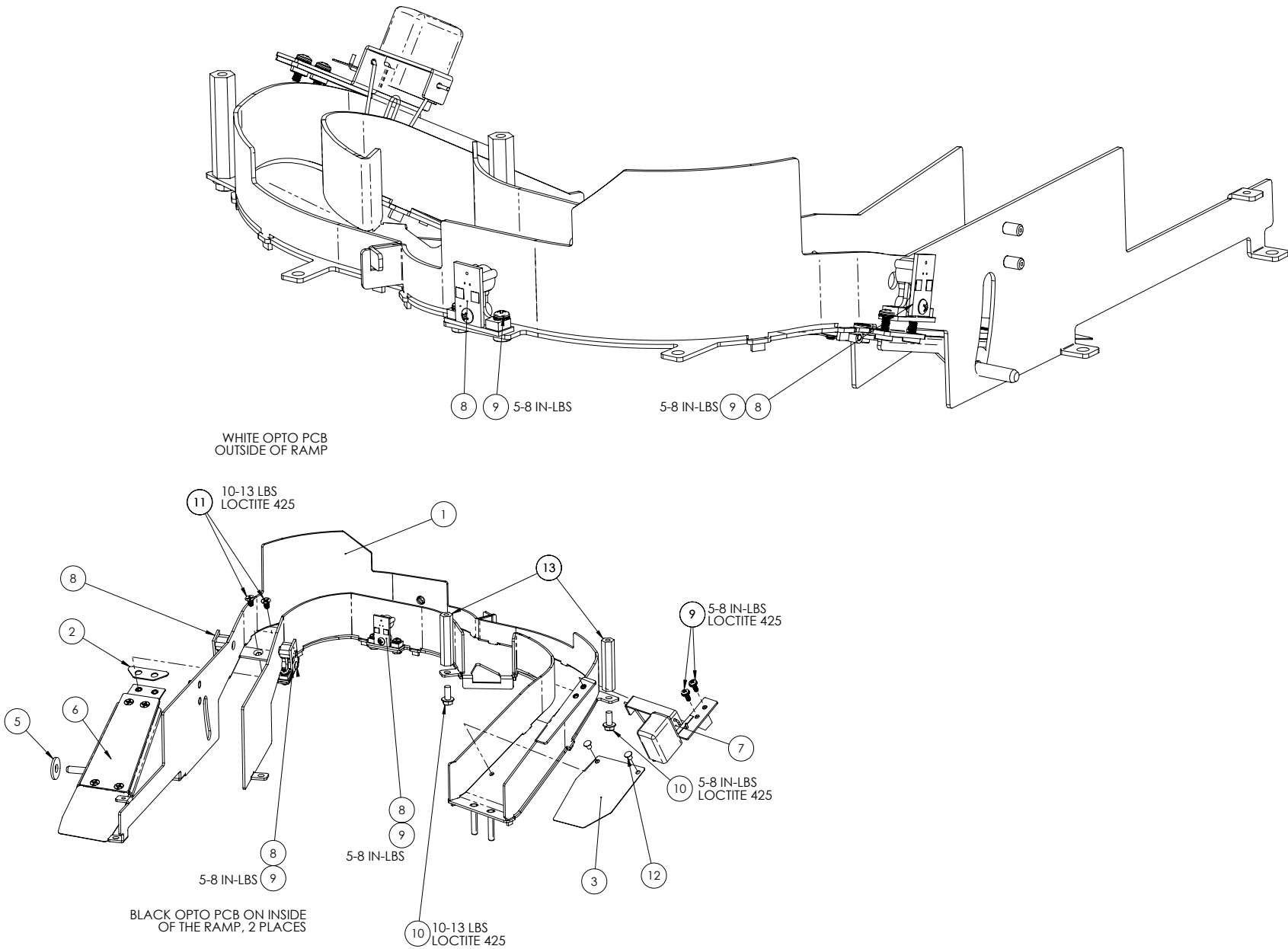
Item	Part Number	Description	Qty
1	10-000248-02	POTC MAIN SUBWAY OPTO BRKT, LOWER	1
2	10-100282-00	PLATE - SUBWAY PROTECTION	1
3	18-007025-24	OPTO PAIR ASSY, OPB100-EZ/SZ, 24" CABLE	1
4	30-000051-08	8" WIRE TIE, NATURAL	2
5	31-100009-00	VACUFORM SUBWAY	1
6	93-000000-00	1/8" x 7/32" x 7/32" OVAL HEAD SEMI-TUBULAR RIVET	4



SNAP-IN PLACE  
AS SHOWN

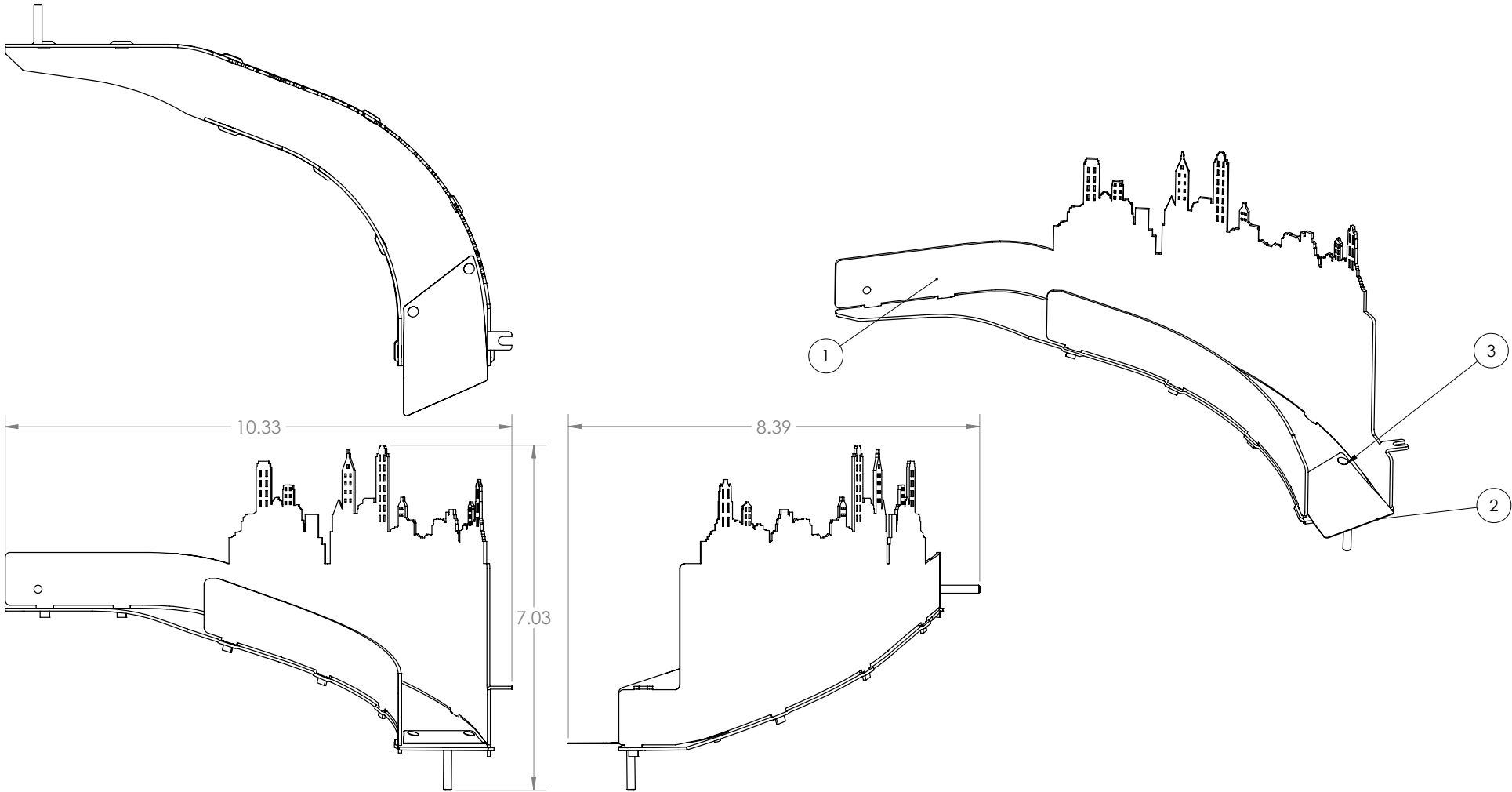
ASSEMBLY, RAMP, MAIN  
51-100226-00

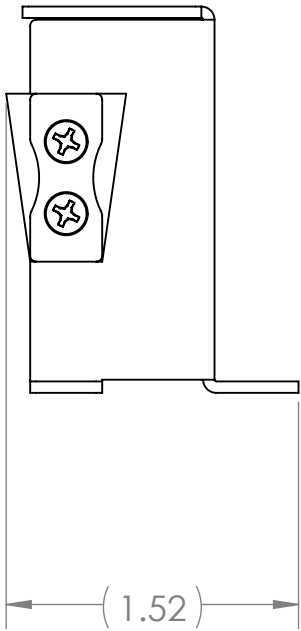
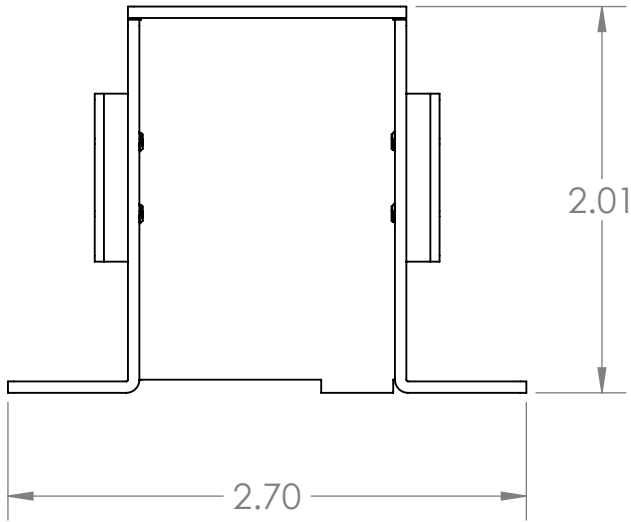
Item	Part Number	Description	Qty
1	10-100284-00	RAMP, MAIN RAMP	1
2	10-100310-00	SHIM HINGE	1
3	11-100062-00	FLAP, MAIN RAMP, RIGHT	1
4	30-000051-08	8" WIRE TIE, NATURAL	4
5	30-100103-10	Washer, .234 ID, .625 OD, Nylon Blk, .063 Thk	1
6	51-100223-00	ASSEMBLY, PLASTIC RAMP	1
7	51-100231-00	ASSY, ROLL UNDER SWITCH, RAMP MOUNT	1
8	51-100243-00	OPTO PCB PAIR, W/ CABLE	2
9	80-001004-05	4-40 x 5/16 PPH MS, SEMS, ZINC PLATED	10
10	80-002008-06	8-32 X 3/8" HWH PHILLIPS MS, SERRATED	2
11	80-016006-04	6-32 x 1/4" PPH MS, 100° CA, Zinc Plated	2
12	93-000003-00	1/8" X 5/32" SEMI-TUBULAR RIVET, TH	2
13	95-001508-24	5/16"X1-1/2" HEX SPACER, F-F, 8-32, ZINC	2



ASSEMBLY, RAMP, LOOP  
51-100227-00

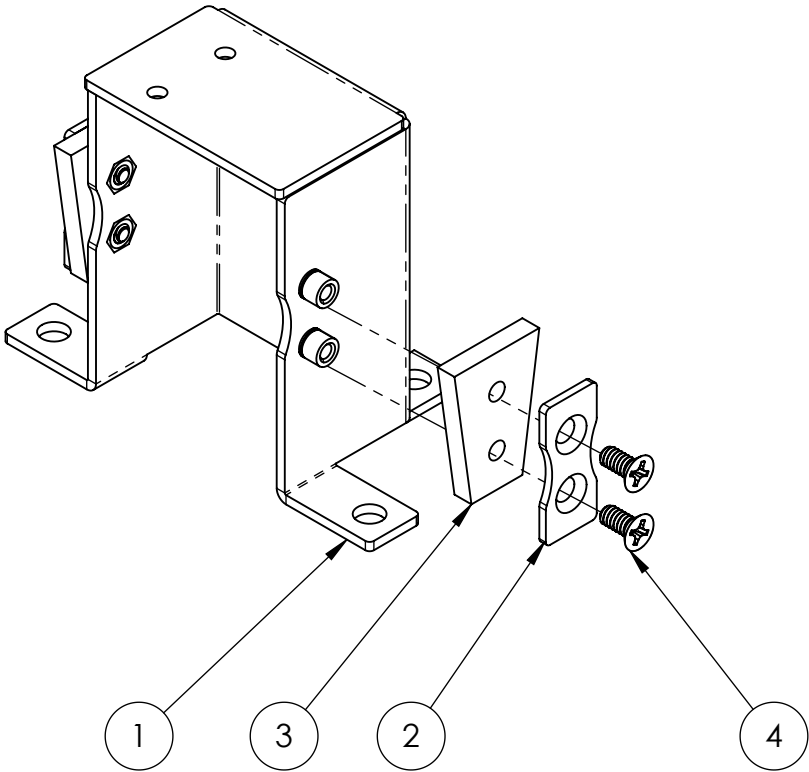
Item	Part Number	Description	Qty
1	10-100285-00	Ramp, Loop Ramp, GF	1
2	11-100063-00	Flap, Loop Ramp, GF	1
3	93-000003-00	1/8" X 5/32" SEMI-TUBULAR RIVET, TH	2





**ASSEMBLY, SCOOP COVER**  
**51-100232-00**

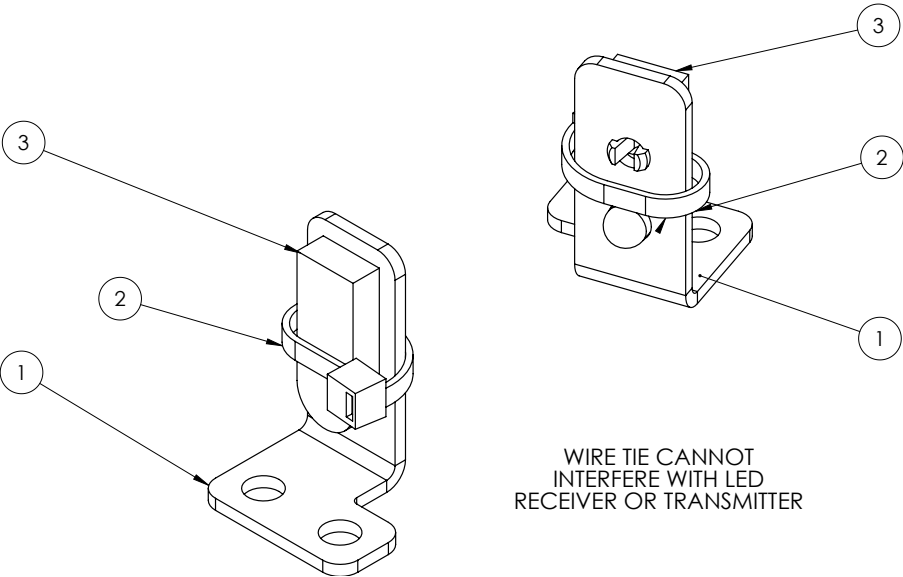
Item	Part Number	Description	Qty
1	10-100290-00	Bracket, Scoop Cover	1
2	10-100309-00	CLIP, RETAINING, BALL SNUBBER	2
3	25-100015-00	PAD, BALL SNUBBER	2
5	80-006004-04U	4-40 PFH MS, 82° CA, WITH UNDERCUT	4



TIGHTEN SCREWS TO 5-8 INCH LBS.  
APPLY LOCTITE® 425 TO THREADS

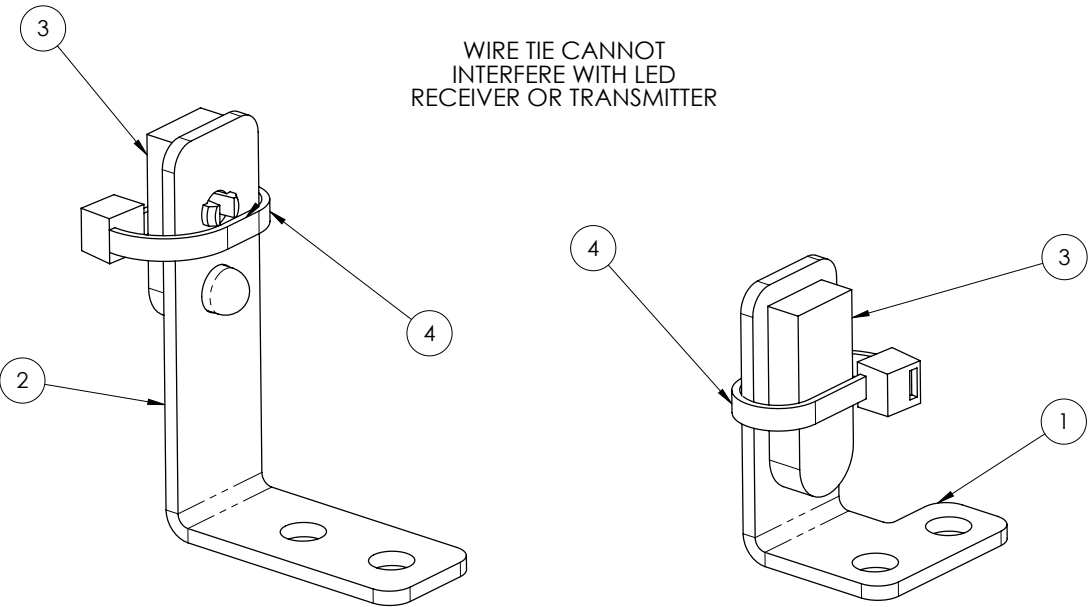


ASSY, OPTO, CLIP-IN, PF MOUNT  
51-100233-00

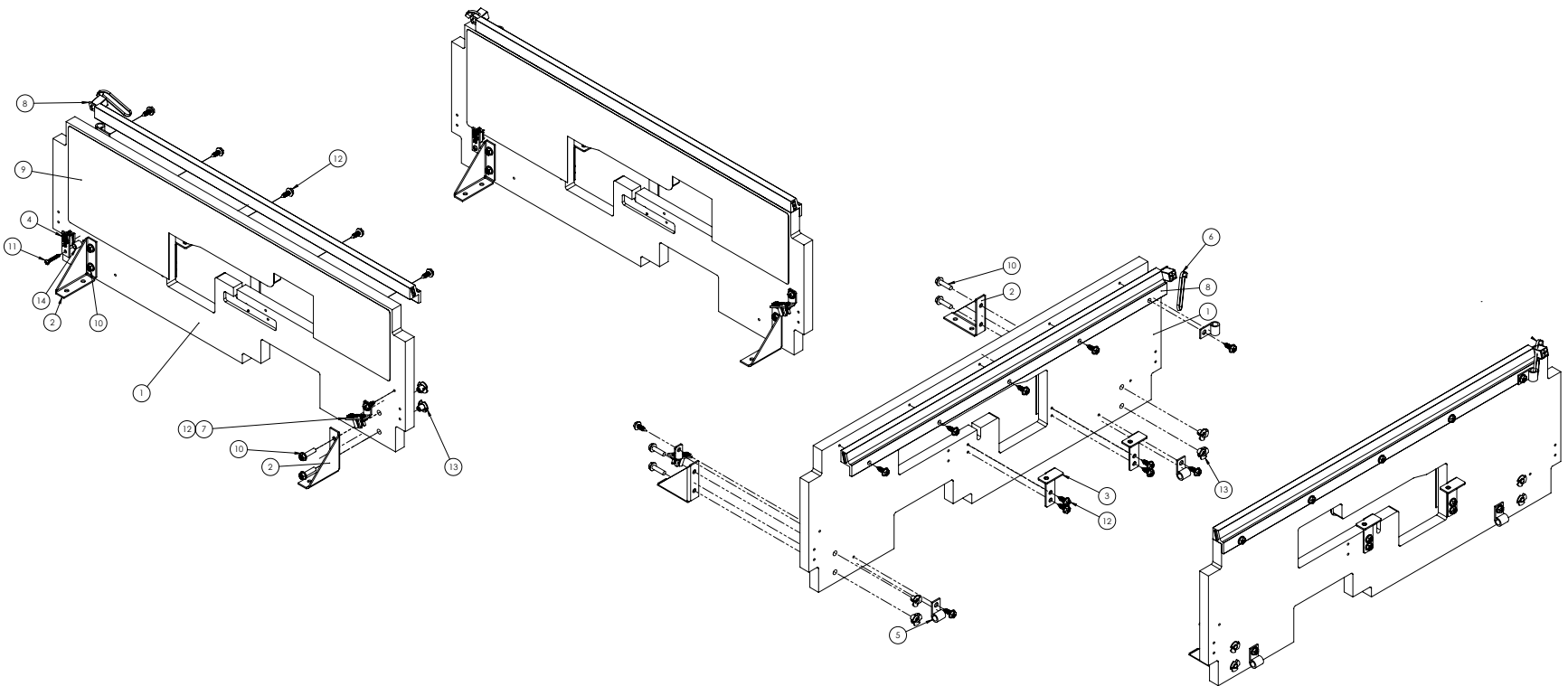


Item	Part Number	Description	Qty
1	10-100291-00	Bracket, Opto, Clip-In, PF Mount	2
2	30-000051-08	8" WIRE TIE, NATURAL	2
3	18-007025-24	OPTO PAIR ASSY, OPB100-EZ/SZ, 24" CABLE	1

ASSY, OPTO, CLIP-IN, TOP/BOTTOM PF MOUNT  
51-100233-01



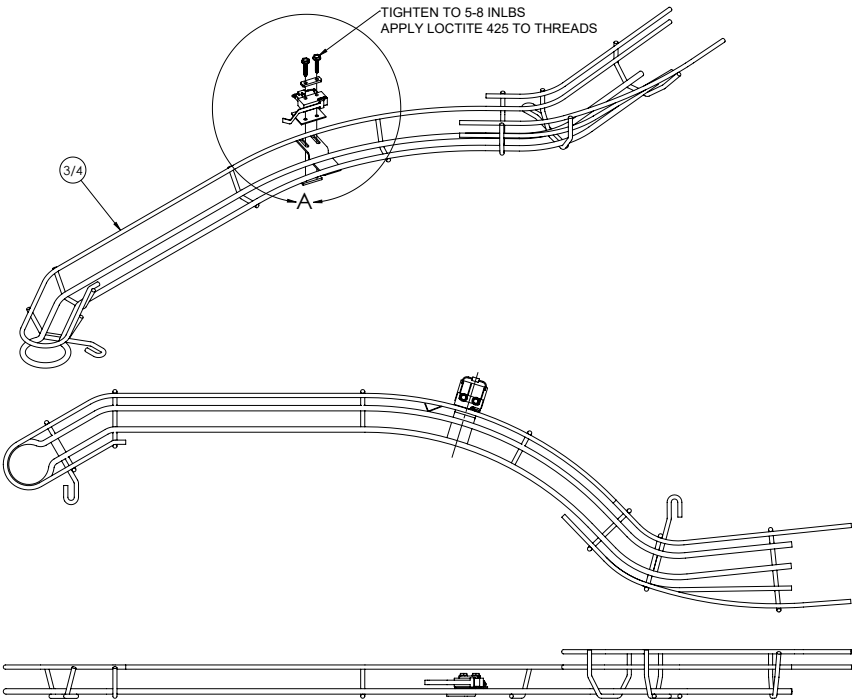
Item	Part Number	Description	Qty
1	10-100291-00	BRACKET, OPTO, CLIP-IN, PF MOUNT	1
2	10-100291-01	BRACKET, OPTO, CLIP-IN, BOTTOM PF MOUNT	1
3	18-007025-24	OPTO PAIR ASSY, OPB100-EZ/SZ, 24" CABLE	1
4	30-000051-08	8" WIRE TIE, NATURAL	2



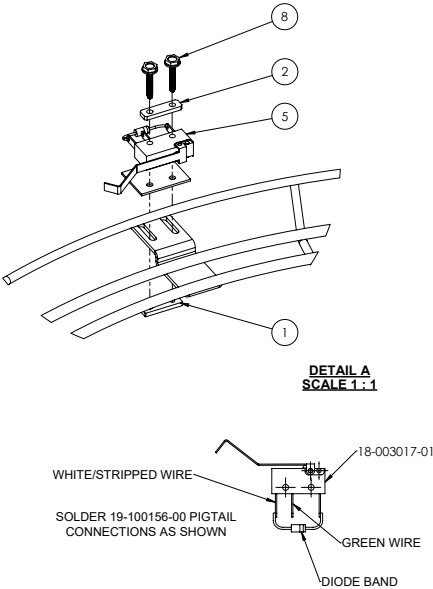
**ASSEMBLY, BACK PANEL, GF LE**  
**51-100234-00**

Item	Part Number	Description	Qty
1	05-100032-00	BACK PANEL, GF	1
2	10-000162-00	BACK PANEL SUPPORT BRKT	2
3	10-100335-00	BRACKET, BACK PANEL PLASTIC SUPPORT	2
4	15-100008-02	RGB GI 5050 TLED, RT ANGLE	1
5	30-000049-04	NYLON CABLE CLAMP OPEN 1/4"	3
6	30-000051-08	8" WIRE TIE, NATURAL	1
7	51-100246-00	ASSY, LED GI, 65 DEG	1
8	51-100264-00	LED STRIP ASSEMBLY, 18"	1
9	62-100061-01	DECAL, BACK PANEL	1
10	80-002008-10	#8-32 x 5/8" HWH PHILLIPS MS, SERRATED	4
11	82-000004-12	#4 x 3/4" PPH SMS	1
12	82-009008-08	#8X1/2" AB SPECIAL HWH PHILLIPS SMS	12
13	91-004008-00	8-32 x 1/4" T-NUT, 3 PRONG WITH 1/2" FLANGE	4
14	94-003003-00	NYLON SPACER, 1/4" OD, 5/16" LENGTH	1

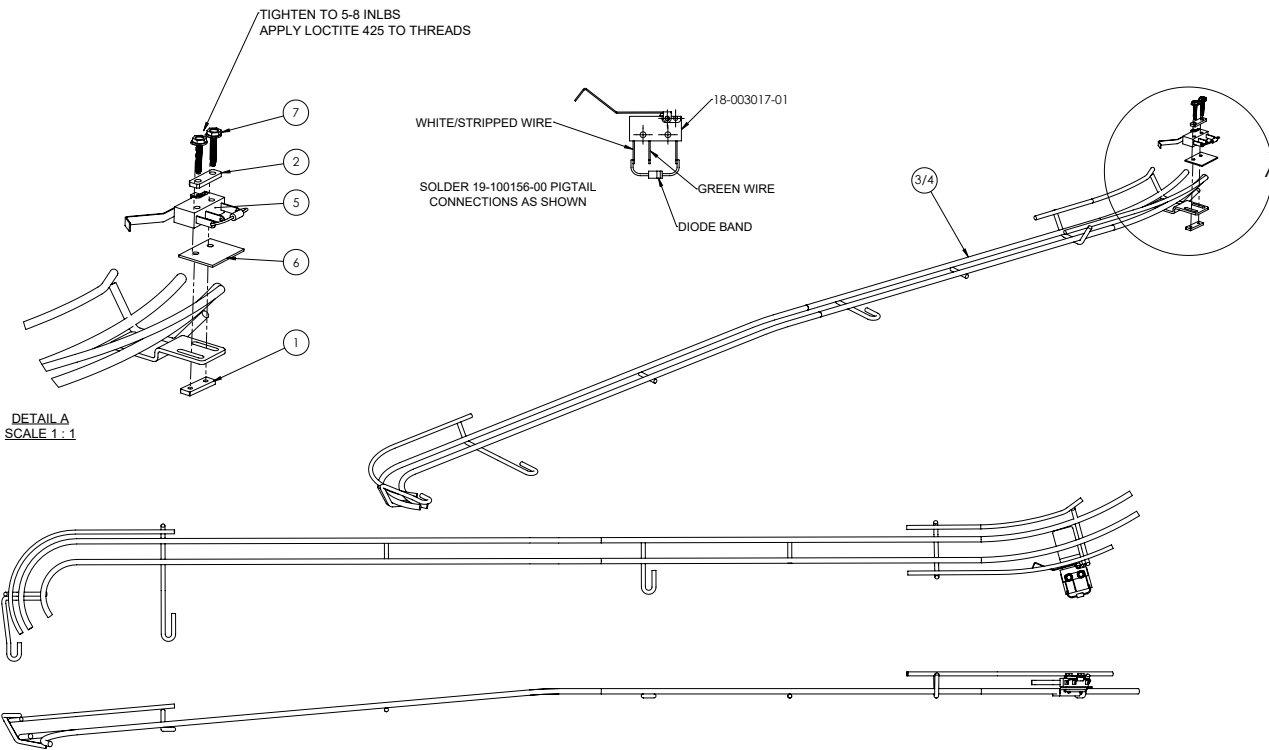
ASSY, LEFT WIRE RAMP, GF  
51-100242-XX



LE Wire Ramps = -00  
CE Wire Ramps = -01

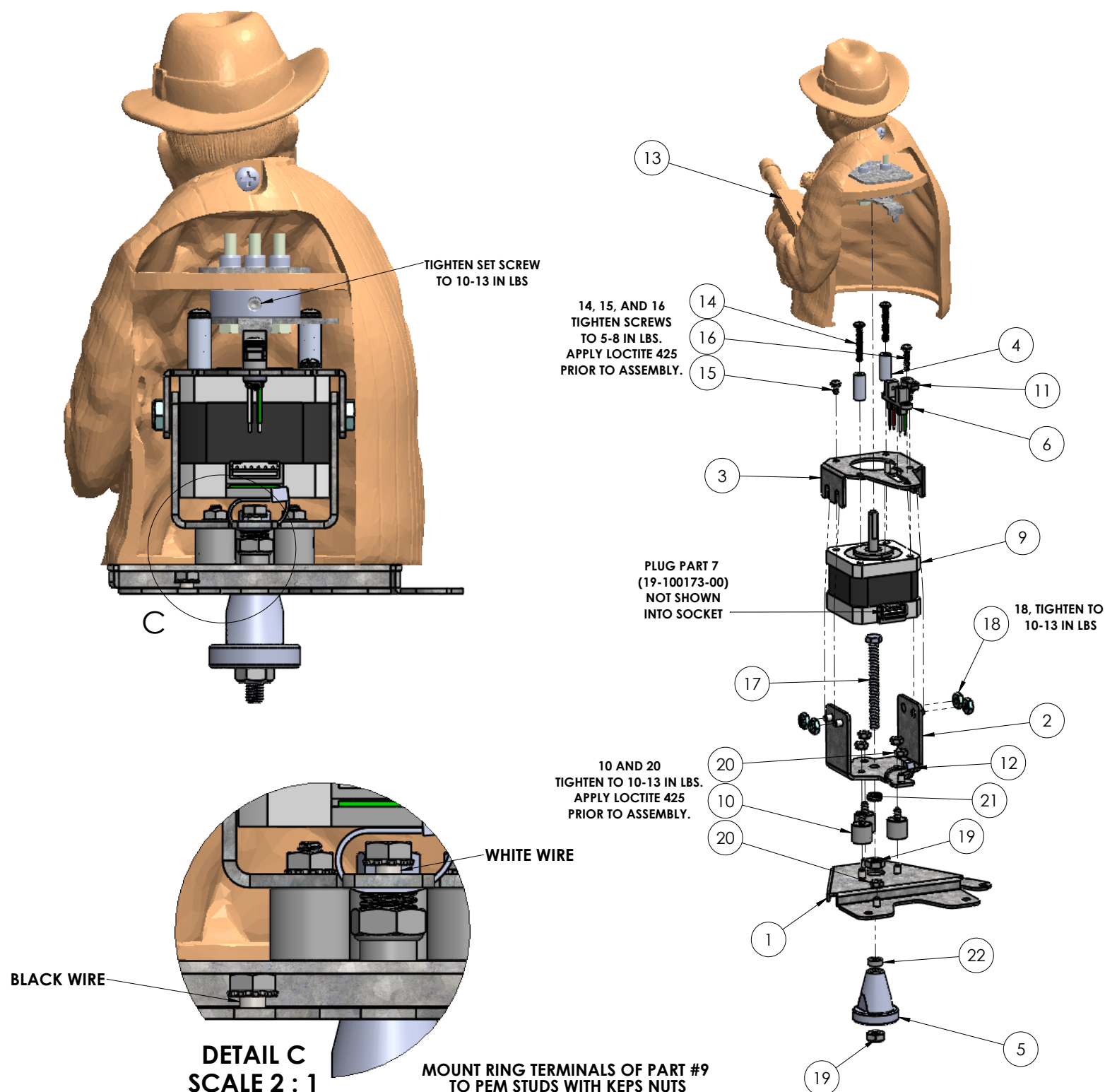


ASSY, RIGHT WIREWAY RAMP, GF  
51-100245-XX



Item	Part Number	Description	Qty
1	10-000024-00	MICROSWITCH NUT PLATE, 2-56	1
2	10-000024-01	MICROSWITCH PROTECTOR PLATE, #2	1
3	13-100037-00	LEFT WIRE RAMP, CHROME (GF)	1 [LE Only]
4	13-100037-01	LEFT WIRE RAMP, BRASS (GF)	1 [CE Only]
5	18-003017-01	RAMP/SUBWAY MICROSWITCH & WIREFORM ASSY	1
6	19-100156-00	MICROSWITCH PIGTAIL, 18-INCH	1
7	70-009002-00	MICROSWITCH INSULATOR, FISH PAPER	1
8	80-002102-08	2-56 X 1/2" HWH MS, BLACK	2

Item	Part Number	Description	Qty
1	10-000024-00	MICROSWITCH NUT PLATE, 2-56	1
2	10-000024-01	MICROSWITCH PROTECTOR PLATE, #2	1
3	13-100038-00	RIGHT WIRE RAMP, CHROME (GF)	1 [LE Only]
4	13-100038-01	RIGHT WIRE RAMP, BRASS (GF)	1 [CE Only]
5	18-003017-01	RAMP/SUBWAY MICROSWITCH & WIREFORM ASSY	1
6	70-009002-00	MICROSWITCH INSULATOR, FISH PAPER	1
7	80-002102-08	2-56 X 1/2" HWH MS, BLACK	2



## ASSEMBLY, GANGSTER MECH 51-100250-XX



Assembly, Gangster Mech, CE  
51-100250-00

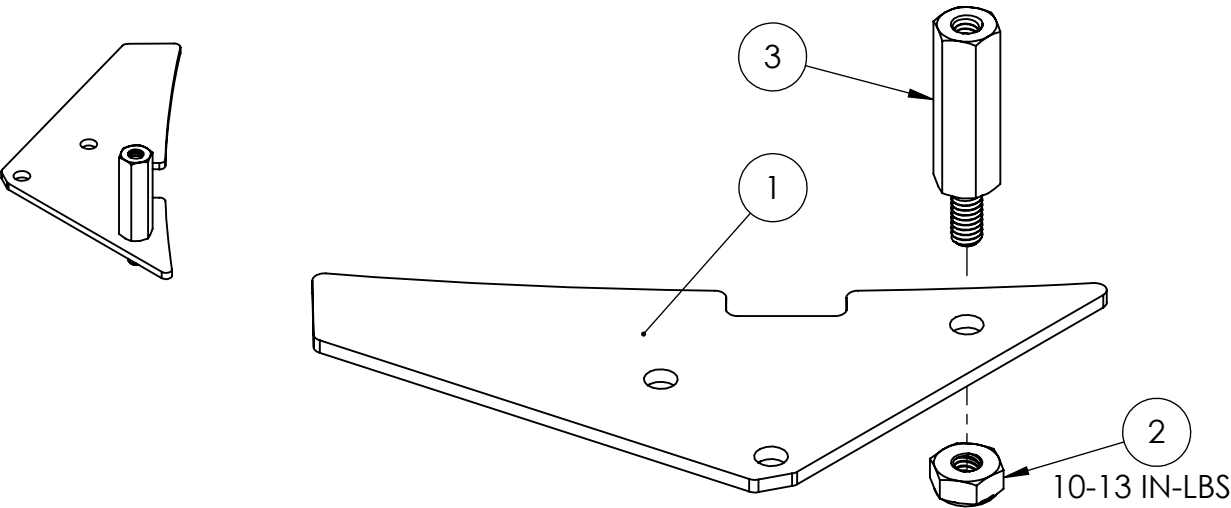


Assembly, Gangster Mech, LE  
51-100250-01

Item	Part Number	Description	Qty
1	10-100358-00	PLATE, MOUNTING, GANGSTER MECH	1
2	10-100359-00	BRACKET, MOUNTING, STEPPER SUPPORT	1
3	10-100360-00	BRACKET, MOUNTING, STEPPER MOTOR	1
4	11-100090-00	MOTOR STOP POST, GF	2
5	11-100092-00	NEWTON POST	1
6	18-007026-24	U-Shaped Opto Assy, OPB812W, 24" Cable	1
7	19-100173-00	Pigtail, Stepper Motor, 12"	1
8	19-100177-00	Ring Terminal Switch Cable, #6	1
9	23-005007-00	HOBBIT SMAUG STEPPER MOTOR	1
10	25-100017-00	MOUNT, ISO THREADED, MF, #6 TH, .4375 OD, .406 HT	3
11	30-000050-05	4" WIRE TIE, W/SCREW HOLE	1
12	30-000051-08	8" WIRE TIE, NATURAL	3
13	51-100328-00	ASSY, SCULPTURE, GANGSTER, "BIG MIKE"	1 [CE Only]
13	51-100328-01	ASSY, SCULPTURE, GANGSTER, "FLOYD"	1 [LE Only]
14	80-000003-12	M3 x 20mm PPH MS, ZINC PLATED	2
15	80-001003-03	M3 x 5mm (3/16") PPH MS, SEMS, ZINC PLATED	2
16	80-001004-08	4-40 x 1/2 PPH MS, SEMS, ZINC PLATED	1
17	80-003210-32	10-32 x 2" Hex Head MS, Stainless	1
18	91-000006-00	6-32 NYLON LOCKNUT, ZINC PLATED, THIN	4
19	91-000010-01	10-32 NYLON STOP NUT, THIN, ZINC PLATED	2
20	91-001006-00	#6-32 KEPS NUT, ZINC PLATED	5
21	92-100011-00	Wave Spring, Stacked, 0.02" Shaft, 0.118" Height, 3lbs Load	1
22	94-005310-04	#10 X 1/8" ROUND SPACER, 5/16" OD, NYLON	1

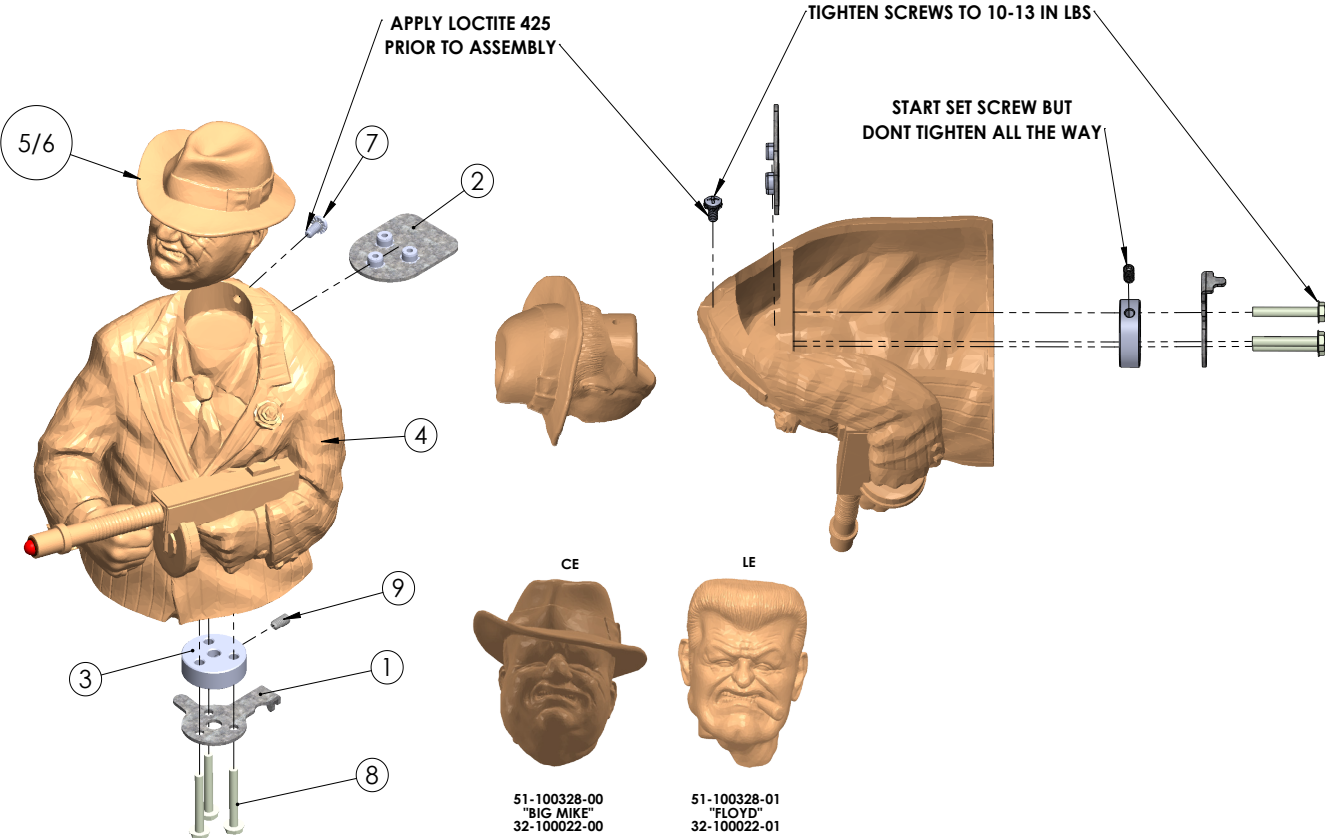


PLASTIC ASSY, COMPOUND FENCE  
51-100327-00



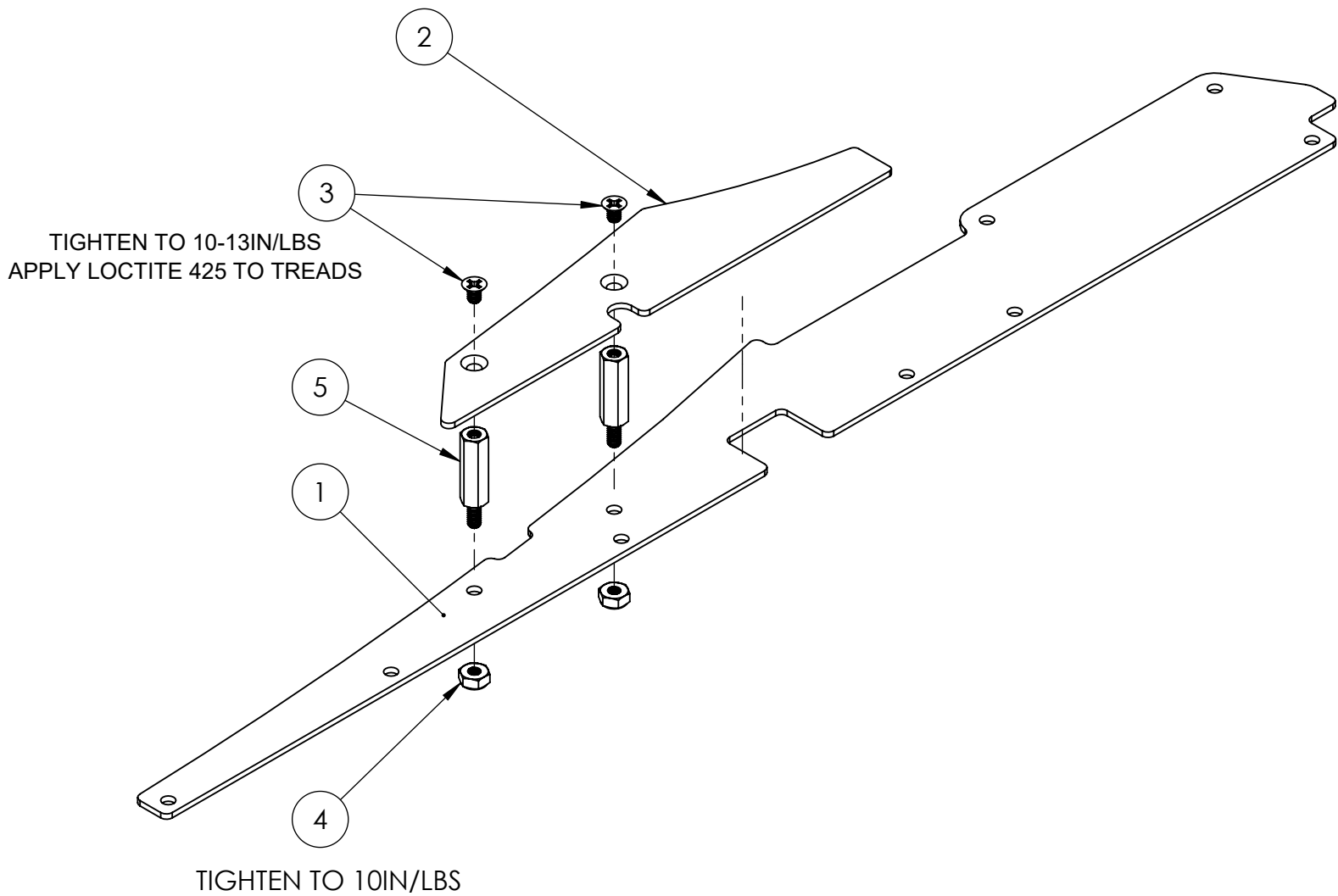
Item	Part Number	Description	Qty
1	30-100122-08	COMPOUND FENCE PLASTIC	1
2	91-000008-00	8-32 NYLON STOP NUT THIN	1
3	95-001518-16	5/16" x 1" HEX SPACER MF, 8-32 THREAD, ZINC	1

ASSY, SCULPTURE, GANGSTER, GF  
51-100328-XX



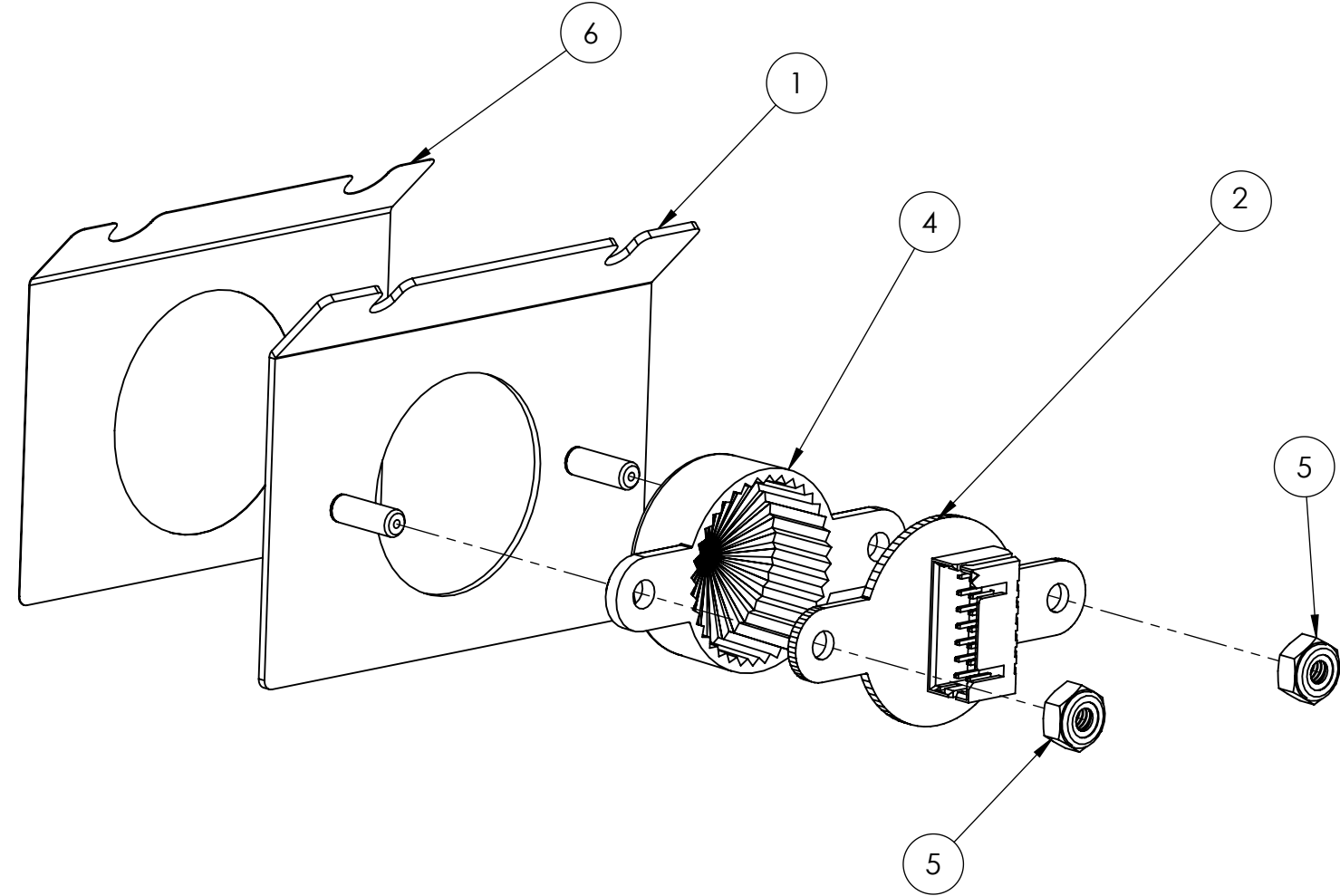
Item	Part Number	Description	Qty
1	10-100361-00	PLATE, OPTO SWITCH FLAG	1
2	10-100373-00	PLATE, GANGSTER ATTACHMENT	1
3	11-100077-00	BOSS MOUNT, SCULPTURE	1
4	32-100020-00	SCULPTURE, GANGSTER BODY AND GUN	1
5	32-100022-00	SCULPTURE HEAD "Big Mike"	1 [CE Only]
6	32-100022-01	SCULPTURE HEAD "Floyd"	1 [LE Only]
7	80-001006-05	6-32 x 5/16 PPH MS, SEMS, ZINC PLATED	2
8	80-002006-16	#6-32 X 1" HWH MS	2
9	85-004508-05	8-32 X 5/16" SET SCREW, CUP POINT, BLACK, W/ NYLON	2

PLASTIC, BALL TRAP, LEFT ORBIT, GF  
51-100260-00

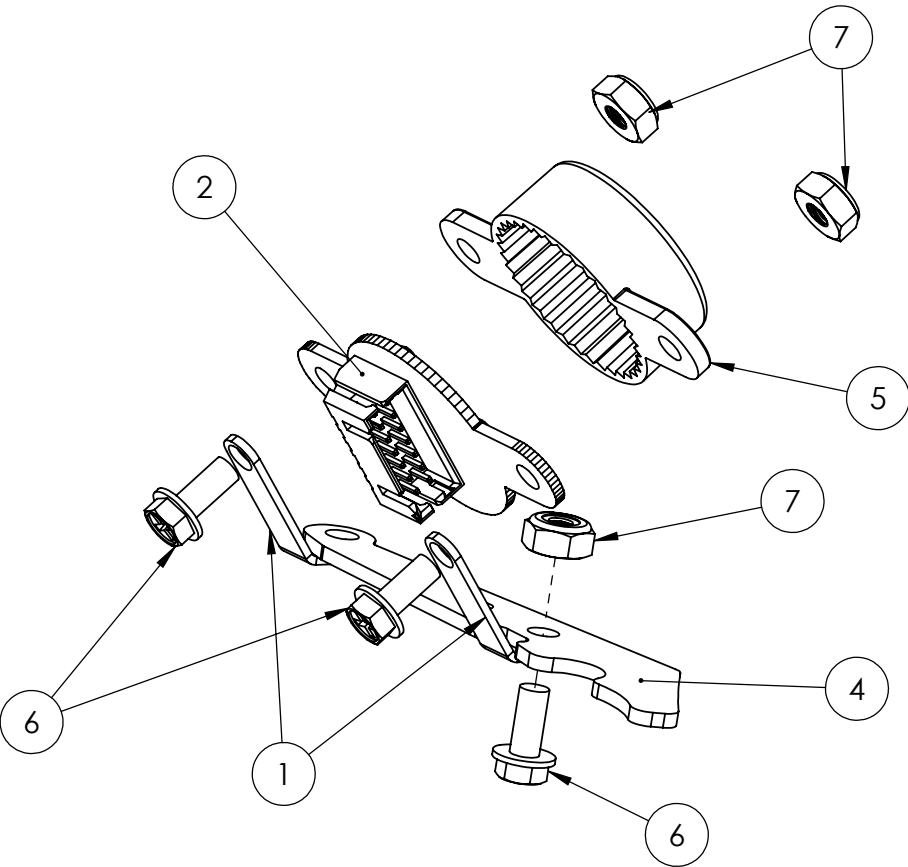


Item	Part Number	Description	Qty
1	30-100122-04	LEFT TARGET BANK PLASTIC	1
2	30-100122-17	LEFT ORBIT BALL TRAP PLASTIC	1
3	80-006008-04U	8-32 x 1/4" PFH MS, 82° CA, UNDERCUT, ZINC PLATED	2
4	91-000008-00	8-32 NYLON STOP NUT THIN	2
5	95-001518-16	5/16" x 1" HEX SPACER MALE FEMALE, 8-32 TH, ZINC	2

FLASHER, LEFT 3-BANK, GODFATHER  
51-100261-00



Item	Part Number	Description	Qty
1	10-100308-00	BRKT, FLASHER MOUNT, LEFT 3-BANK	1
2	15-100043-00	ARC BEACON BD	1
3	19-100162-00	14PIN HIROSE EXTENSION CABLE, 24"	1
4	30-100141-13	FLASHER DOME W/ SCREW TABS, 1/2"	1
5	91-000108-00	8-32 NYLON STOP NUT, THIN, BLACK ZINC	2
6	62-100061-03	DECAL, LEFT 3-BANK FLASHER	1

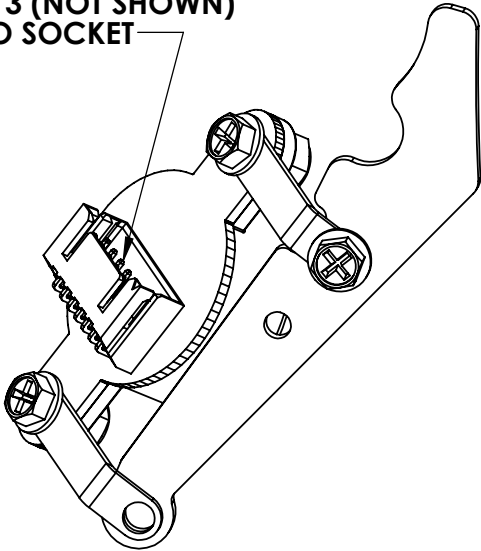


**PARTS 6 AND 7  
TIGHTEN TO 10-13 IN LBS.**

**PLASTIC, FLASHER MOUNT, RIGHT, 3-BANK  
51-100262-00**

Item	Part Number	Description	Qty
1	10-100383-00	BRACKET, L, FLASHER, GF	2
2	15-100043-00	ARC BEACON BD	1
3	19-100162-00	14 PIN HIROSE EXTENSION CABLE, 24"	1
4	30-100122-06	UPPER FLIPPER TARGET BANK PLASTIC	1
5	30-100141-13	FLASHER DOME W/ SCREW TABS, 1/2"	1
6	80-002008-06	8-32 X 3/8" HWH PHILLIPS MS, SERRATED	3
7	91-000108-00	8-32 NYLON STOP NUT, THIN, BLACK ZINC	3

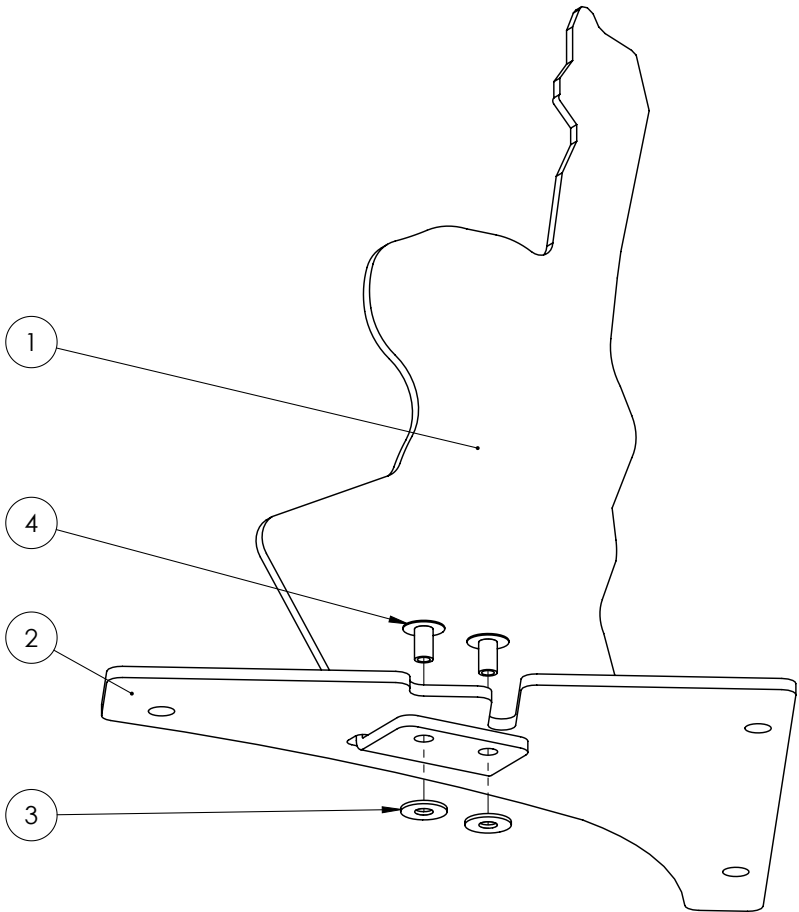
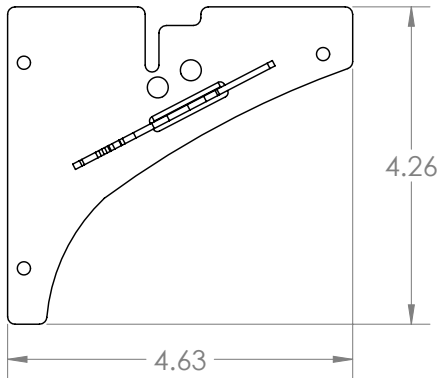
**PLUG PART 3 (NOT SHOWN)  
INTO SOCKET**





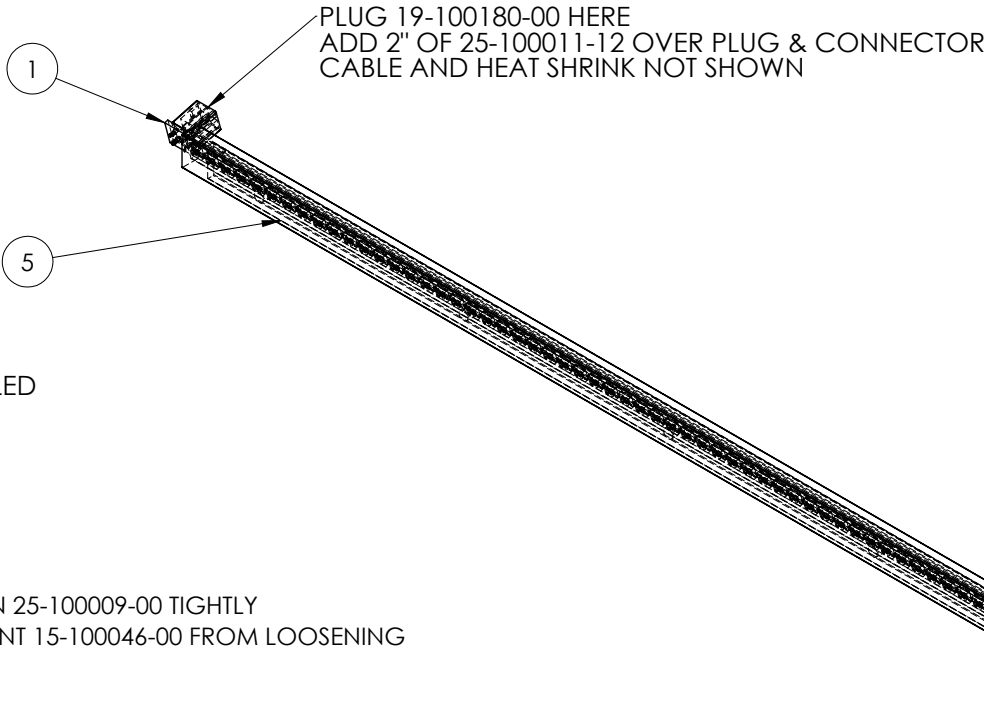
PLASTIC ASSEMBLY, REAR LEFT CORNER, LE  
51-100263-00

Item	Part Number	Description	Qty
1	30-100113-22	STATUE OF LIBERTY	1
2	30-100122-15	BASE, PLASTIC, STATUE OF LIBERTY	1
3	92-000004-00	#4 SAE FLAT WASHER, ZINC PLATED	2
4	93-000000-00	1/8" x 7/32"SEMI-TUBULAR RIVET, TH	2

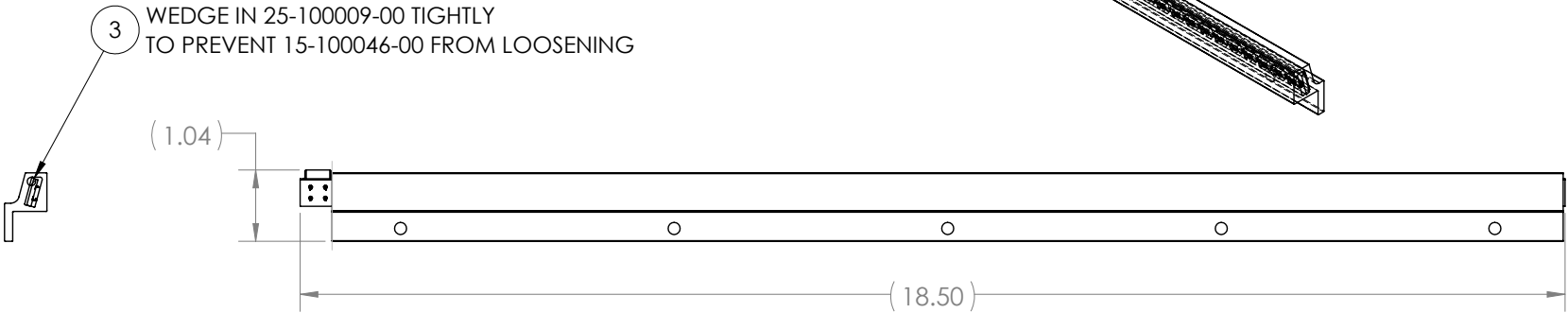
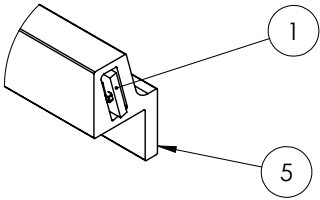


LED STRIP ASSEMBLY, 18"  
51-100264-00

Item	Part Number	Description	Qty
1	15-100046-00	BACK PANEL NeoLED BD	1
2	19-100180-00	BACK PANEL NeoLED CABLE	1
3	25-100009-00	PLUG RUBBER TAPERED	1
4	25-100011-12	HEAT SHRINK THIN-WALL FLEX POLY TUBING, 3/4"	2"
5	30-100120-00	EXTRUSION, LED STRIP COVER, 18IN	1

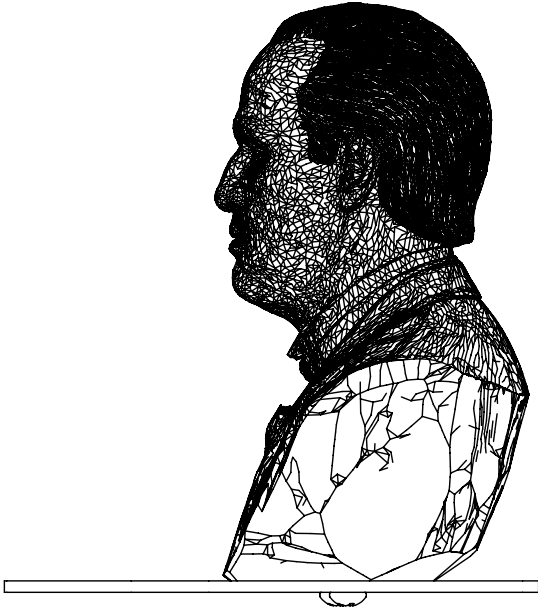
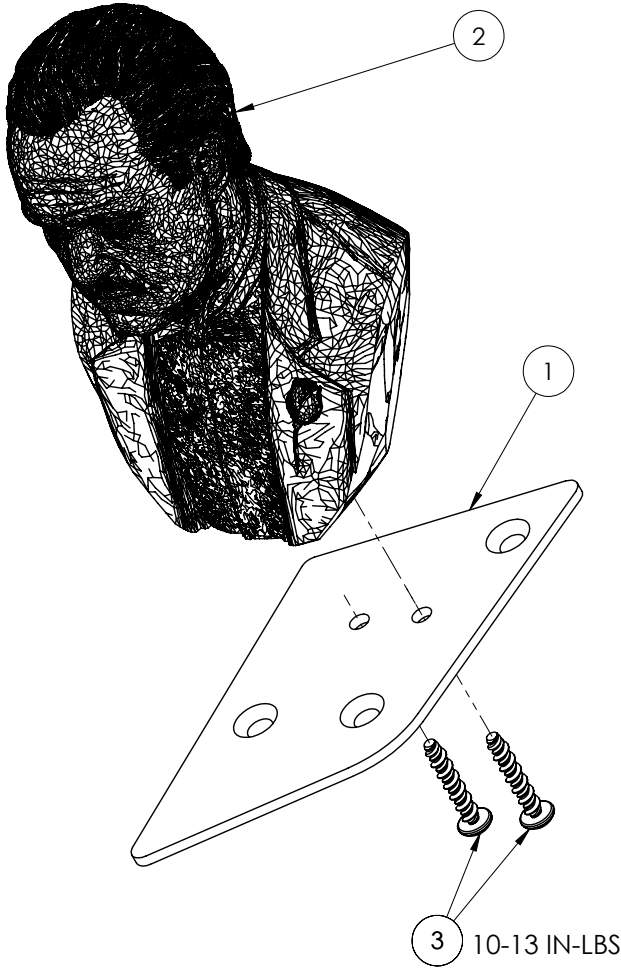


NOTE: PLUG INSTALLED BEHIND LED



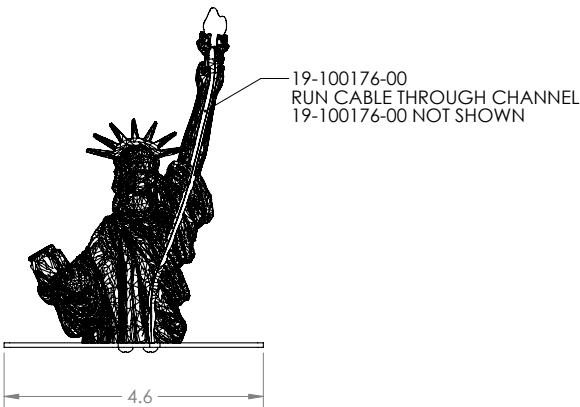
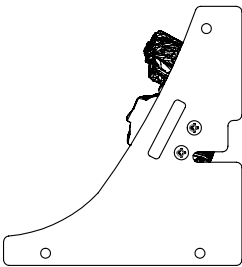
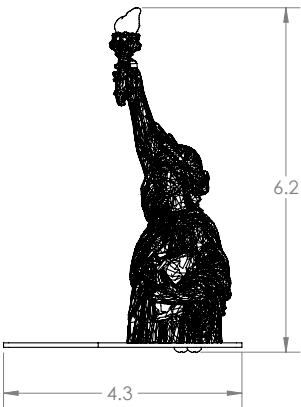
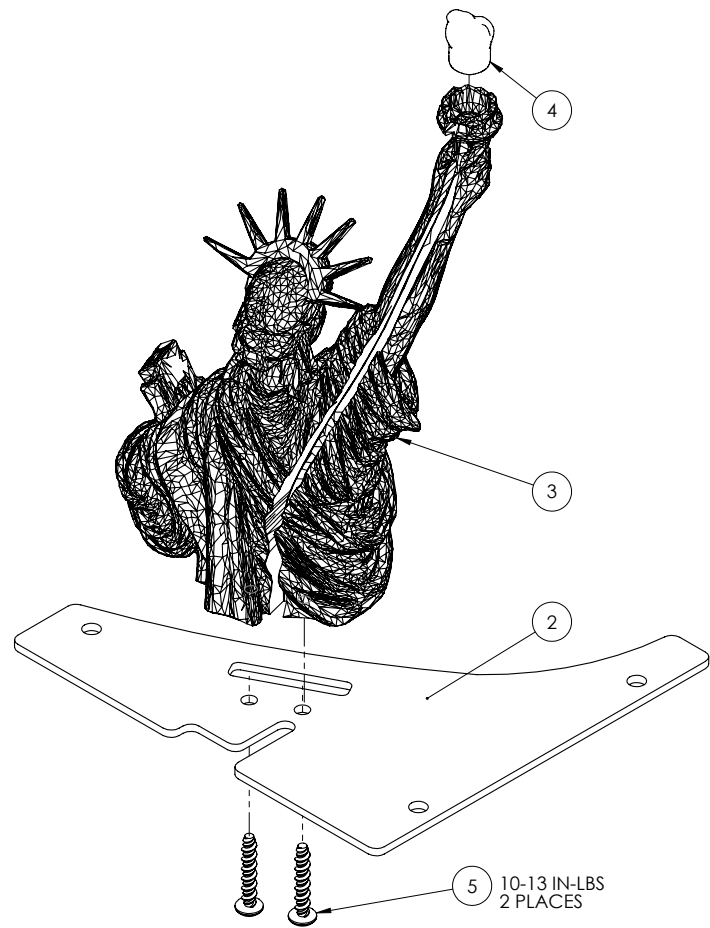
ASSY, FIGURINE 1, GF  
51-100266-00

Item	Part Number	Description	Qty
1	30-100122-24	UPPER FLIPPER BALL TRAP PLASTIC	1
2	32-100014-00	SCULPTURE, FIGURINE 1, GF	1
3	83-001006-12	#6 x 3/4" THD FORMING FOR PLASTIC PHL-HD SCREW	2



PLASTIC ASSY, REAR LEFT CORNER, GF CE  
51-100268-00

Item	Part Number	Description	Qty
1	19-100176-00	RGB LED AND CABLE ASSEMBLY	1
2	30-100122-15	LEFT ORBIT REAR PLASTIC	1
3	32-100015-00	SCULPTURE, REAR LEFT CORNER	1
4	32-100015-01	SCULPTURE, REAR LEFT CORNER, TORCH	1
5	83-001006-12	#6 x 3/4" THD FORMING FOR PLASTIC PHL-HD SCREW	2





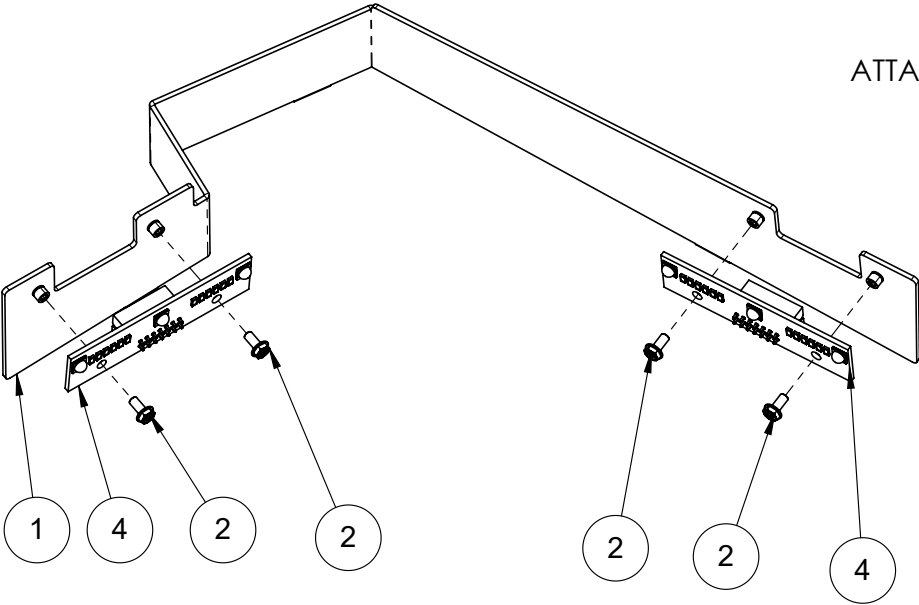
**FLOODLIGHT ASSY, 120 DEGREE BRACKET**  
**51-100276-00**

Item	Part Number	Description	Qty
1	10-100304-00	Bracket PCB RGB, 120 Degrees	1
2	51-100235-00	RGBW Floodlight & Cable Assy	1
3	80-00004-06	4-40 x 3/8" PPH MS, Zinc	1

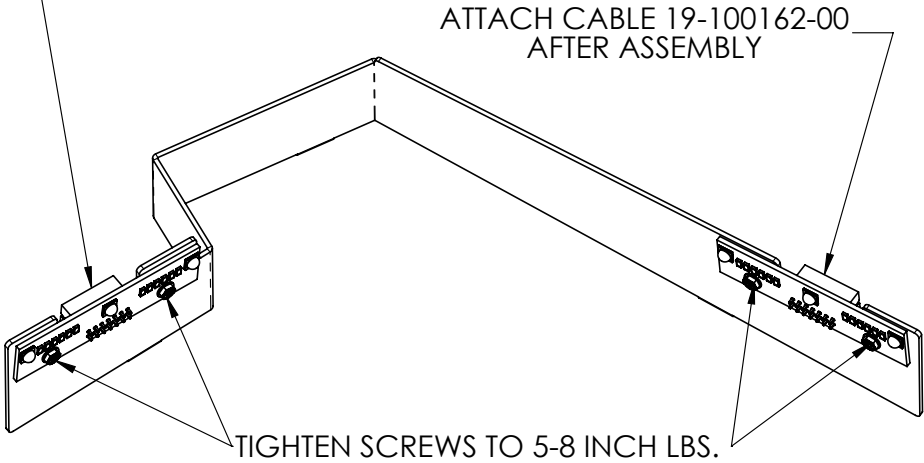


ASSY, OUTHOLE FLATRAIL W/ LIGHTS  
51-100285-00

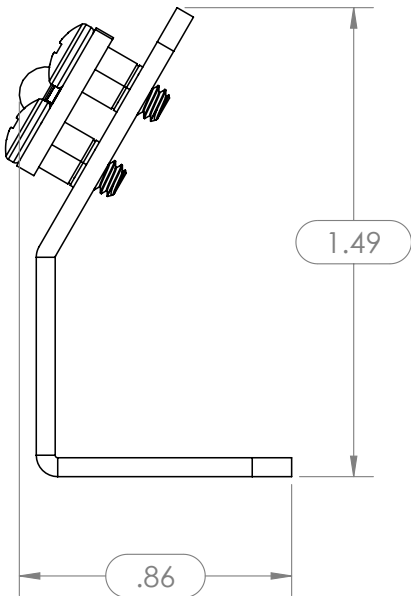
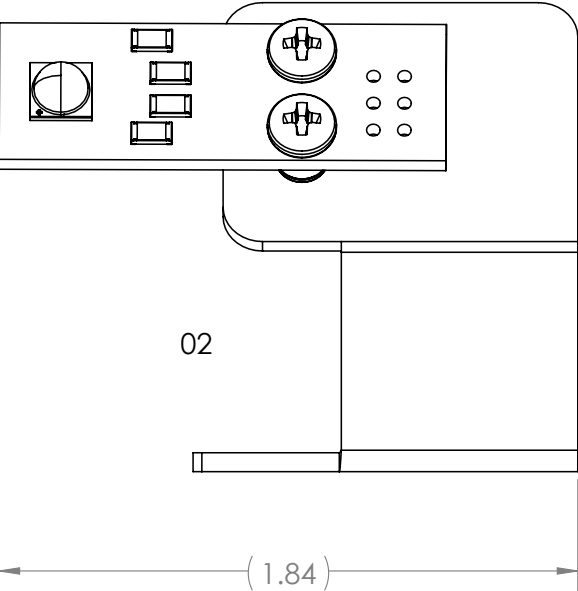
Item	Part Number	Description	Qty
1	12-100042-00	OUTHOLE FLATRAIL	1
2	80-002104-04	4-40X1/4" HWH PHILLIPS MS, BLK OXIDE	4
3	19-100162-00	14 PIN HIROSE EXTENSION CABLE, 24"	2
4	15-100050-00	RGBW TRI-FLOOD	2



ATTACH CABLE 19-100162-00  
AFTER ASSEMBLY



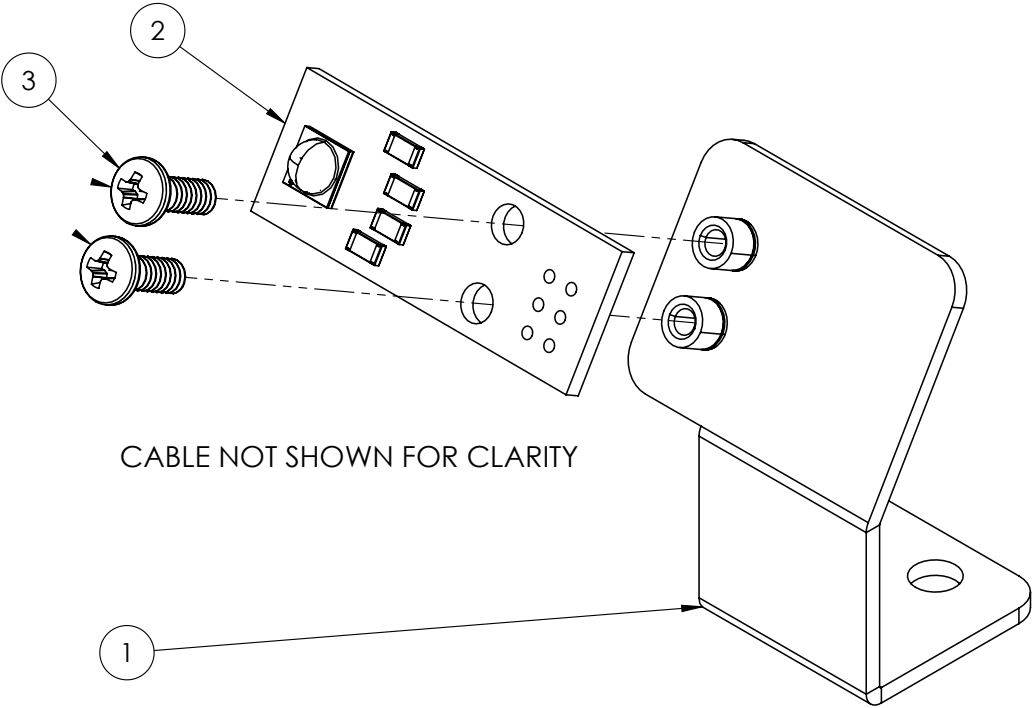
NOTE: 19-100162-00 NOT SHOWN



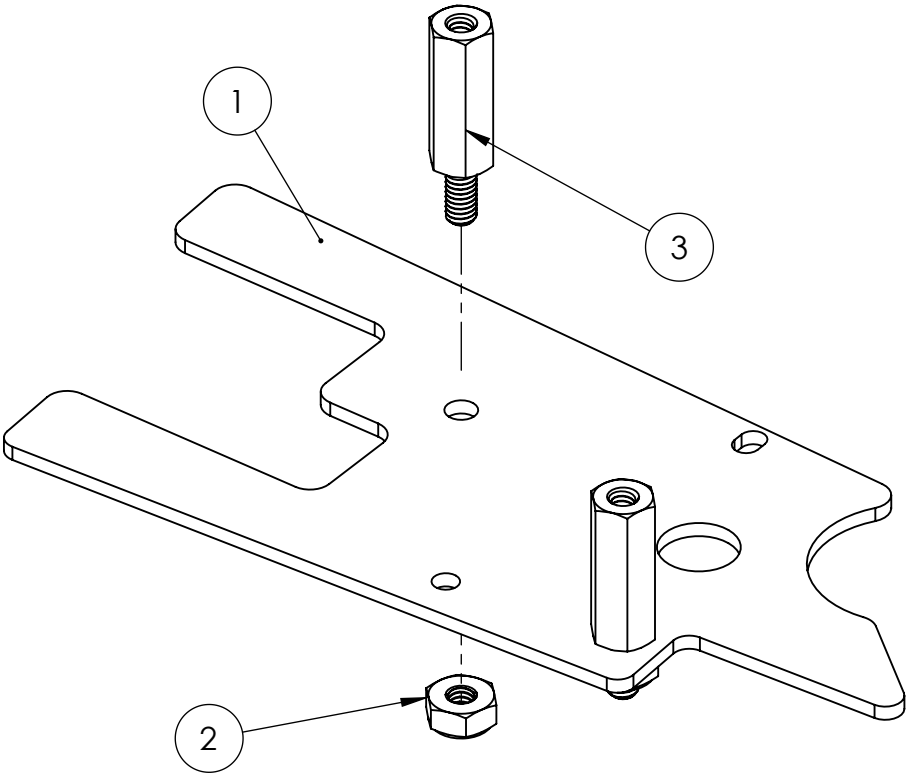
TIGHTEN SCREWS TO 5-8 IN LBS.

ASSY, ACTION BUTTON LIGHT  
51-100286-00

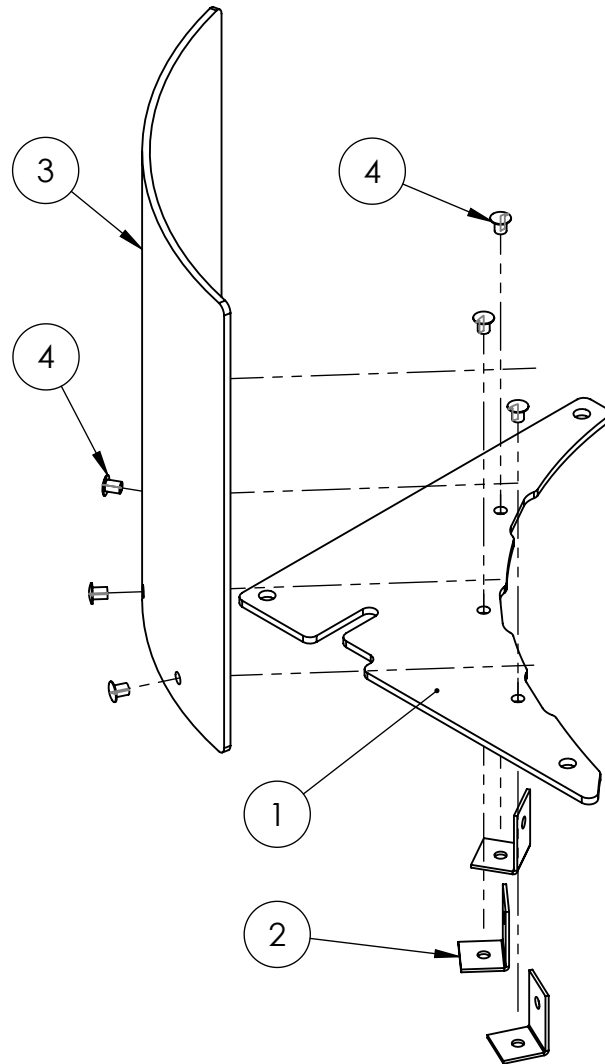
Item	Part Number	Description	Qty
1	10-100334-00	BRACKET, MOUNTING, ACTION BUTTON LIGHT	1
2	51-100287-00	ACTION BUTTON RGB LED & CABLE ASSY	1
3	80-000004-05	#4-40 x 5/16" L PPH MS	2



ASSY, PLASTIC, UPPER FLIPPER, GODFATHER  
51-100300-00



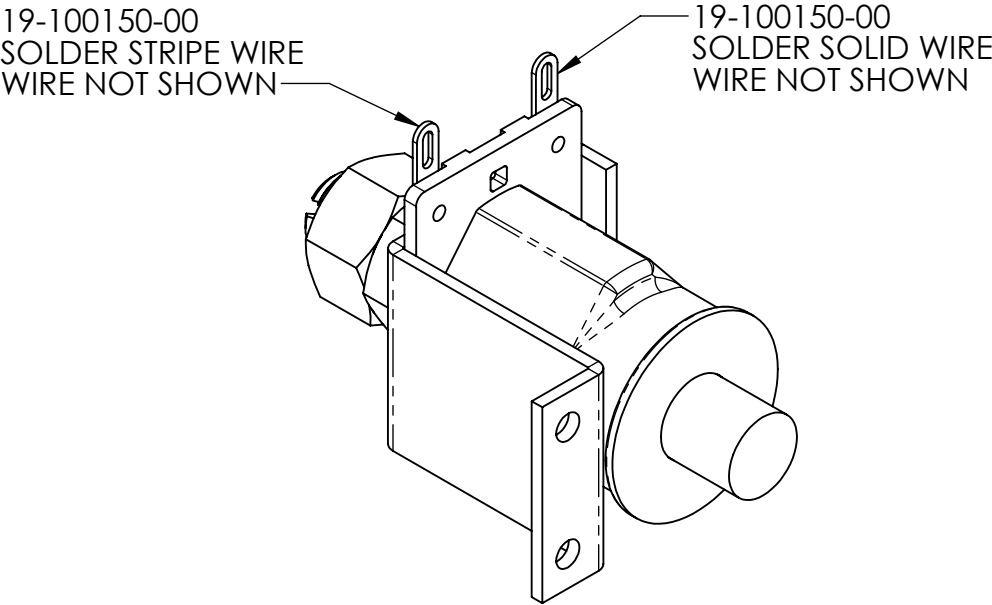
Item	Part Number	Description	Qty
1	30-100122-09	PF PLASTIC, GF, LE, -09	1
2	91-000008-00	8-32 NYLON STOP NUT THIN	2
3	95-001518-14	5/16" x 7/8" HEX SPACER, M-F, 8-32, ZINC	2



**PLASTIC ASSY, REAR RIGHT CORNER, GF**  
**51-100310-00**

Item	Part Number	Description	Qty
1	30-100122-14	UNDER LOOP RAMP PLASTIC	1
2	10-000227-01	PLAYFIELD SIGN MTG BRKT, 90°	3
3	30-100122-27	CITY SKYLINE PLASTIC	1
4	93-000003-00	1/8" X 5/32" SEMI-TUBULAR RIVET, TH	6

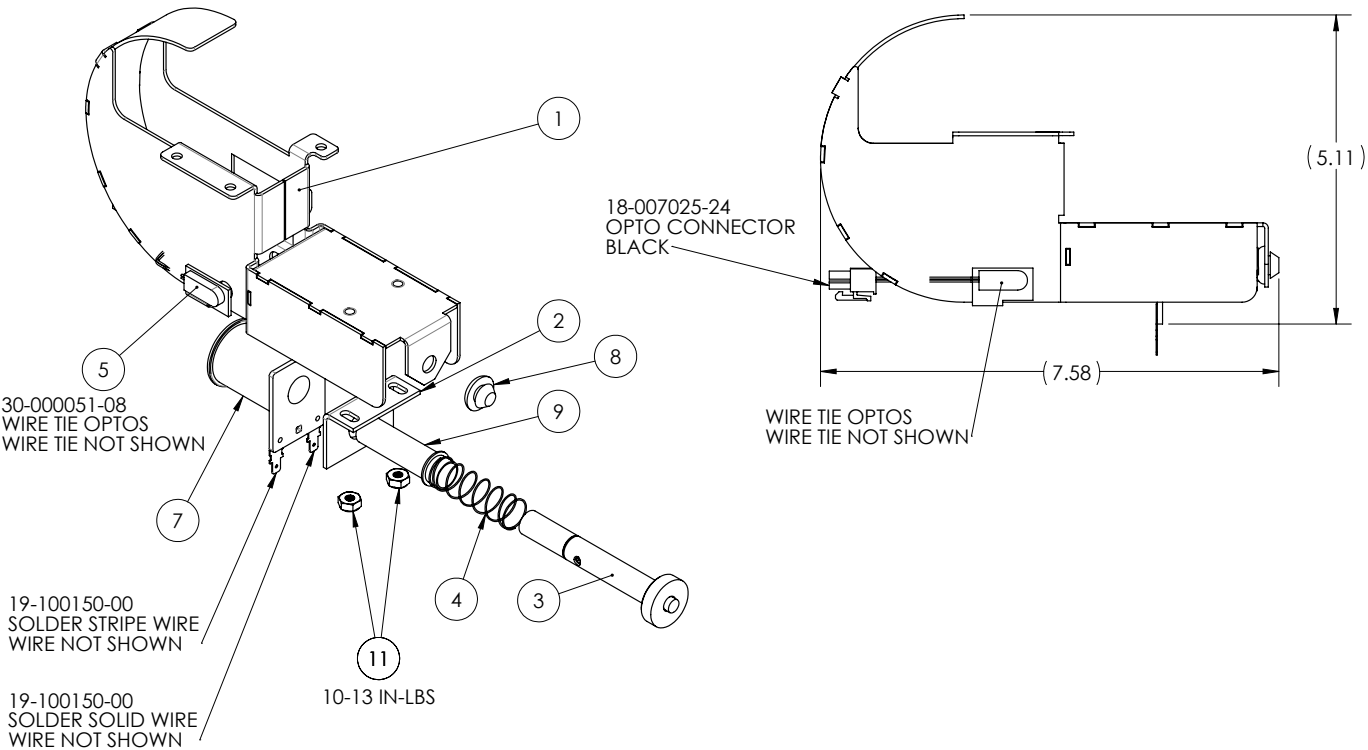
ASSY, MAGNET THROUGH PLAYFIELD  
51-100338-XX



51-100338-01  
ASSEMBLY, MAGNET, THROUGH PLAYFIELD, W/ PIGTAIL, LUGS RIGHT

Item	Part Number	Description	Qty
1	10-100035-00	BRKT - SINGLE COIL MAGNET	1
2	11-100008-00	CORE - ADJUSTABLE .50 DIA MAGNET	1
3	19-100152-00	COIL PIGTAIL, 2-LUG, KEY-2, 4"	1
4	23-100000-00	COIL, 23-000003-00, WITH THERMAL CUTOFF	1
5	91-100000-00	HEX NUT 1/2-13 STEEL ZINC PLATE	1

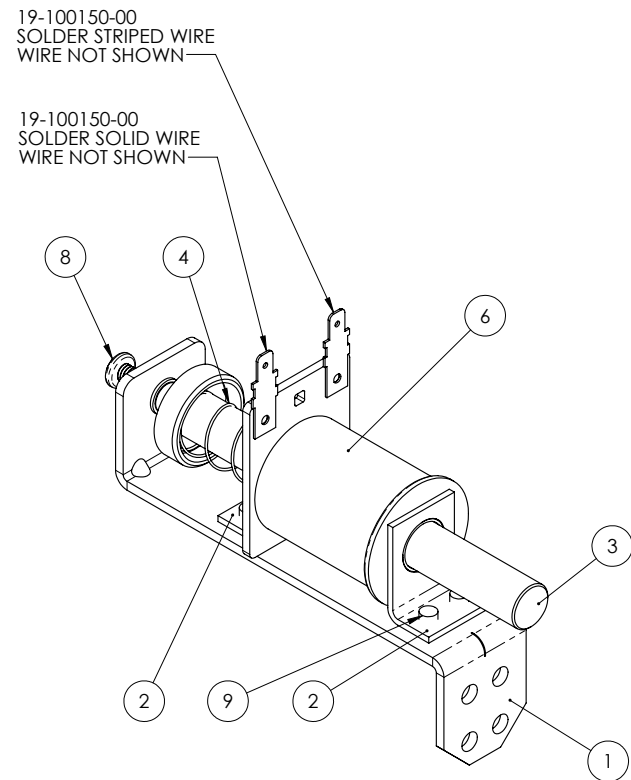
ASSY, SCOOP, RIGHT SIDE ENTRANCE  
51-100339-00



Item	Part Number	Description	Qty
1	10-005036-01	BALL SCOOP WELD, RIGHT SIDE ENTRANCE	1
2	10-007014-02	COIL CENTERING BRKT, 5/8", SLOTTED, 1.56" W	1
3	11-005001-00	BELL ARMATURE ASSEMBLY	1
4	13-007005-00	VUK PLUNGER RETURN SPRING	1
5	18-007025-24	OPTO PAIR ASSY, OPB100-EZ/SZ, 24" CABLE	1
6	19-100150-00	COIL PIGTAIL, 2-LUG, 4"	1
7	23-000003-00	23-800 STANDARD COIL	1
8	25-009001-00	RUBBER BUMPER PLUG, BLACK	1
9	30-000014-30-1	1-7/8" COIL TUBING, FLANGED	1
10	30-000051-08	8" WIRE TIE, NATURAL	2
11	91-000008-00	8-32 NYLON STOP NUT THIN	2

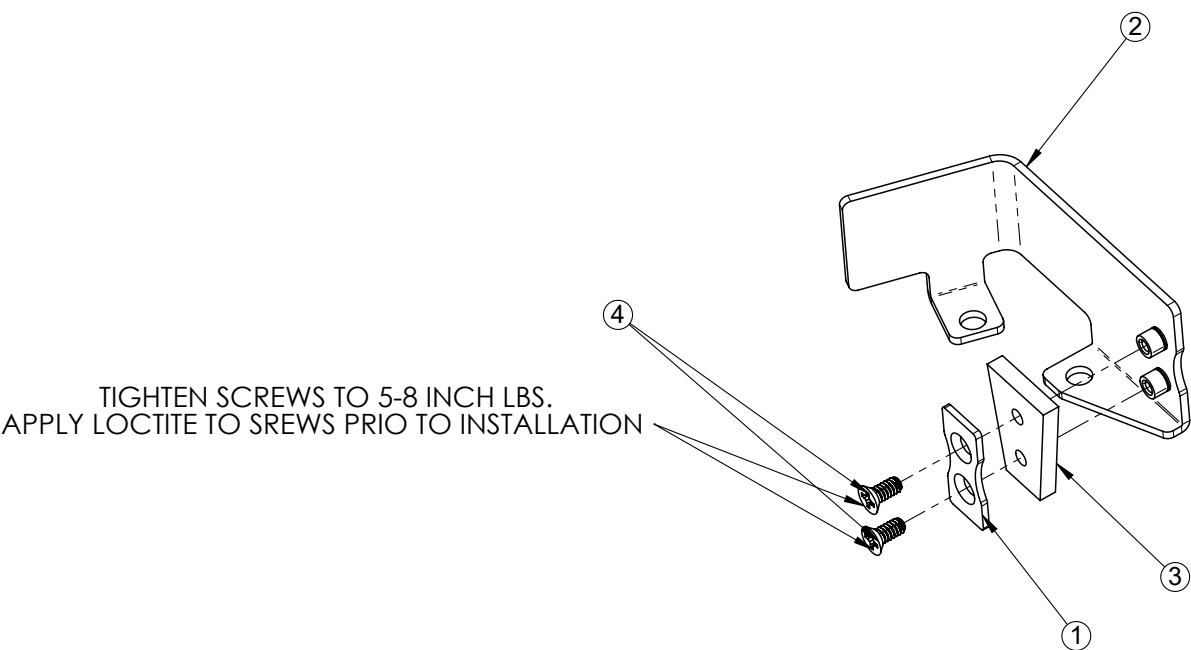


ASSY, DISAPPEARING POST, 7/16”  
51-100340-00



Item	Part Number	Description	Qty
1	10-005027-00	DISAPPEARING POST COIL BRKT	1
2	10-007000-00	COIL RETAINING BRACKET "T" TYPE	2
3	11-005009-10	DISAPPEARING POST PLUNGER ASSY, 7/16" DIAM	1
4	13-007005-00	VUK PLUNGER RETURN SPRING	1
5	19-100150-00	COIL PIGTAIL, 2-LUG, 4"	1
6	23-000010-00	26-1200 STANDARD COIL	1
7	30-000014-30-1	1-7/8" COIL TUBING, FLANGED	1
8	80-000308-12	#8-32 x 3/4" PPH MS, BRASS	1
9	80-002008-04	#8-32 x 1/4" HWH PHILLIPS SERRATED	4

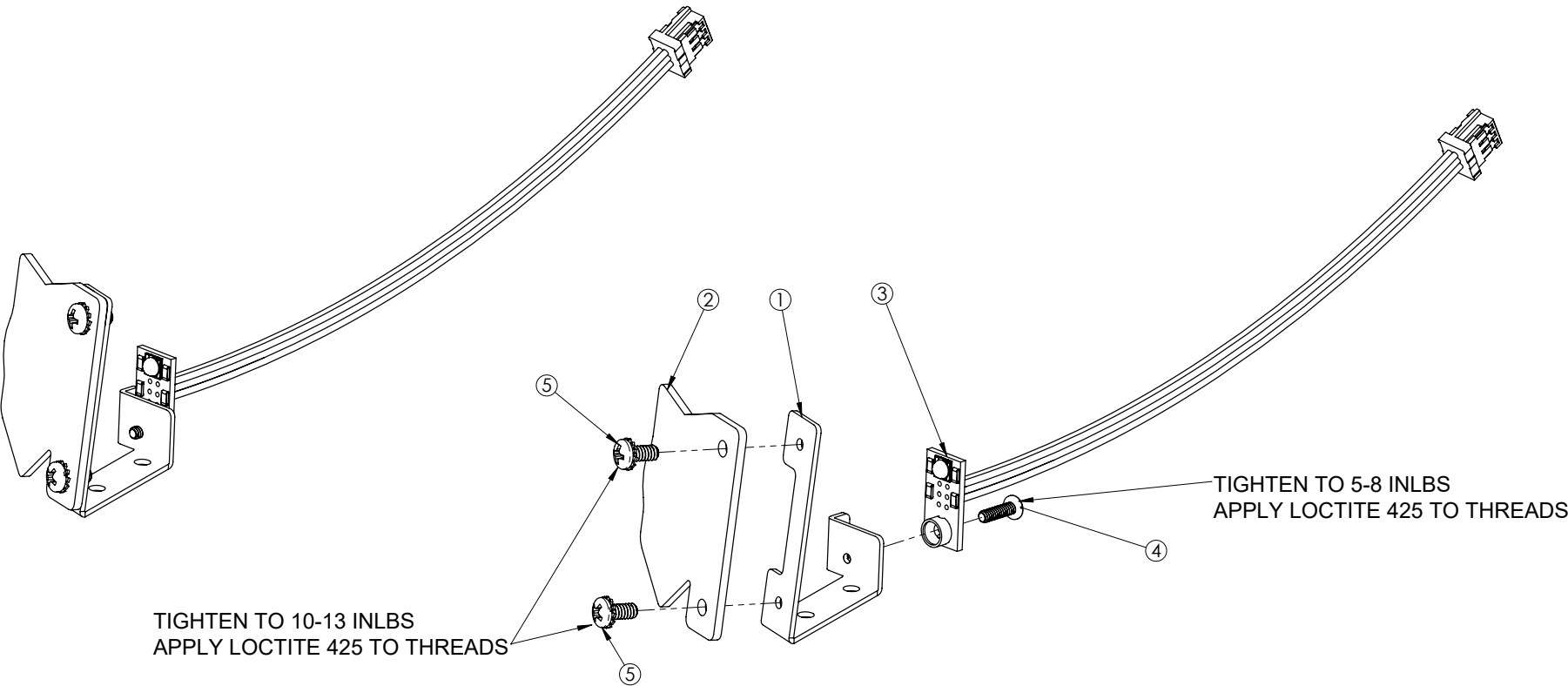
ASSY, FLATRAIL, NEWTON AREA  
51-100343-00



Item	Part Number	Description	Qty
1	10-100309-00	CLIP, RETAINING, BALL SNUBBER	1
2	12-100039-13	FLATRAIL, NEWTON BALL DIVIDER	1
3	25-100015-00	PAD, BALL SNUBBER	1
4	80-006004-04U	4-40 PFH MS, 82° CA, WITH UNDERCUT	2

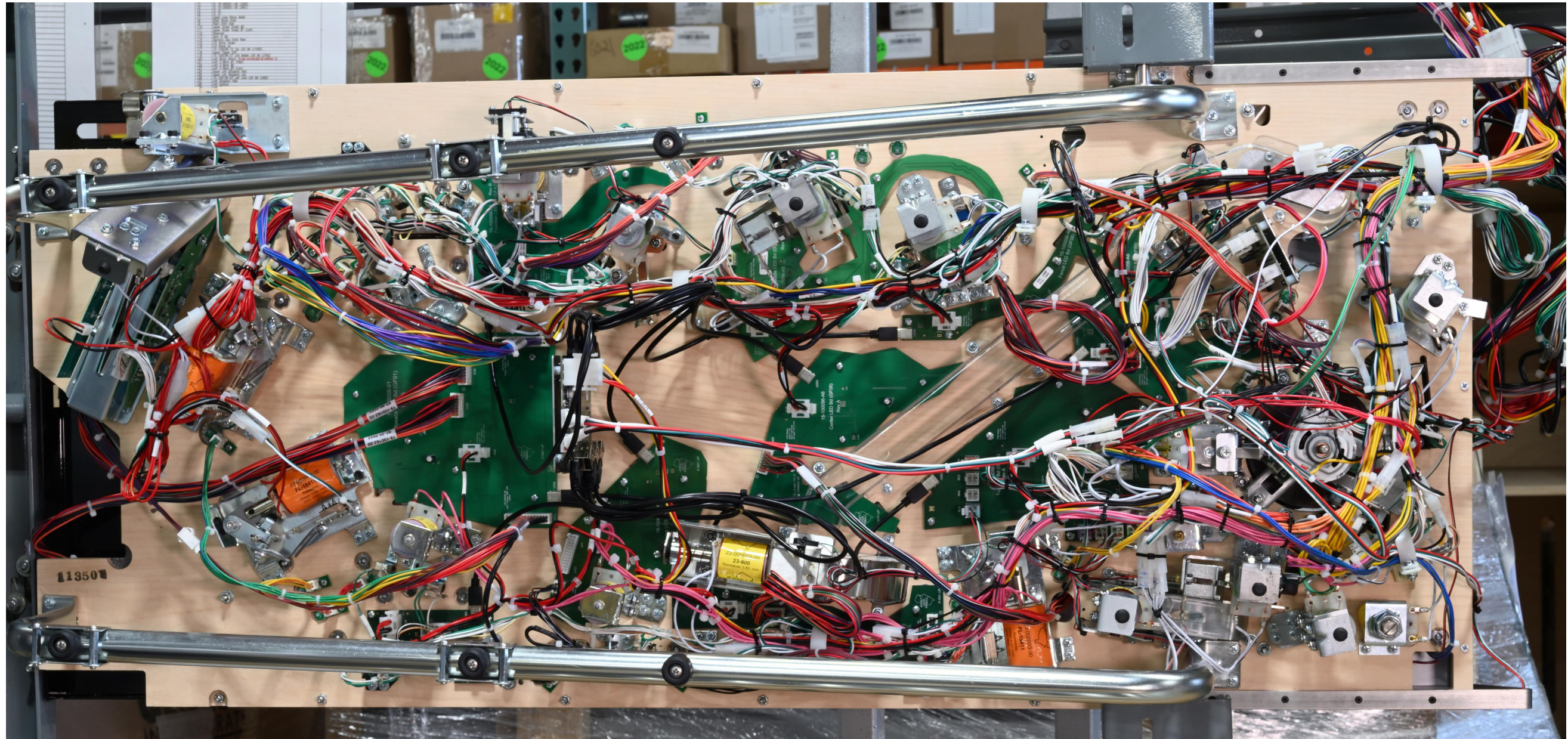
ASSEMBLY, HIDEOUT SIGN  
51-100347-00

Item	Part Number	Description	Qty
1	10-100394-00	BRACKET, HIDEOUT SIGN	1
2	30-100122-30	HIDEOUT SIGN PLASTIC	1
3	51-100235-00	RGBW FLOODLIGHT & CABLE ASSY	1
4	80-000004-06	4-40 X 3/8" PPH MS, ZINC PLATED	1
5	80-001006-05	6-32 x 5/16 PPH MS, SEMS, ZINC PLATED	2



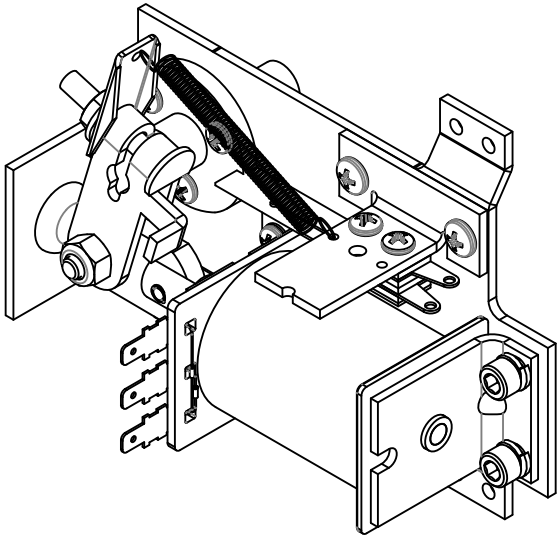
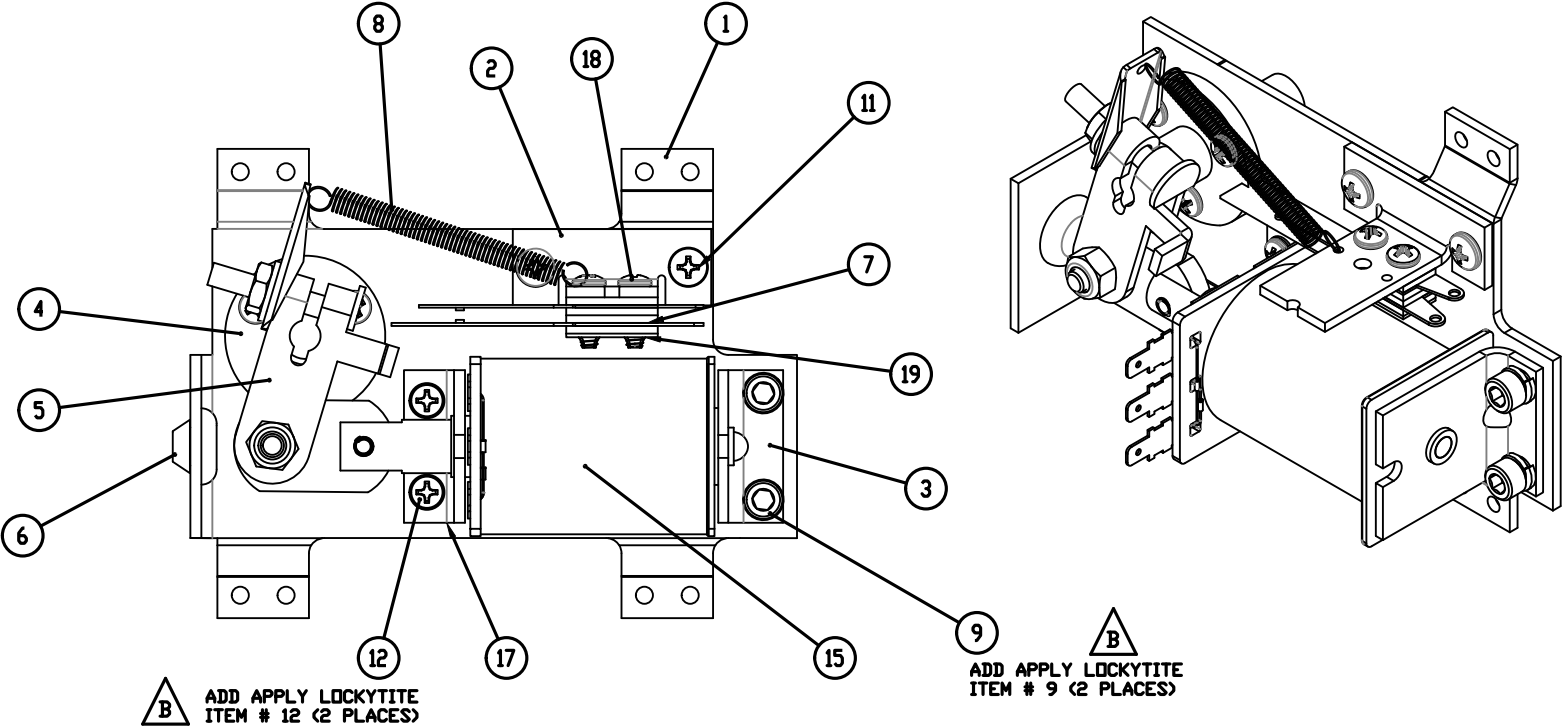


# UNDER - PLAYFIELD ASSEMBLIES

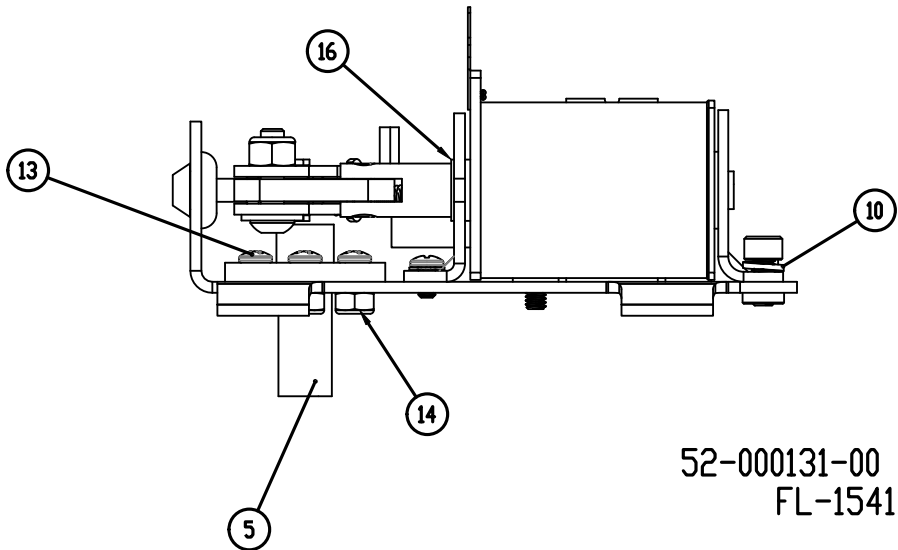




RIGHT FLIPPER ASSEMBLY  
52-010131-00



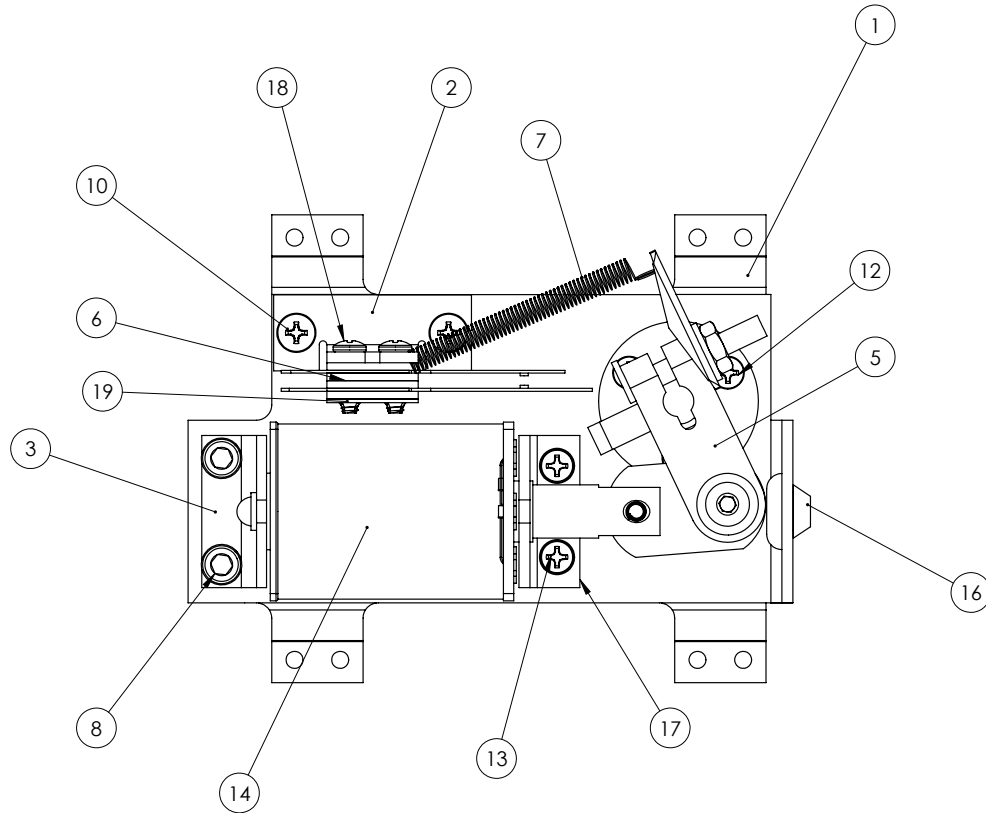
Item	Part Number	Description	Qty
1	10-005001-00	FLIPPER BASE PLATE- RIGHT	1
2	10-000018-00	END OF STROKE SWITCH BRKT	1
3	10-007001-00	FLIPPER COIL STOP BRKT	1
4	30-009002-00	FLIPPER BUSHING	1
5	51-005018-00	FLIPPER CRANK & LINK ASSY, RIGHT	1
6	25-009001-00	RUBBER BUMPER PLUG, BLACK	1
7	18-000001-00	END OF STROKE LEAF SWITCH	1
8	13-007001-00	FLIPPER RETURN SPRING	1
9	90-004010-06	10-32 x 3/8" SH CS	2
10	92-001010-00	#10 SPLIT LOCK WASHER	2
11	80-000008-05	8-32 x 5/16" PPH MS	2
12	80-001006-04	6-32 x 1/4"PPH MS SEMS	2
13	80-000006-06	6-32 x 3/8" PPH MS	3
14	91-000006-00	6-32 NYLON STOP NUT	3
15	23-002003-00	FL-15411 FLIPPER COIL	1
16	30-000014-35	2-3/16" COIL TUBING, STRAIGHT	1
17	10-007002-01	FLIPPER COIL CEN BRKT, 1 WAY	1
18	82-000006-08	#6 x 1/2" PPH SMS	2
19	91-006000-00	TINNERMAN NUT, LEAF SW STACK	1



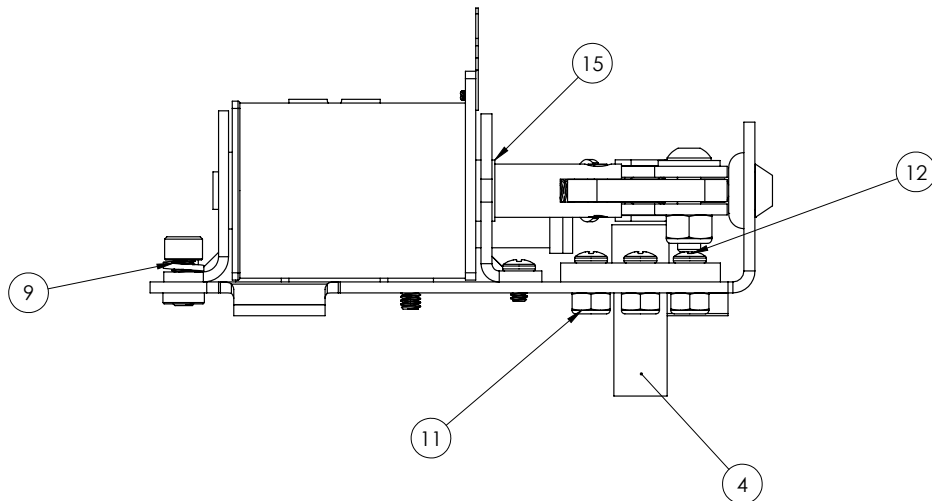
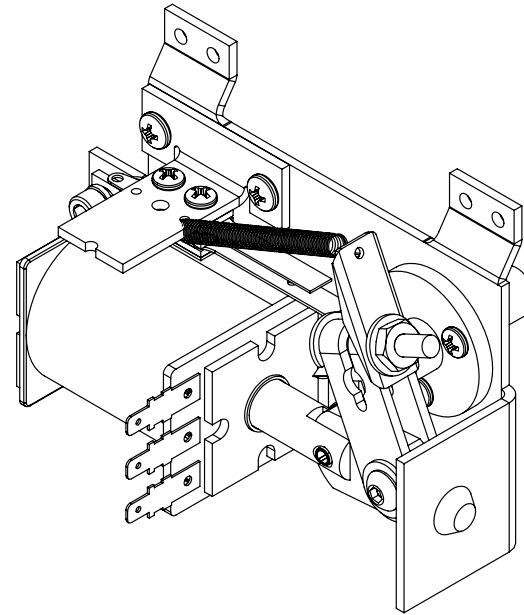
52-000131-00 SHOWN  
FL-15411

## LEFT FLIPPER ASSEMBLY

### 52-010132-00

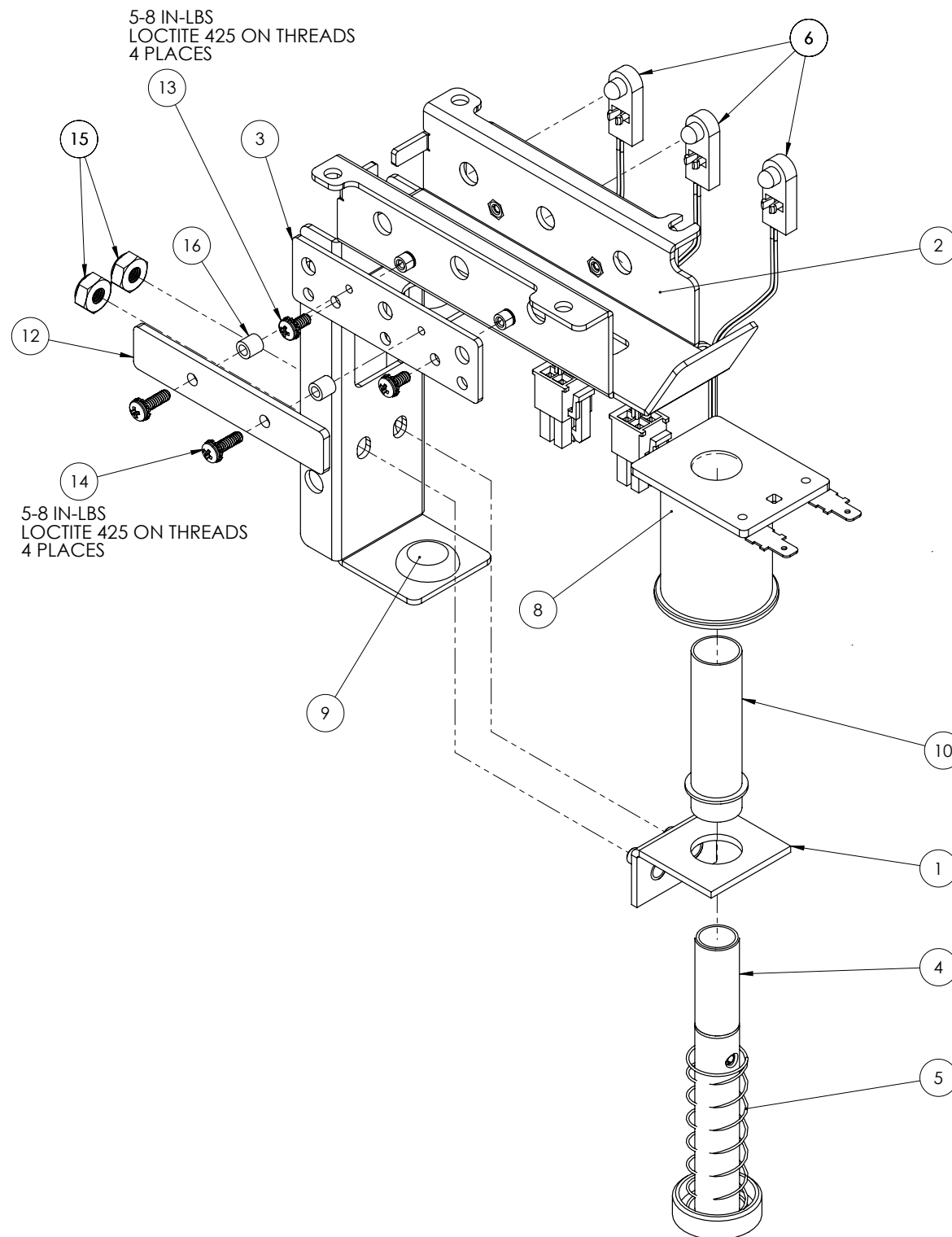


**52-000132-00 SHOWN  
FL-15411**



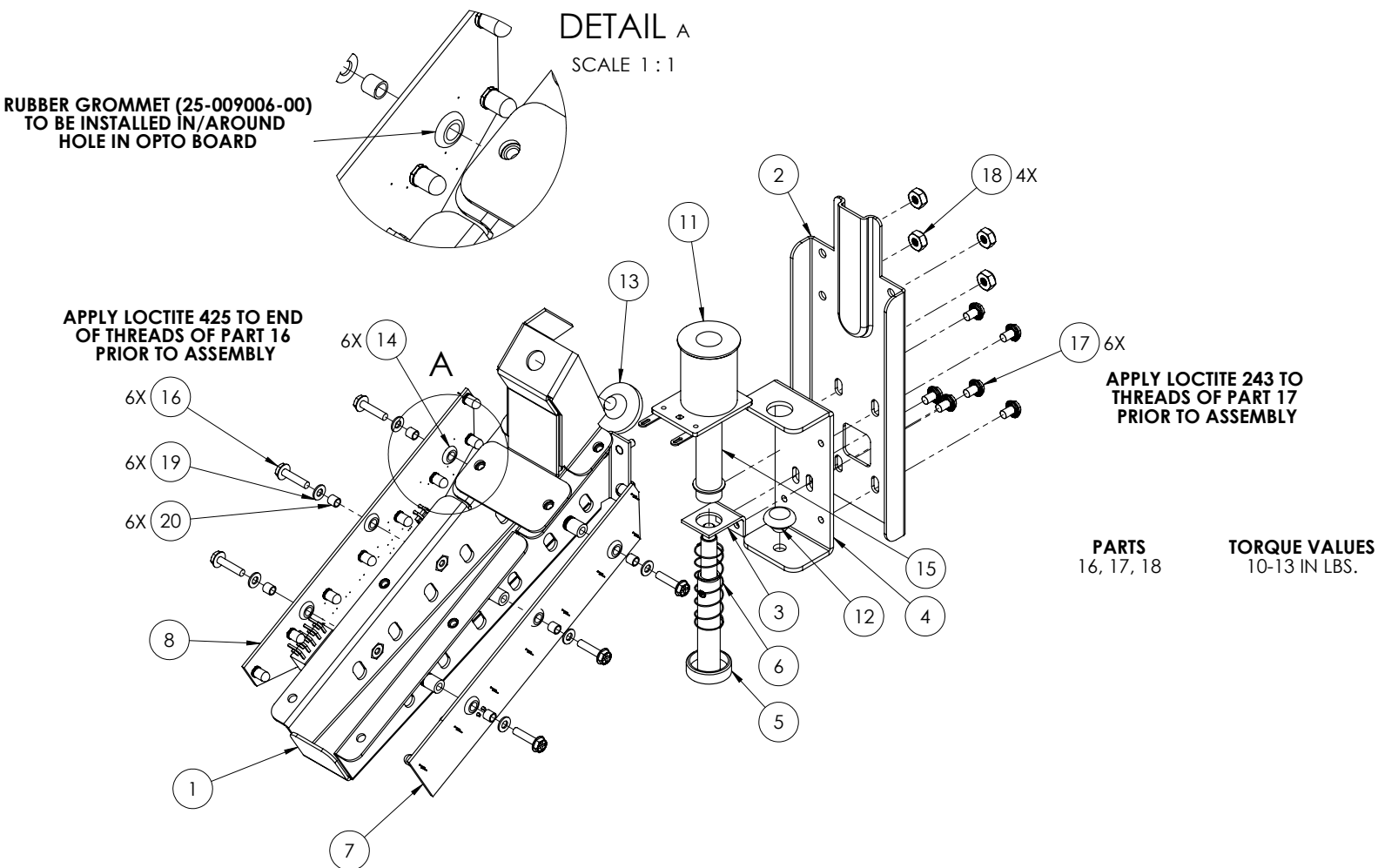
Item	Part Number	Description	Qty
1	10-005002-00	FLIPPER BASE PLATE- LEFT	1
2	10-000018-00	END OF STROKE SWITCH BRKT	1
3	10-007001-00	FLIPPER COIL STOP BRKT	1
4	30-009002-00	FLIPPER BUSHING	1
5	51-005018-01	FLIPPER CRANK & LINK ASSY, LEFT	1
6	18-000001-00	END OF STROKE LEAF SWITCH	1
7	13-007001-00	FLIPPER RETURN SPRING	1
8	90-004010-06	10-32 x 3/8" SH CS	2
9	92-001010-00	#10 SPLIT LOCK WASHER	2
10	80-000008-05	8-32 x 5/16" PPH MS	2
11	91-000006-00	6-32 NYLON STOP NUT	3
12	80-000006-06	6-32 x 3/8" PPH MS	3
13	80-001006-04	6-32 x 1/4"PPH MS SEMS	2
14	23-002002-00	FL-11629 FLIPPER COIL	1
15	30-000014-35	2-3/16" COIL TUBING, STRAIGHT	1
16	25-009001-00	RUBBER BUMPER PLUG, BLACK	1
17	10-007002-01	FLIPPER COIL CEN BRKT, 1 WAY	1
18	82-000006-08	#6 x 1/2" PPH SMS	2
19	91-006000-00	TINNERMAN NUT, LEAF SW STACK	1





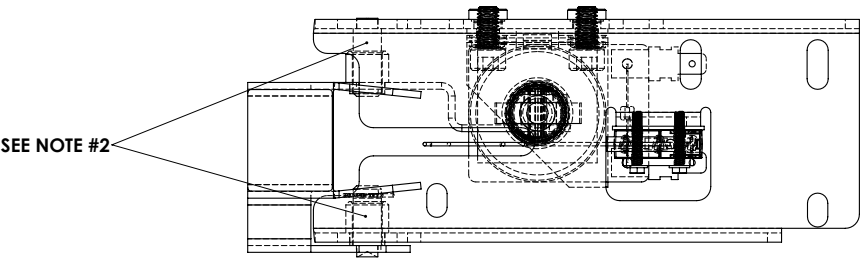
## ASSY, 3-BALL LOCK TROUGH 51-100244-00

Item	Part Number	Description	Qty
1	10-007004-00	Coil Centering Brkt, 5/8", 8-32 Stud	1
2	10-100297-00	3-Ball Lock Trough Brkt	1
3	10-100395-00	Brkt, Opto Mnt, 3-Ball Lock	2
4	11-005001-00	Bell Armature Assy	1
5	13-007002-00	Pop Bumper Spring	1
6	18-007025-24	Opto Pair Assy, OPB100-EZ/SZ 24"	3
7	19-100150-00	Coil Pigtail, 2-Lug, 4"	1
8	23-000003-00	23-800 Standard Coil	1
9	25-009001-00	Rubber Bumper Plug, Black	1
10	30-000014-30-1	1-7/8" Coil Tubing, Flanged	1
11	30-000051-08	8" Wire Tie, Natural	2
12	30-100122-25	Opto Retainer Brkt, 3-Ball	2
13	80-001004-04	4-40 x 1/4 PPH MS, SEMS, Zinc	4
14	80-001004-06	4-40 x 3/8 PPH MS, SEMS, Zinc	4
15	91-000008-00	8-32 Nylon Stop Nut, Thin	2
16	94-005104-06	#4 x 3/16" Round Spacer, 3/16" OD Nylon	4

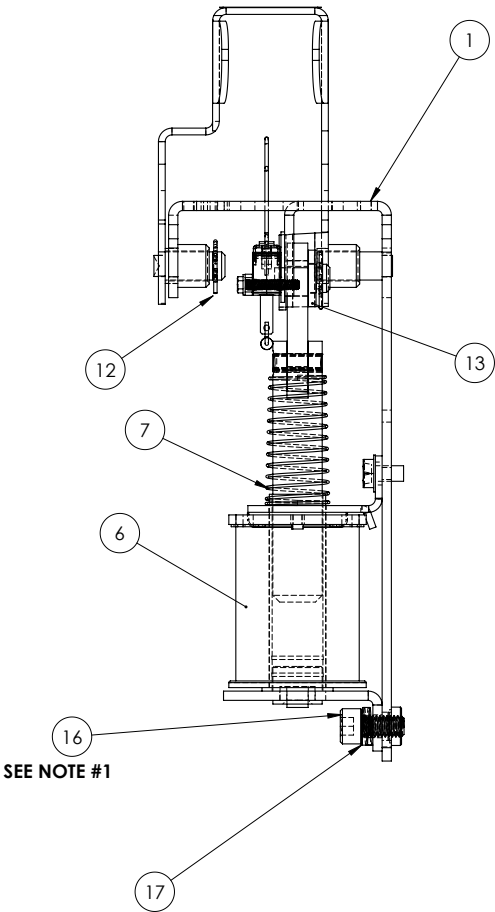
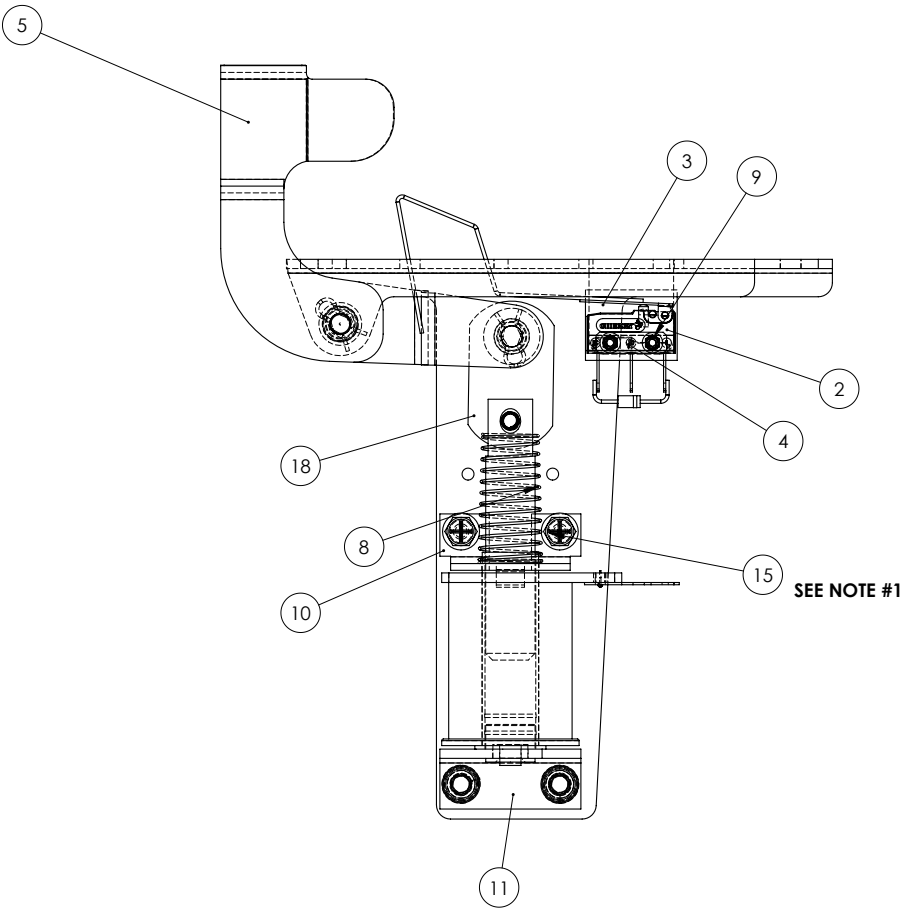


**6 - BALL TROUGH ASSY**  
**51-100311-00**

Item	Part Number	Description	Qty
1	10-005010-00	Main Bracket	1
2	10-005010-01	Coil Bracket	1
3	10-007000-00	Coil Retaining Bracket	1
4	10-007006-00	Coil Mounting Brkt	1
5	11-005012-00	Plunger Assy.	1
6	13-007005-00	Spring	1
7	15-100002-00	Transmitter Board	1
8	15-100004-00	Reciever Board	1
9	19-009019-00	Power Cable (Not Shown)	1
10	19-100150-00	Coil Pigtail, 2-Lug, 4"	1
11	23-000010-00	26-1200 Standard Coil	1
12	25-009001-00	Bumper Plug, Black	1
13	25-009001-01	Bumper Plug, Blue	1
14	25-009006-00	Rubber Grommet	6
15	30-000014-30-1	1 7/8" Coil Sleeve	1
16	80-002006-10	#6 x 5/8" HWH SMS	6
17	80-002008-04	#8-32 x 1/4" HWH Phillips Serr	6
18	91-000008-00	8-32 Nylon Stop Nut	4
19	92-000006-00	#6 Flat Washer	6
20	94-003002-00	Bushing	6



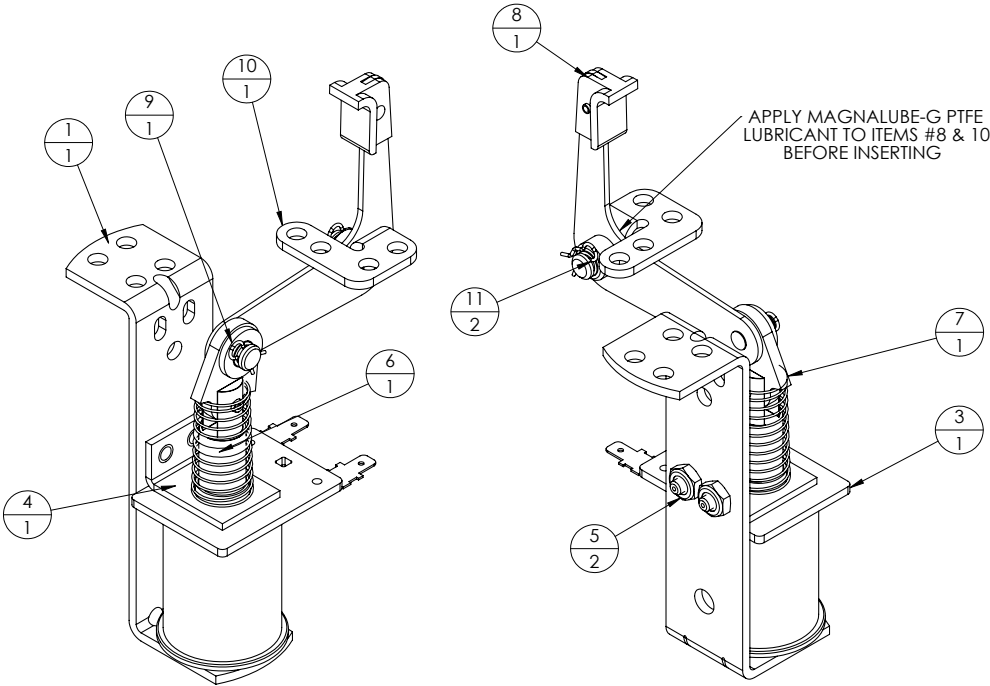
AUTO-LAUNCH ASSY  
51-000026-00



Item	Part Number	Description	Qty
1	10-005009-00	Coil Bracket	1
2	18-003001-00	Microswitch	1
3	70-009002-00	Fish Paper	1
4	10-000024-01	Protector Plate	1
5	10-000028-00	Crank Bracket	1
6	23-000003-00	23-800 Coil	1
7	30-000014-28	1 3/4" Coil Sleeve	1
8	13-007004-00	Spring	1
9	80-002102-08	2-56 x 1/2" MS	2
10	10-007009-00	Centering Bracket	1
11	10-007005-00	Coil Stop	1
12	13-009002-00	Hairpin Clip	2
13	95-002651-20-67	Flat Washer	1
14	62-000002-00	Decal	1
15	80-002006-04	6-32 x 1/4" MS	2
16	90-004010-06	10-32 x 3/8" CS	2
17	92-001010-00	#10 Split Lock Washer	2
18	11-005000-00	Plunger, Link Assy.	1

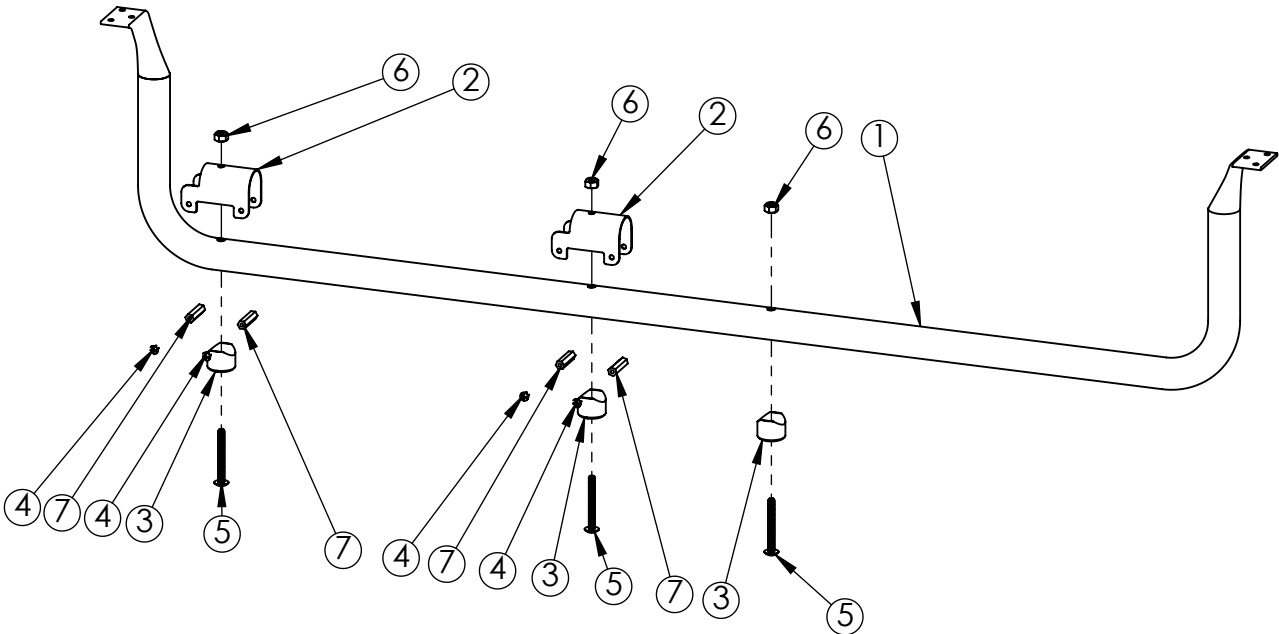
NOTES:  
1: APPLY LOCTITE #243 ON FIRST 1/8" LENGTH OF SCREWS THREADS ON ITEMS SHOWN.  
2: APPLY MAGNALUBE TO PIVOT PINS OF ITEM PRIOR TO ASSEMBLING.

SLINGSHOT ASSY  
51-000003-00



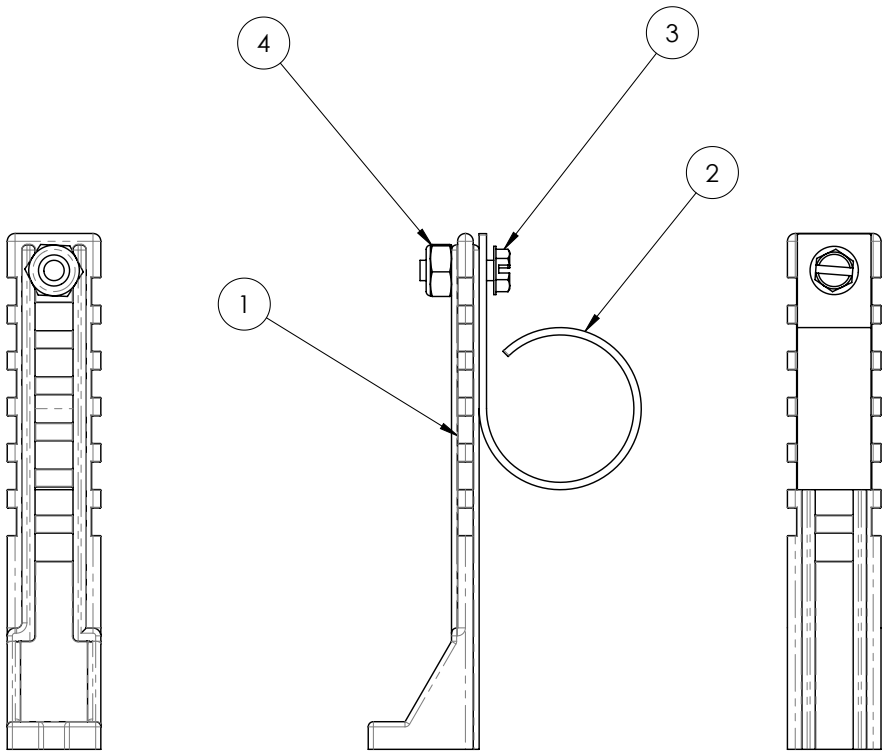
Item	Part Number	Description	Qty
1	10-005004-00	Coil Bracket	1
2	30-000014-28	2 1/16" Coil Sleeve	1
3	23-000003-00	23-800 Coil	1
4	10-007000-01	Centering Bracket	1
5	91-000006-00	6-32 Nylon Stop Nut	2
6	13-007004-00	Spring	1
7	11-005003-00	Plunger, Link Assy.	1
8	10-000042-00	Crank Assy.	1
9	95-002651-20-67	Flat Washer	1
10	10-000043-00	Crank Mounting Brkt	1
11	13-009002-00	Hairpin Clip	2

PLAYFIELD SUPPORT ASSY.  
51-100001-00



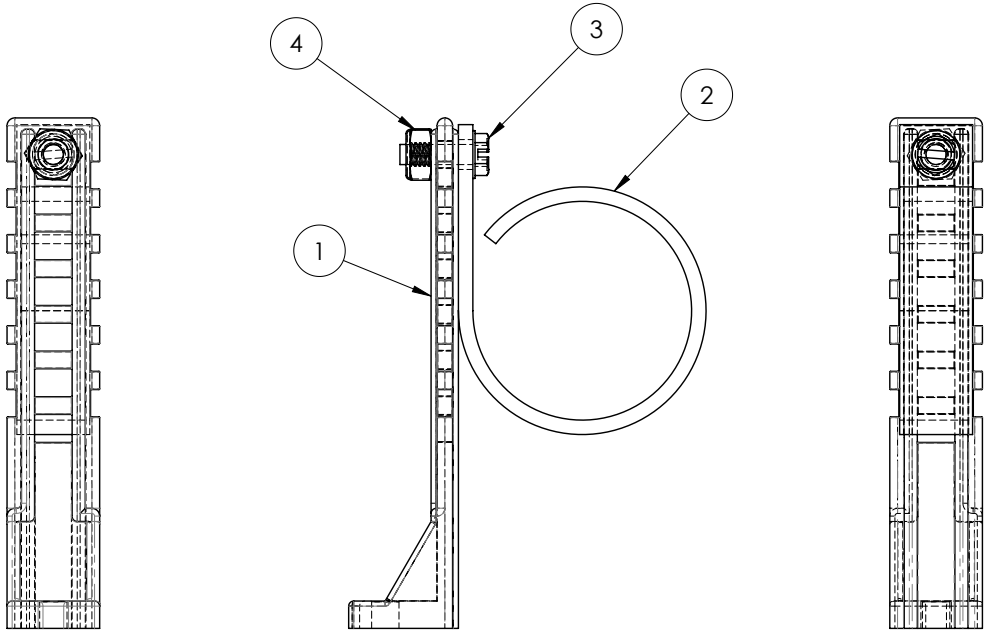
Item	Part Number	Description	Qty
1	10-000093-00	Support Tube	1
2	10-000280-00	Foot Bracket	2
3	25-009008-00	Rubber Spacers	1
4	80-000006-04	6-32 x 5/16" MS	8
5	80-007010-28	10-24 x 1 3/4" MS	3
6	91-000011-00	#10-24 Nylon Stop Nut	3
7	94-001406-16	#6-32 Female Hex Spacer	4

ASSY LADDER AND CLAMP 1.00 DIA  
51-100212-16



Item	Part Number	Description	Qty
1	30-000033-01	Nylon Cable Ladder, 3.5"	1
2	30-000049-16	Nylon Cable Clamp, Open 1"	1
3	80-002008-08	8-32 x 1/2" HWH Phillips MS, Serr	1
4	91-000008-00	8-32 Nylon Stop Nut Thin	1

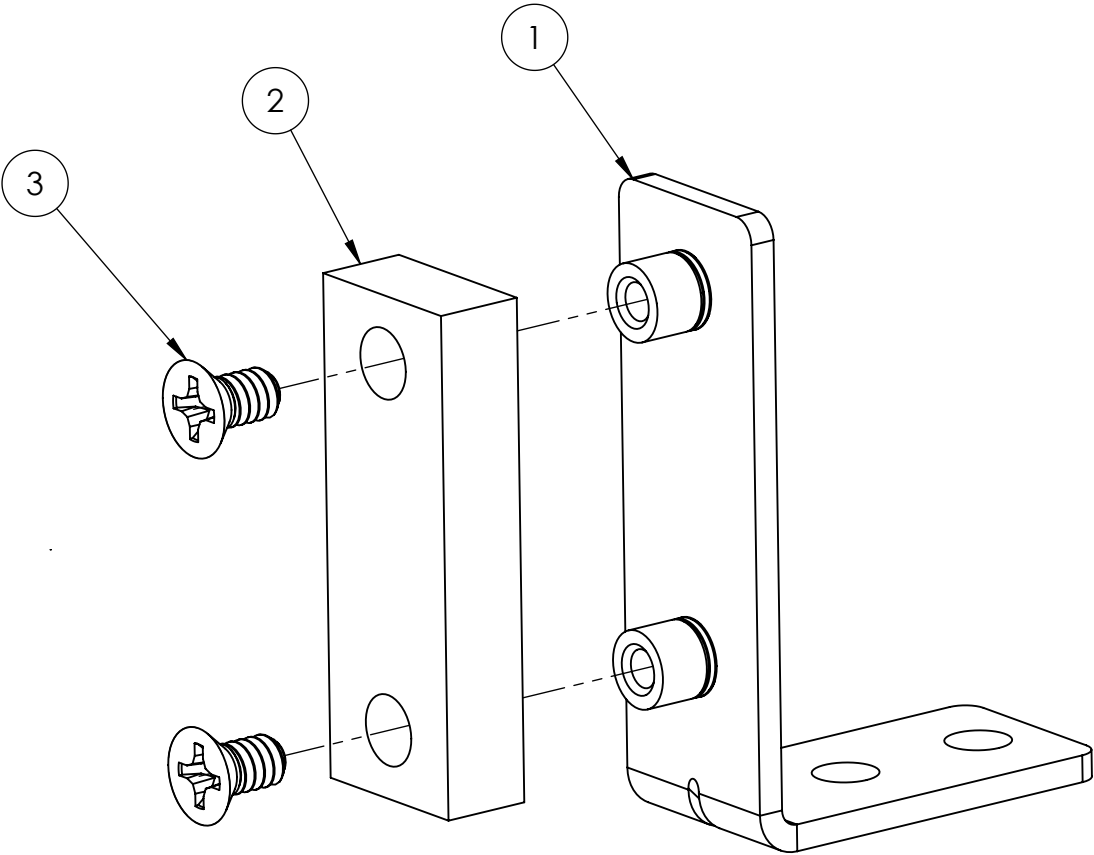
ASSY LADDER AND CLAMP 1.50 DIA  
51-100212-24



Item	Part Number	Description	Qty
1	30-000033-01	Nylon Cable Ladder, 3.5"	1
2	30-000049-24	Nylon Cable Clamp, Open 1-1/2"	1
3	80-002008-08	8-32 x 1/2" HWH Phillips MS, Serr	1
4	91-000008-00	8-32 Nylon Stop Nut Thin	1

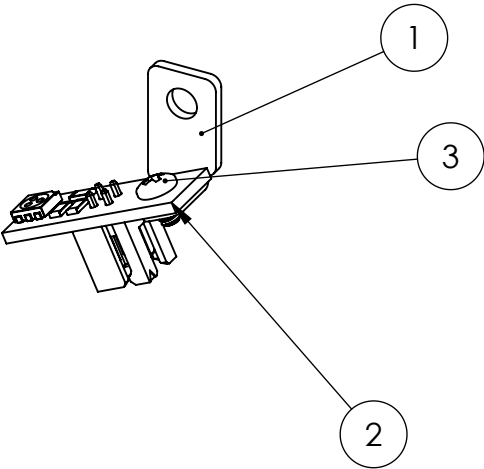


**ASSY, DEAD STOP BRACKET**  
**51-100236-00**



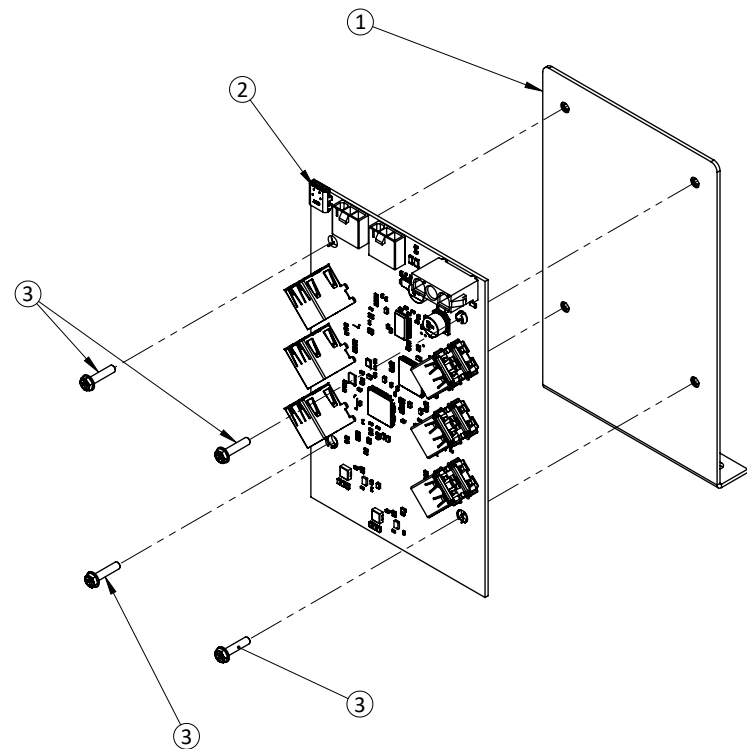
Item	Part Number	Description	Qty
1	10-100294-00	Bracket, Dead Stop	1
2	25-100013-00	Snubber Block, .25" Thick, Rectangle	1
3	80-006006-04U	6-32 x 1/4 PFH MS, 82 Deg CA, Zinc	2

**ASSY, LED GI, 65 DEG**  
**51-100246-00**



Item	Part Number	Description	Qty
1	10-100299-00	Brkt, LEG GI Mount, 65 Deg	1
2	15-100008-00	RGB GI 5050 TLED	1
3	80-000004-03	#4-40 x 3/16"L PPH MS	1

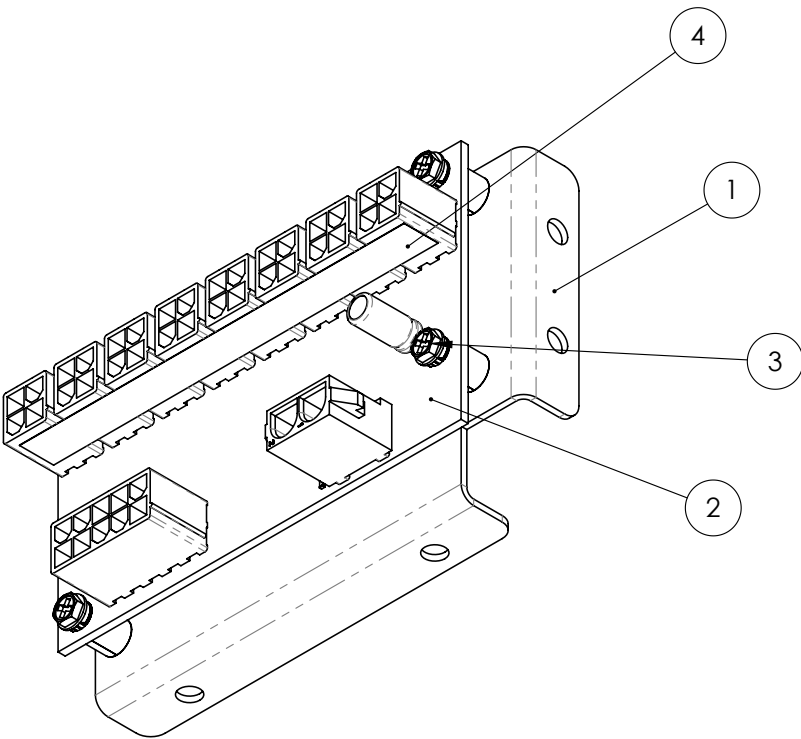
PLAYFIELD CONTROLLER BOARD ASSY  
51-000103-07



TIGHTEN THREADS TO 10 IN/LBS  
APPLY LOCTITE 243 TO THREADS

Item	Part Number	Description	Qty
1	10-005035-00	LED Controller Mounting Bracket	1
2	15-100055-00	PF USB Controller Board	1
3	80-002104-08	4-40 x 1/2" HWH Phillips MS, Blk	4

OPTO BOARD ASSY  
52-100008-00



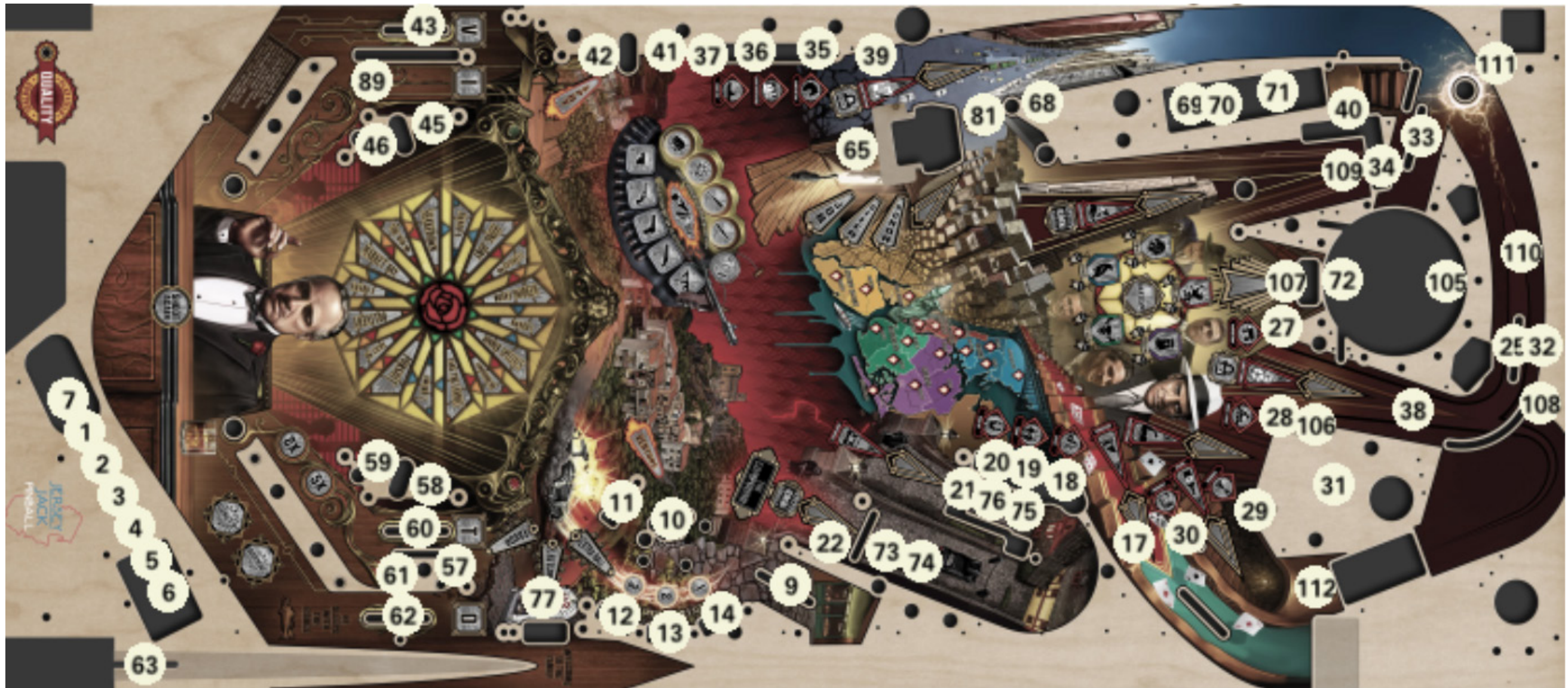
Item	Part Number	Description	Qty
1	10-005020-00	Mounting Bracket	1
2	15-100005-00	OPTO Board	1
3	80-002104-08	4-40 x 1/2" MS	4
4	62-100030-00	Decal, Opto Connection Color Code	1



# Reference Diagrams & Schematics



# PLAYFIELD SWITCHES



# PLAYFIELD SWITCHES

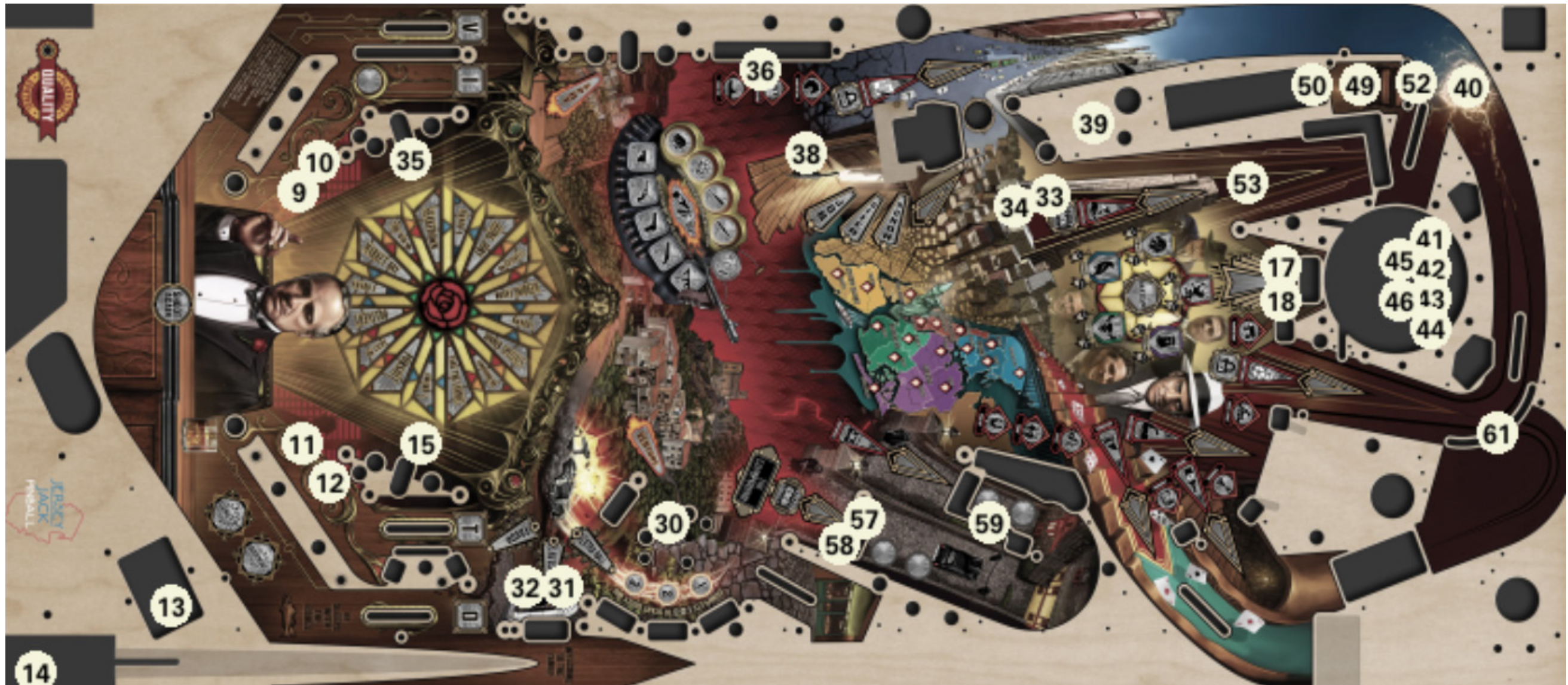
#001 6-Ball Trough #5  
#002 6-Ball Trough #4  
#003 6-Ball Trough #3  
#004 6-Ball Trough #2  
#005 6-Ball Trough #1 (right)  
#006 6-Ball Trough jam  
#007 6-Ball Trough #6 (left)  
#009 Bumper Skill Lane  
#010 Jet Bumper  
#011 Jet Bumper Target  
#012 Bumper Target #3 (Lo)  
#013 Bumper Target #2  
#014 Bumper Target #1 (Hi)  
#017 Upper Loop Ramp Enter  
#018 Right 3-Bank #1 (Hi)  
#019 Right 3-Bank #2  
#020 Right 3-Bank #3 (Lo)  
#021 U-Turn Target  
#022 U-Turn Entry Wall Up  
#025 Right Orbit Hi  
#027 Upper Single Target #1 (Left)  
#028 Upper Single Target #2  
#029 Upper Single Target #3

#030 Upper Single Target #4 (Right)  
#031 Right Ramp Enter  
#032 Upper Loop Ramp Made  
#033 Disc Enter Rear  
#034 Lift Ramp Target  
#035 Left 3-Bank #1 (Hi)  
#036 Left 3-Bank #2  
#037 Left 3-Bank #3 (Lo)  
#038 Right Ramp Return  
#039 Left Ramp Return  
#040 Lift Ramp Up  
#041 Upper Left Slingshot Hi  
#042 Upper Left Slingshot Lo  
#043 Left outlane  
#045 Left Slingshot Hi  
#046 Left Slingshot Lo  
#057 Right Inlane Target Hi  
#058 Right Slingshot Hi  
#059 Right Slingshot Lo  
#060 Right Inlane  
#061 Right Inlane Target Lo  
#062 Right Outlane  
#063 Autolaunch

#065 Scoop  
#068 Left Orbit Spinner  
#069 Lockup Trough 1 (Bottom)  
#070 Lockup Trough 2  
#071 Lockup Trough 3 (Top)  
#072 Disc Enter Front  
#073 U-Turn Right Sensor Lo  
#074 U-Turn Right Sensor Hi  
#075 U-Turn Left Sensor Hi  
#076 U-Turn Left Sensor Lo  
#077 Right Drop Target  
#081 Under Flipper Sensor  
#089 Left Inlane Sensor  
#105 Bad Guy Home  
#106 Right Orbit Spinner  
#107 Bad Guy Drop Target  
#108 Subway Rear Entry  
#109 Left Ramp Enter  
#110 Left Ramp Made  
#111 Left Orbit Hi  
#112 Subway



# PLAYFIELD COILS

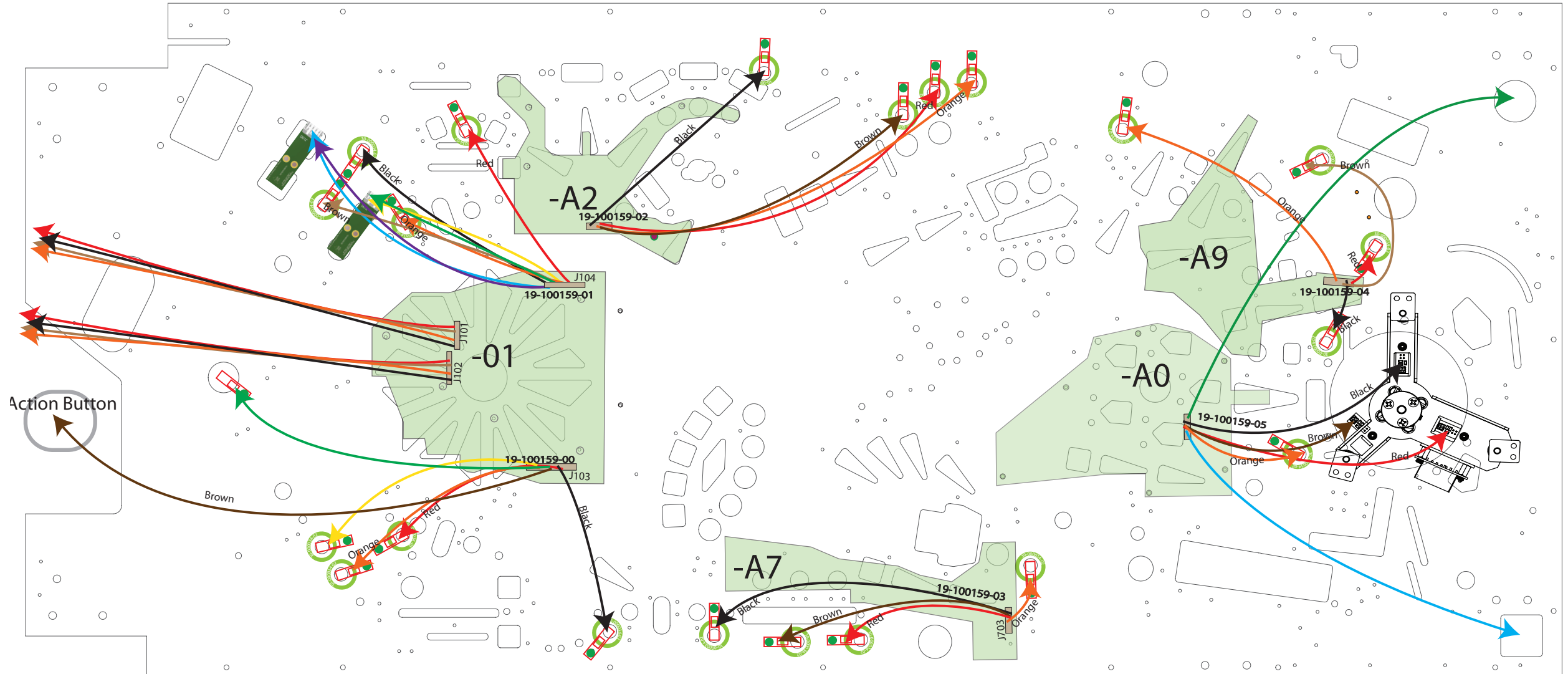


# PLAYFIELD COILS

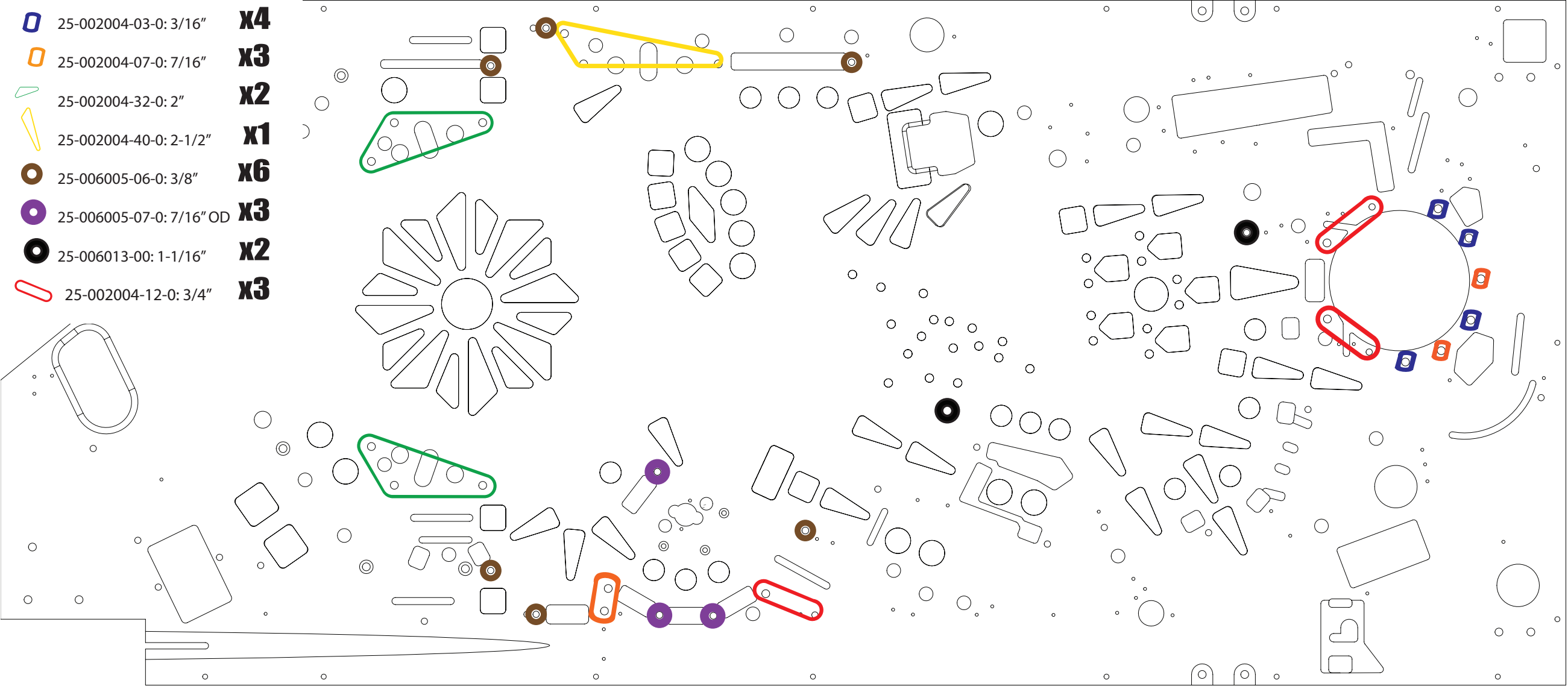
#007	Knocker 1	70v	#041	Bad Guy Stepper Pin 3 (C-Drive)	12v
#008	Knocker 2	70v	#042	Bad Guy Stepper Pin 1 (A-Drive)	12v
#009	Left Flipper Power	70v	#043	Bad Guy Stepper Pin 6 (D-Drive)	12v
#010	Left Flipper Hold	70v	#044	Bad Guy Stepper Pin 4 (B-Drive)	12v
#011	Right Flipper Power	70v	#045	Spinning Disk Motor	12v
#012	Right Flipper Hold	70v	#046	Spinning Disk Motor Relay	12v
#013	Trough VUK	70v	#049	Lift Ramp Up	20v
#014	Auto Launch	70v	#050	Lift Ramp Down	20v
#015	Right Slingshot	70v	#052	Lockup Diverter	20v
#017	Bad Guy Drop Target Up	70v	#053	Under-Ramp Post	20v
#018	Bad Guy Drop Target Down	70v	#057	U-turn Entry Up	20v
#030	Jet Bumper	70v	#058	U-turn Entry Down	20v
#031	Right Drop Target Up	70v	#059	U-turn Divider Down	20v
#032	Right Drop Target Down	70v			
#033	Upper Left Flipper Power	70v			
#034	Upper Left Flipper Hold	70v			
#035	Left Slingshot	70v			
#036	Upper Left Slingshot	70v			
#038	Scoop	70v			
#039	Lockup Trough	70v			
#040	Orbit Magnet	70v			



# PLAYFIELD GI CONNECTIONS



# PLAYFIELD SILICONE RINGS



# USB CABLE INFORMATION

**19-003100-01** - USB Cable, 2.0 A to Mini-B, M-M, Shielded, 1ft  
x1 - Backbox Mount PCB Base Assy

**19-003100-06** - USB Cable, 2.0 A to Mini-B, M-M, 6ft  
x1 - Topper, Godfather [CE GAME ONLY]

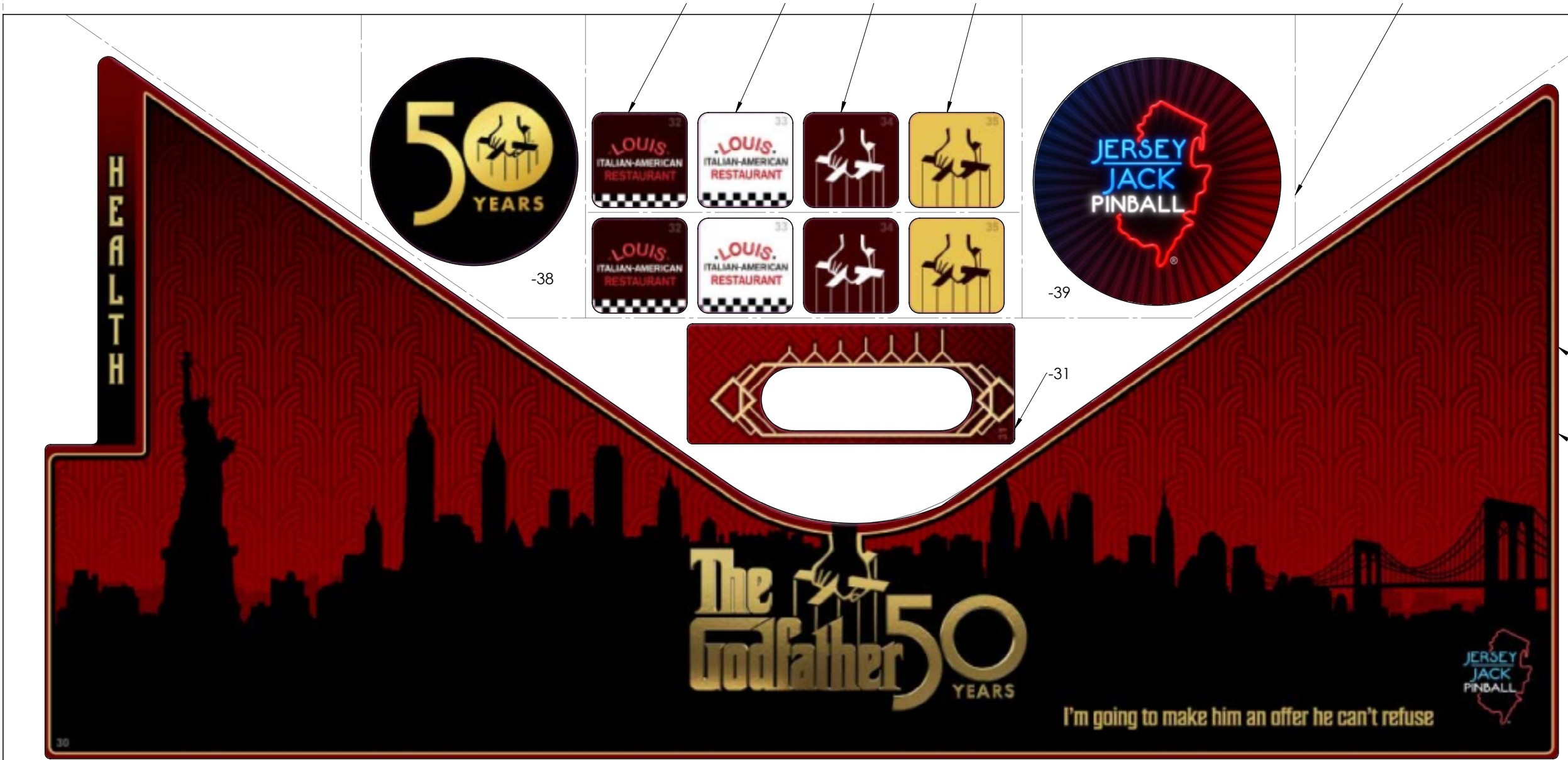
**19-003100-10** - USB Cable, 2.0 A to Mini-B, M-M, 10ft  
x1 - Lower Cabinet Assembly

**19-100170-01** - USB Cable, A to C, M-M, 1.5 ft  
x10 - Playfield Assembly, Bottom Side

**19-100170-10** - USB Cable, A to C, M-M, 10 ft  
x1 - Playfield Assembly, Bottom Side



62-100062-XX  
GODFATHER DECAL SHEET, LE





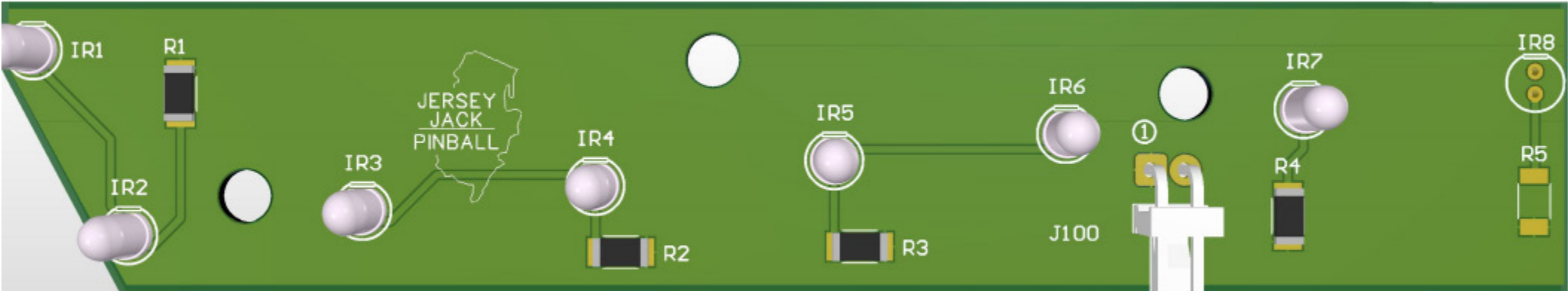
30-100113-XX  
ZEUS PRINTED  
PLASTICS SET, LE





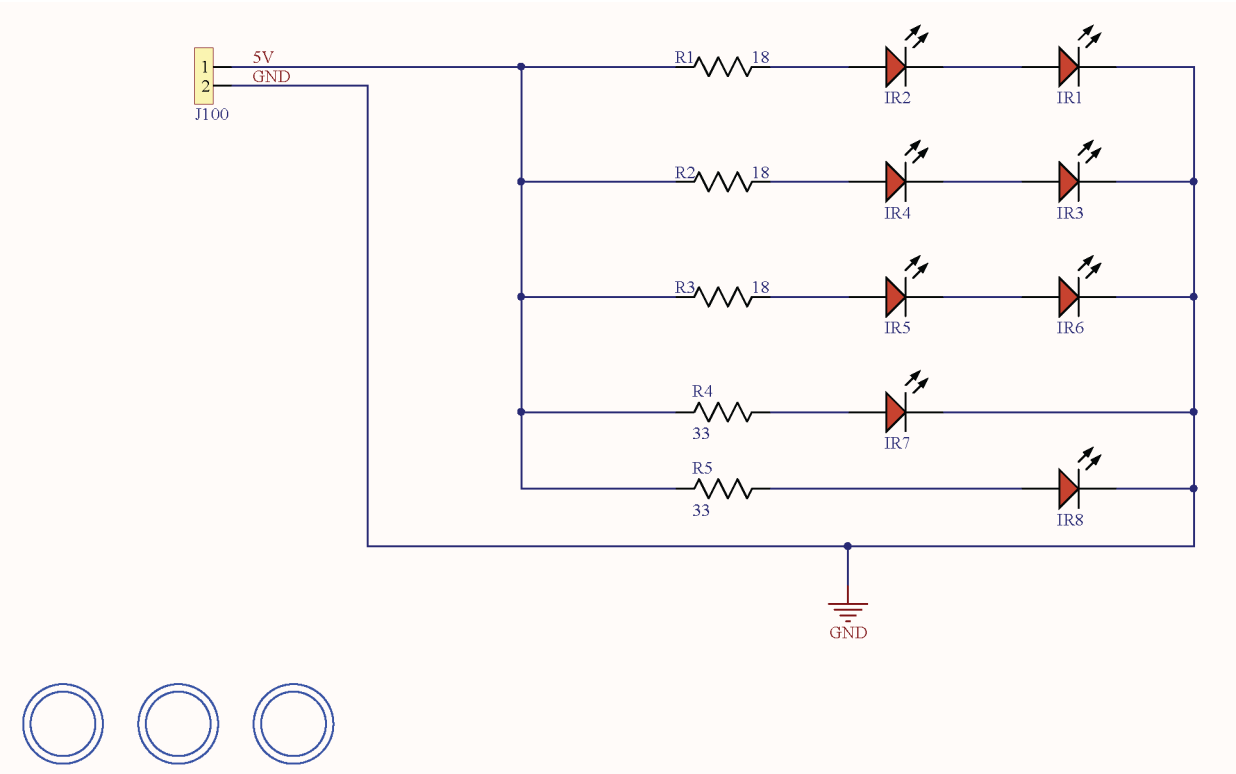


6-Ball Trough Opto Transmitter Board  
15-100002-00



J100 Power Input

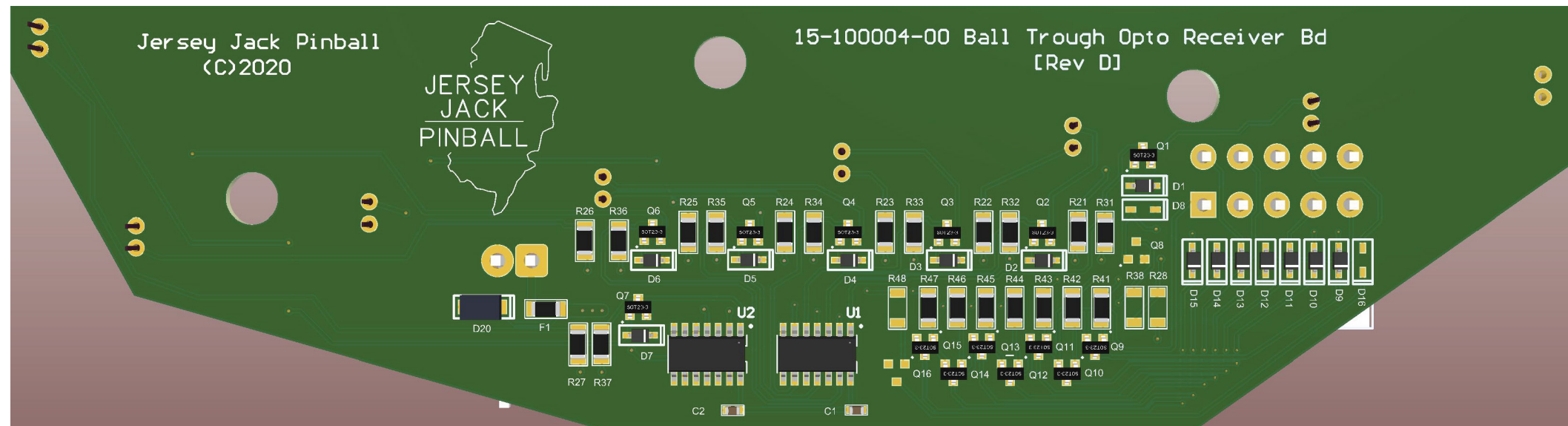
- Pin
- |   |       |                              |
|---|-------|------------------------------|
| 1 | Black | Ground from ATX Power Supply |
| 2 | Red   | +5VDC from ATX Power Supply  |





## 6-Ball Trough Opto Receiver Board

15-100004-00



### J1 Switch Inputs

Pin

1	Black / Green	Column 1 From I/O Board J201-1
2	White / Blue	Row 7 from I/O Board J200-7
3	White / Black	Row 1 from I/O Board J200-1
4	White / Brown	Row 2 from I/O Board J200-2
5	White / Red	Row 3 from I/O Board J200-3
6	White / Orange	Row 4 from I/O Board J200-4
7	White / Yellow	Row 5 from I/O Board J200-5
8	White / Green	Row 6 from I/O Board J200-6
9	White / Violet	Row 8 from I/O Board J200-8
10	Key	

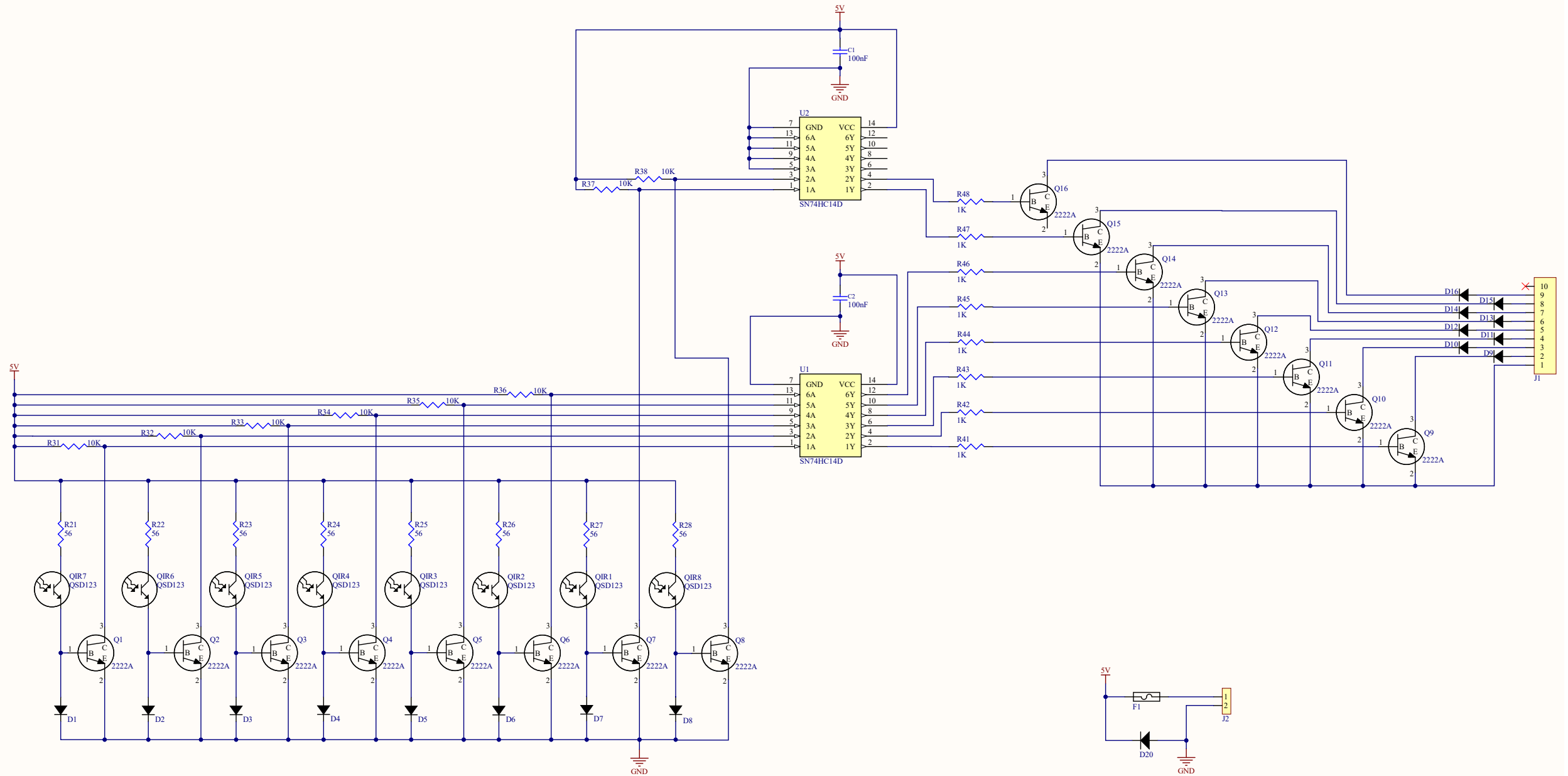
### J2 Power Input

Pin

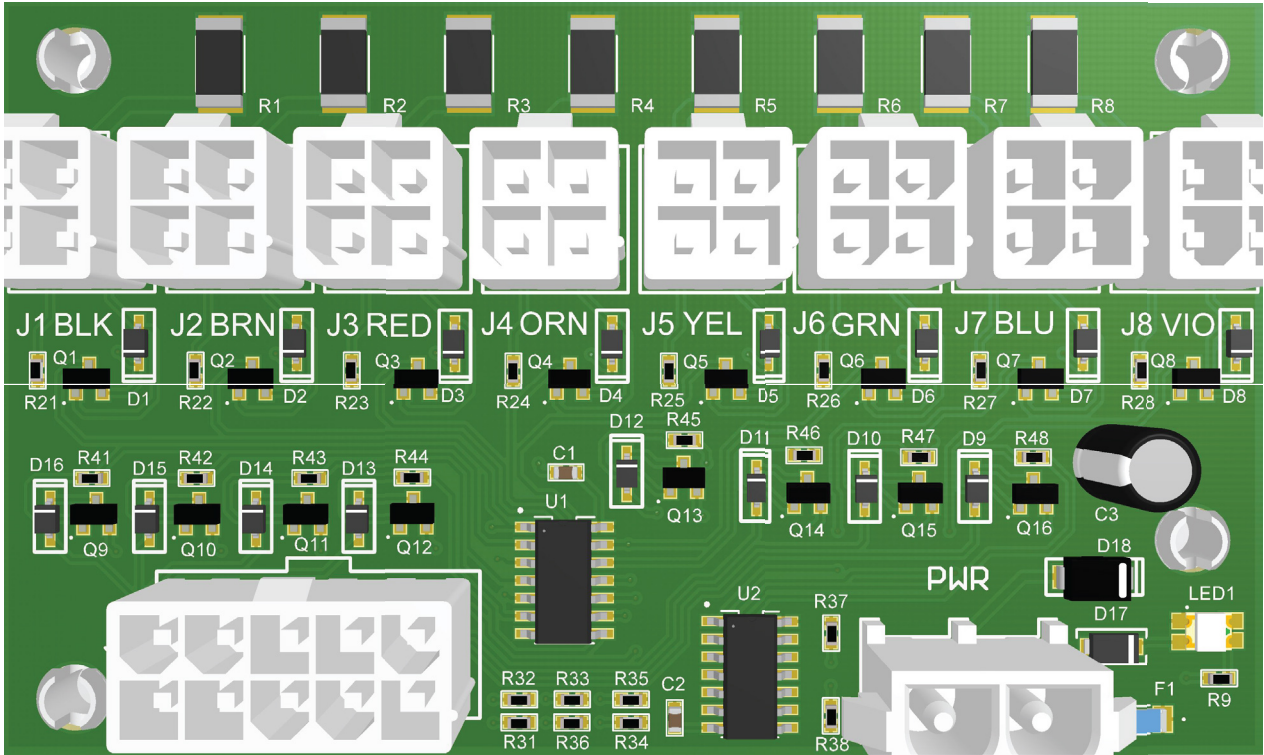
1	Black	Ground from ATX Power Supply
2	Red	+5VDC from ATX Power Supply

# 6-Ball Trough Opto Receiver Board

## 15-100004-00



Opto IO Board  
15-100005-00



J9 Switch Inputs

Pin	
1	Black / Green
2	White / Blue
3	White / Black
4	White / Brown
5	White / Red
6	White / Orange
7	White / Yellow
8	White / Green
9	White / Violet
10	Key

Column 1 From I/O Board J201-1
Row 7 from I/O Board J200-7
Row 1 from I/O Board J200-1
Row 2 from I/O Board J200-2
Row 3 from I/O Board J200-3
Row 4 from I/O Board J200-4
Row 5 from I/O Board J200-5
Row 6 from I/O Board J200-6
Row 8 from I/O Board J200-7

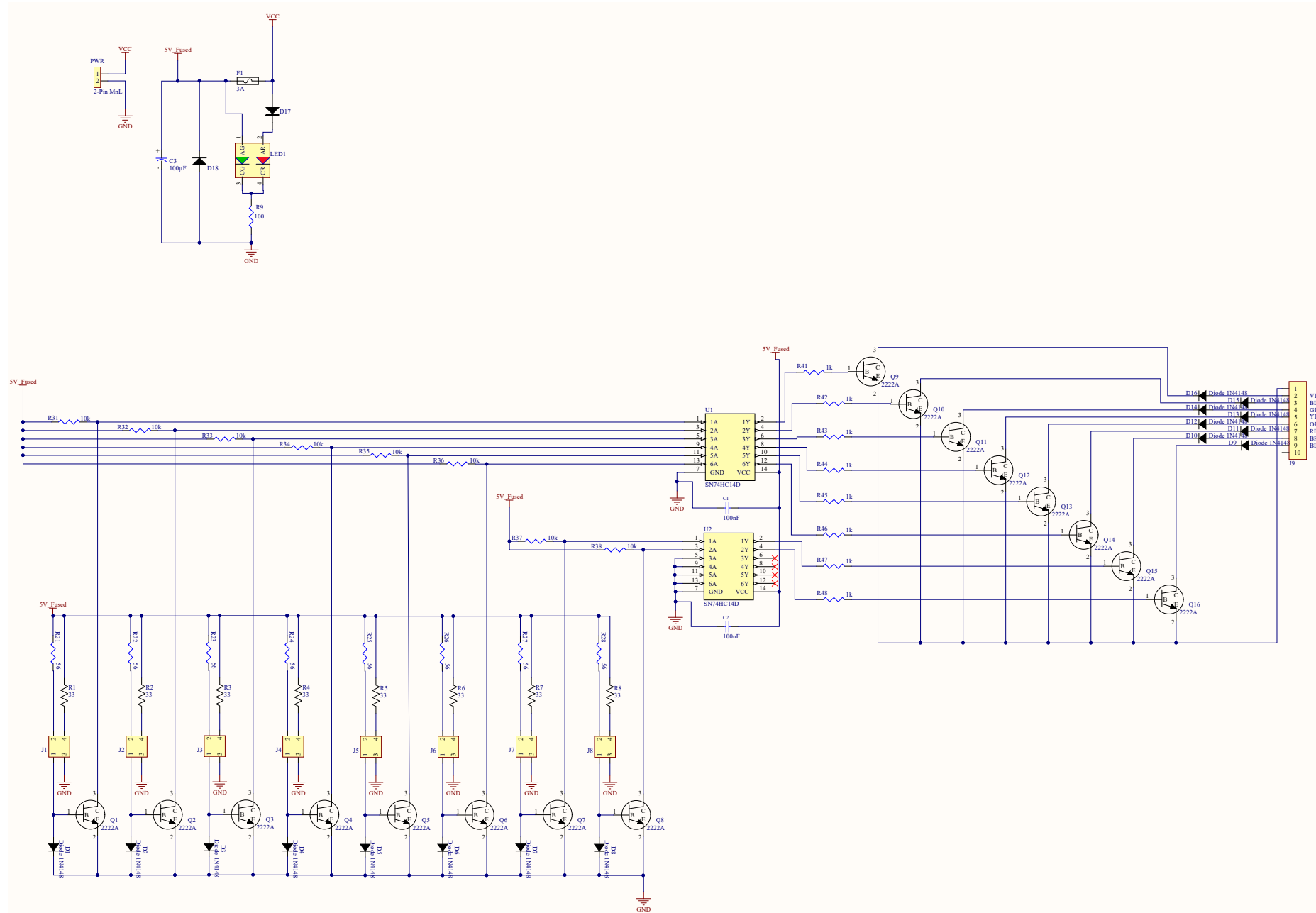
J1 - J8 OPTO Inputs

Pin	
1	5 VDC
2	5 VDC
3	Ground
4	Input

Power Input

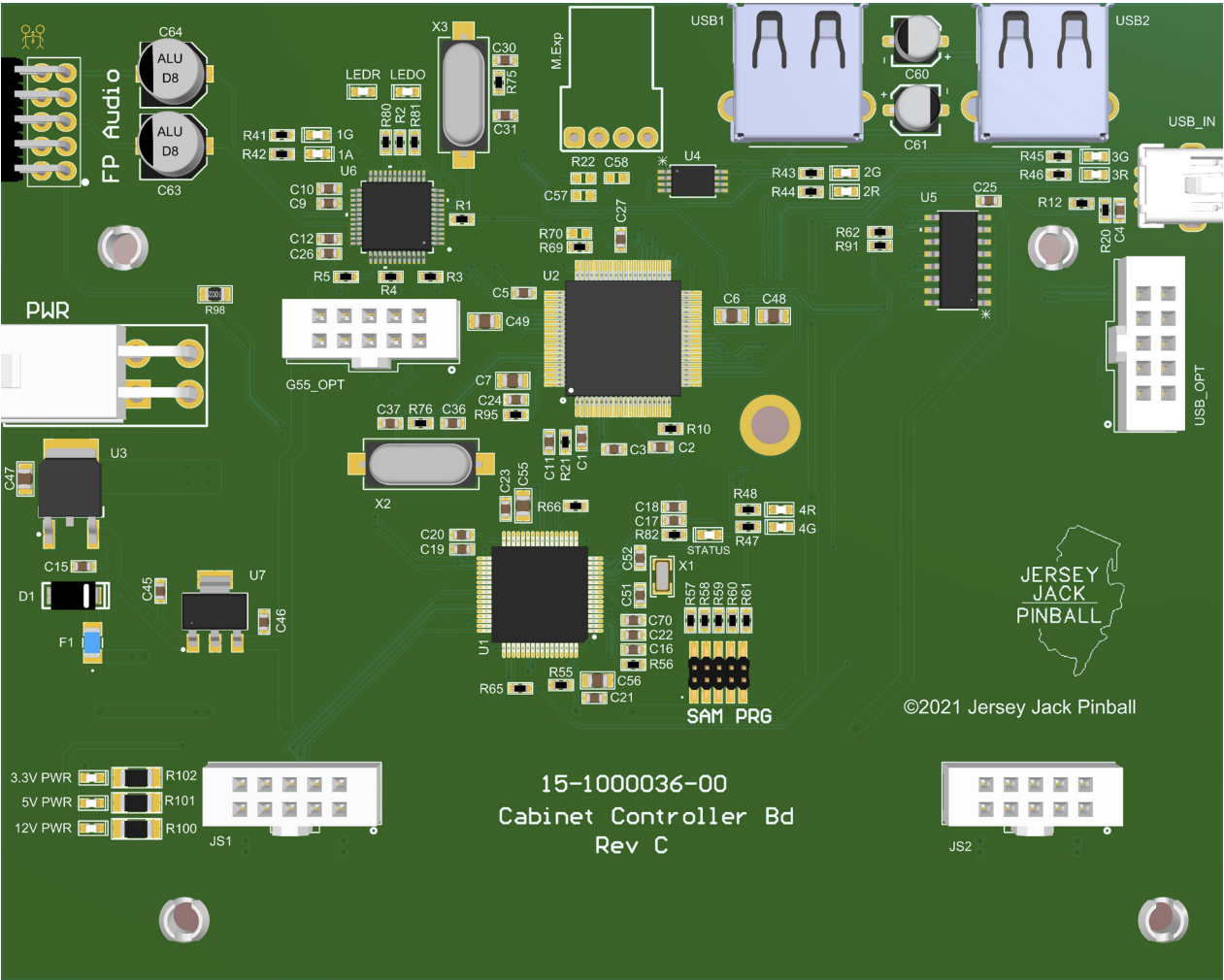
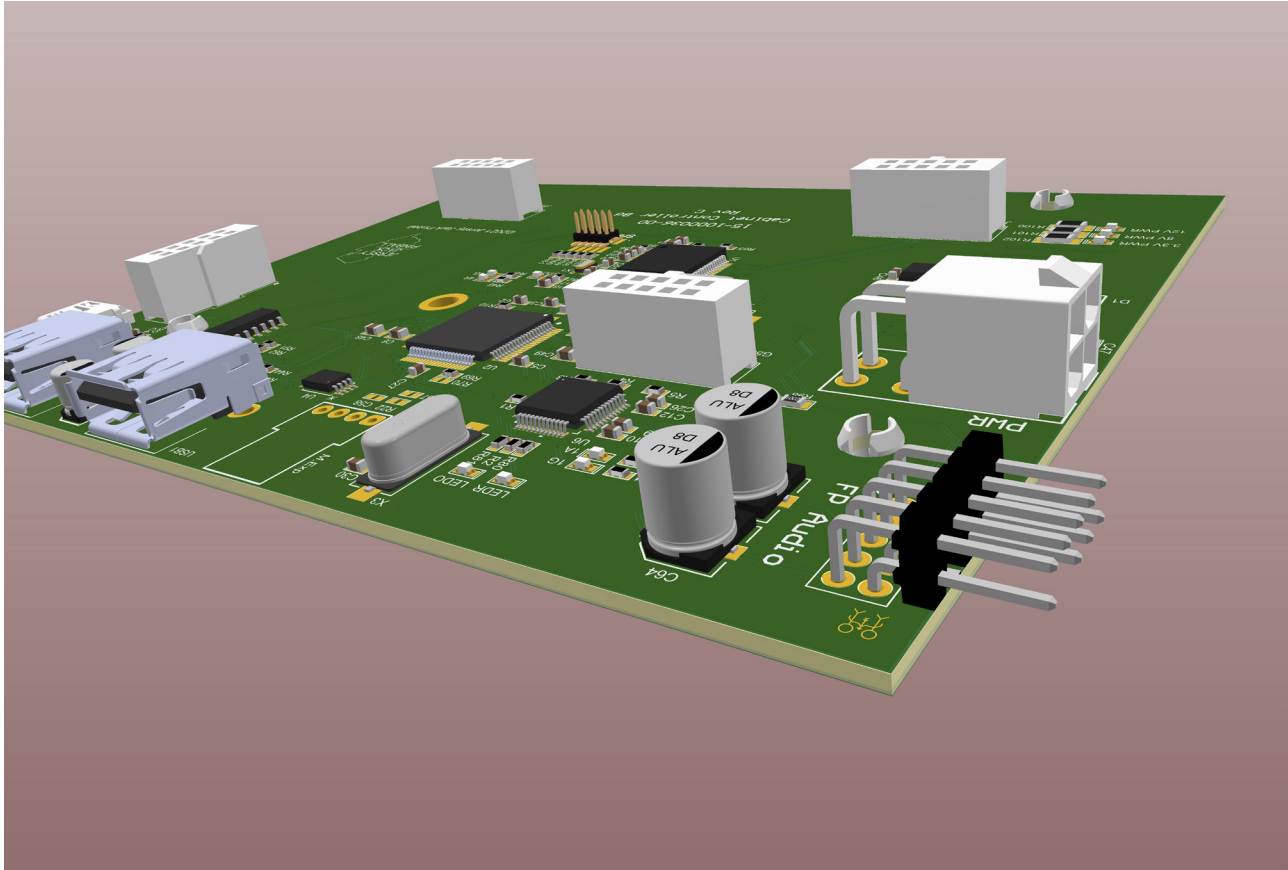
Pin	
1	Red +5VDC from ATX Power Supply
2	Black Ground from ATX Power Supply

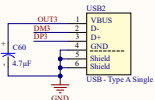
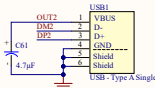
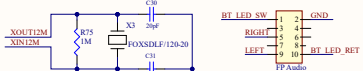
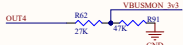
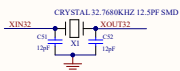
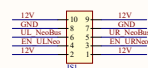
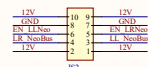
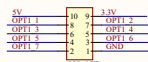
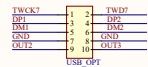
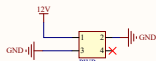
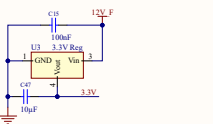
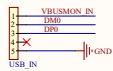
**Opto IO Board**  
**15-100005-00**



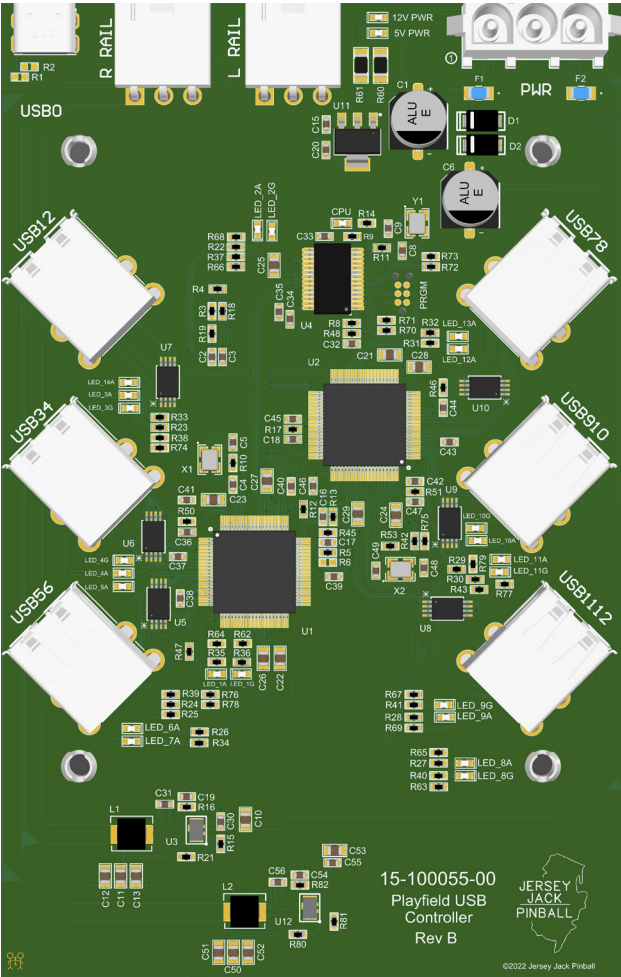
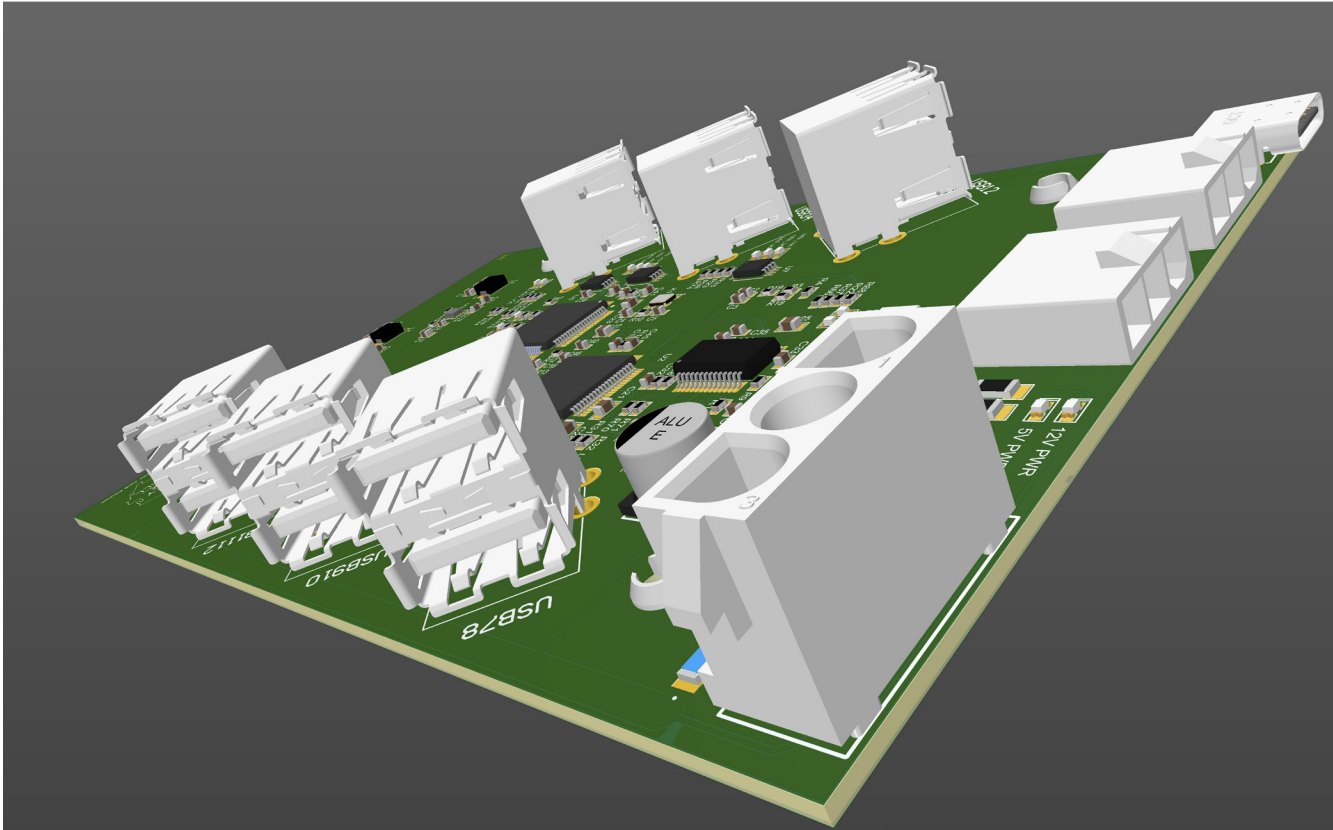


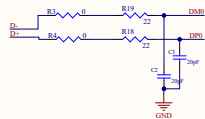
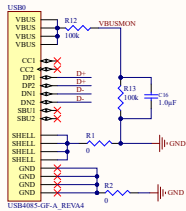
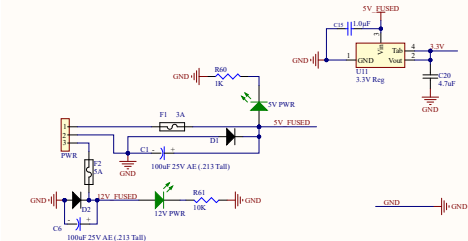
Cabinet Controller Bd  
15-100036-00



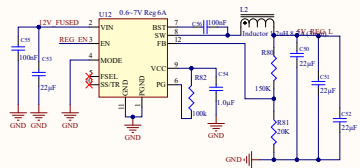


Playfield USB Controller Bd  
15-100055-00

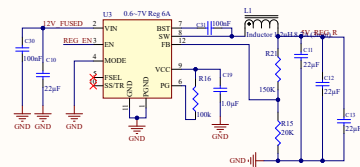




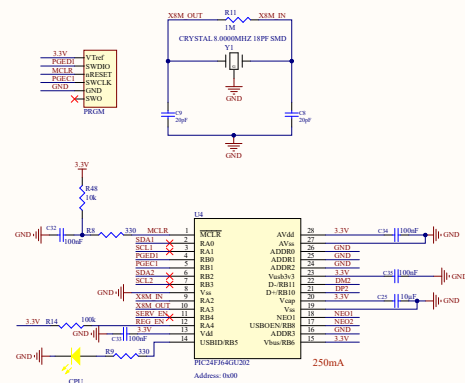
## 12V -> 5V REG 6A



## 12V -> 5V REG 6A



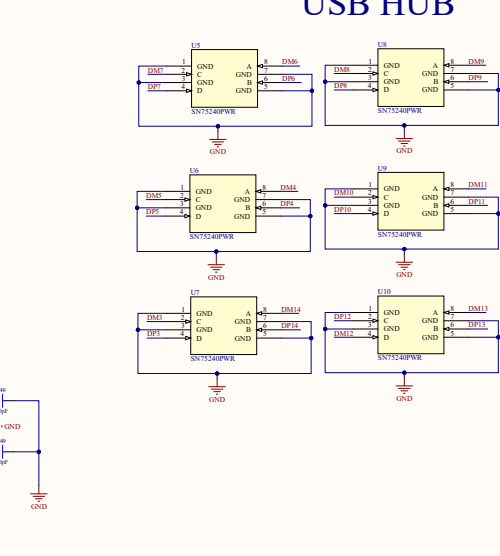
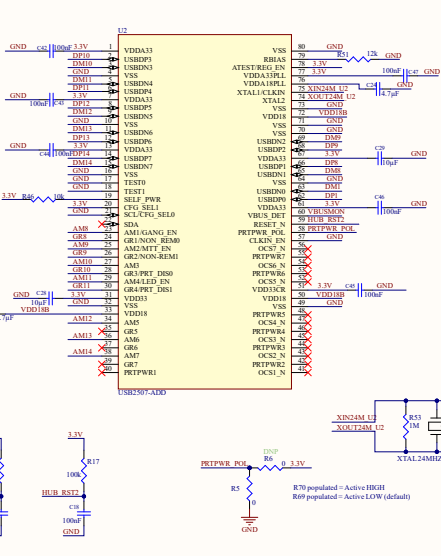
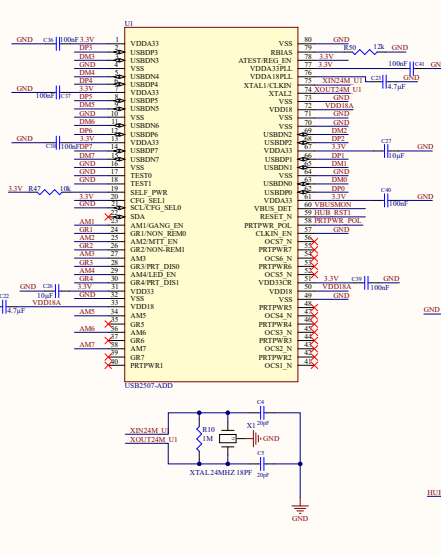
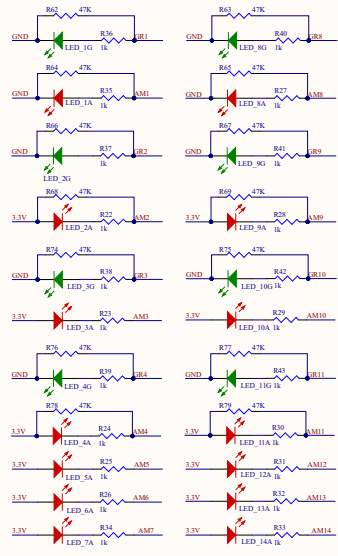
## NODE 0



## NEO

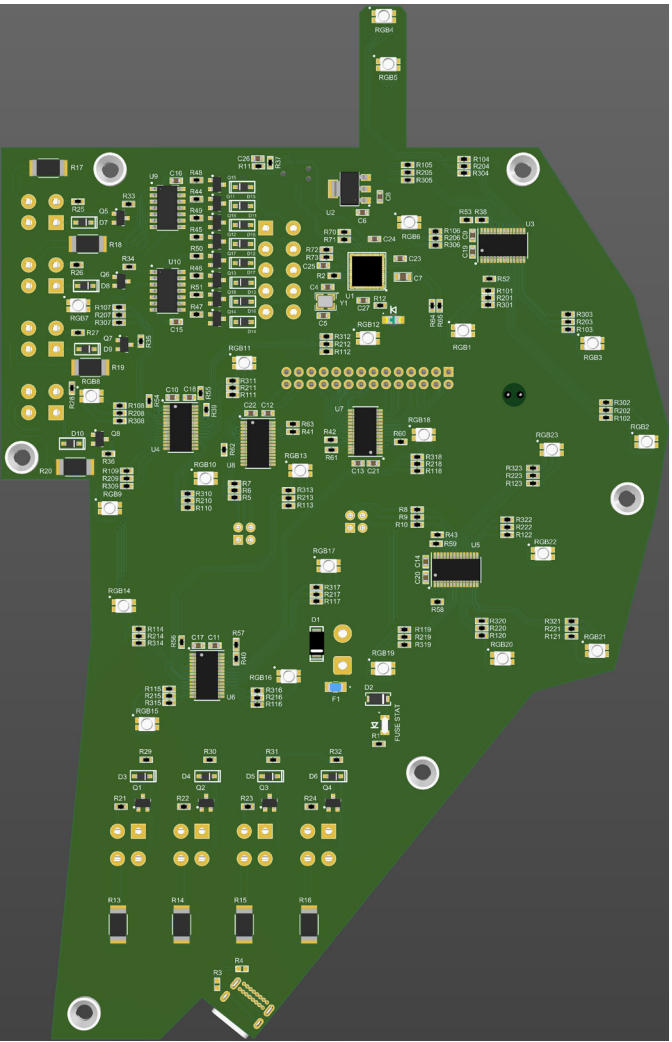
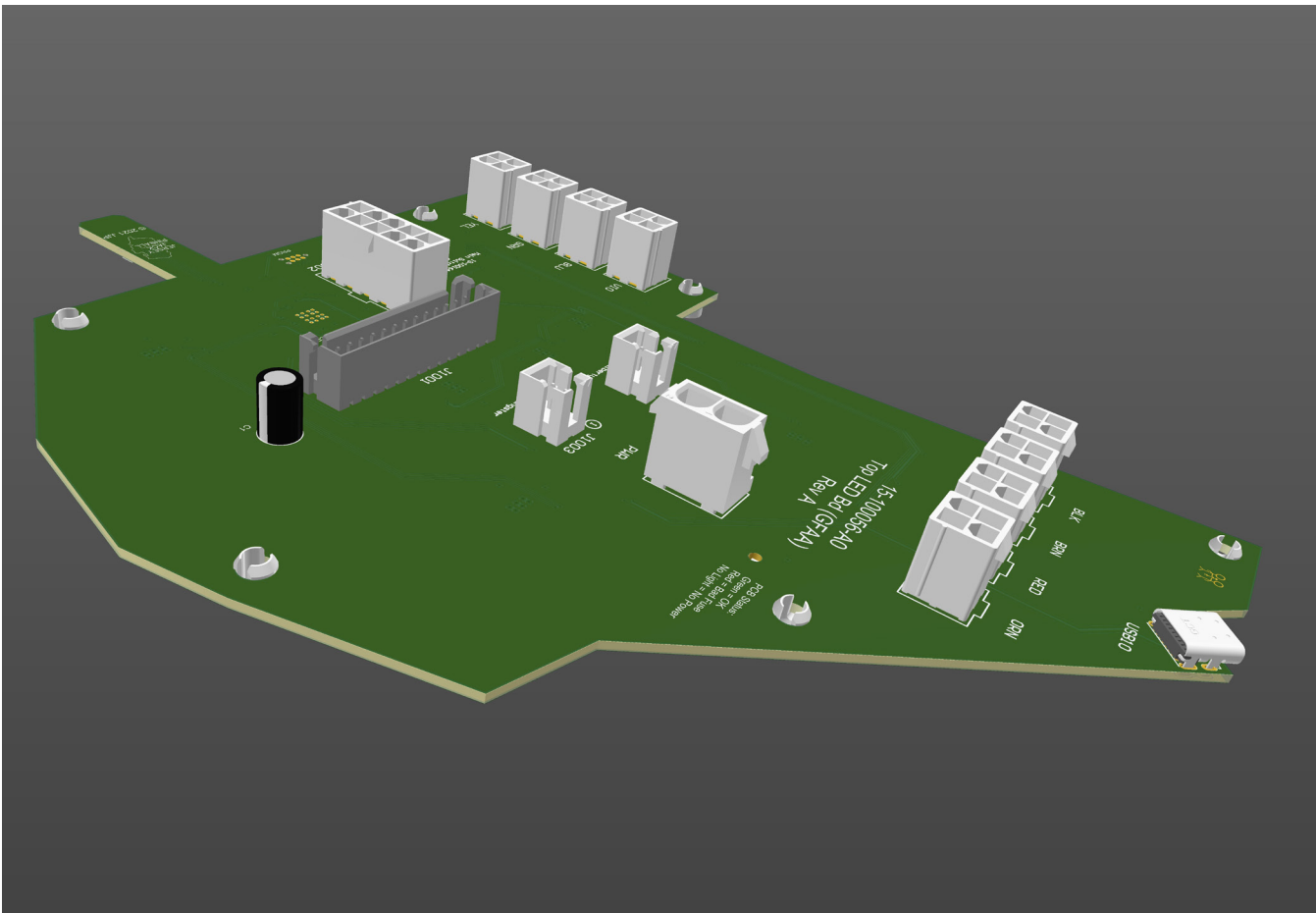


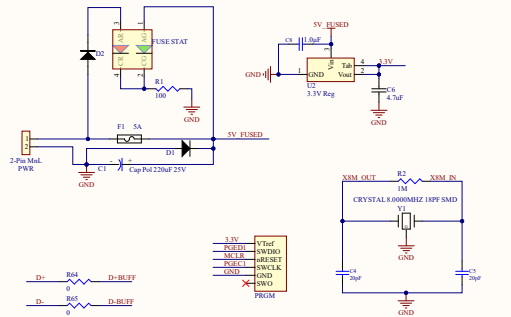
## USB HUB





Top LED Bd[RevA]  
15-100056-A0

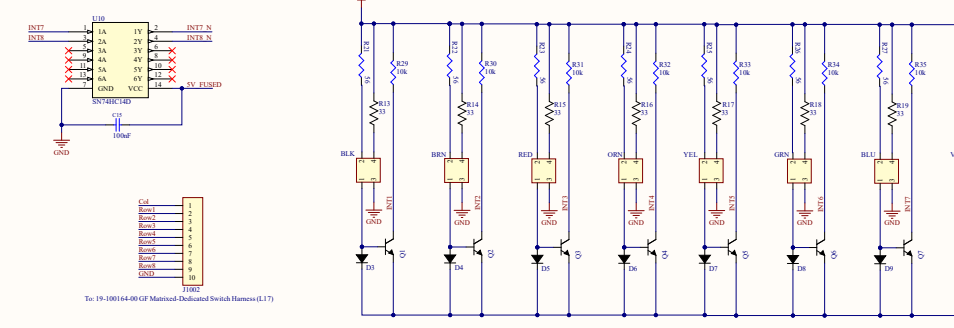
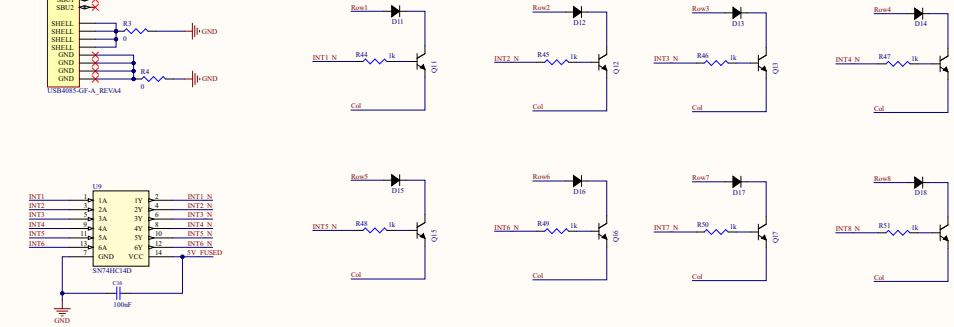
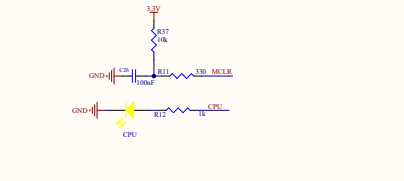
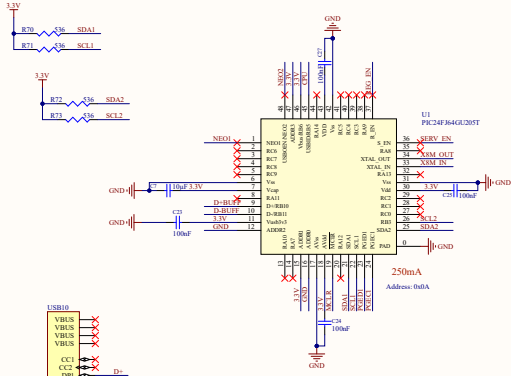
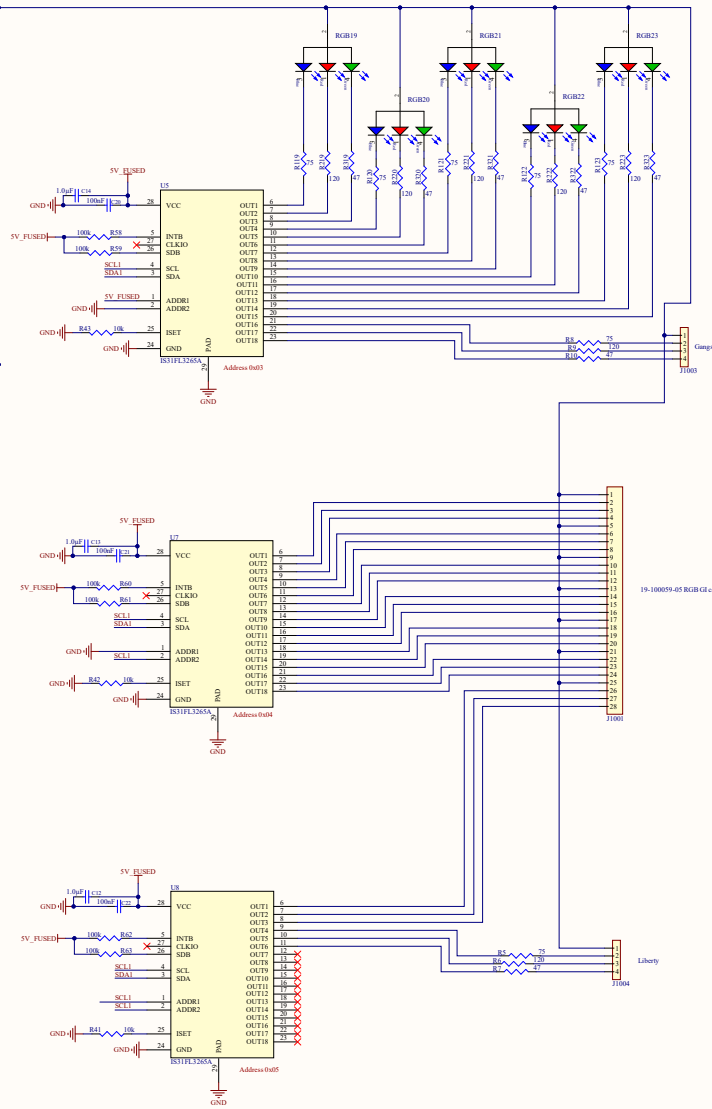
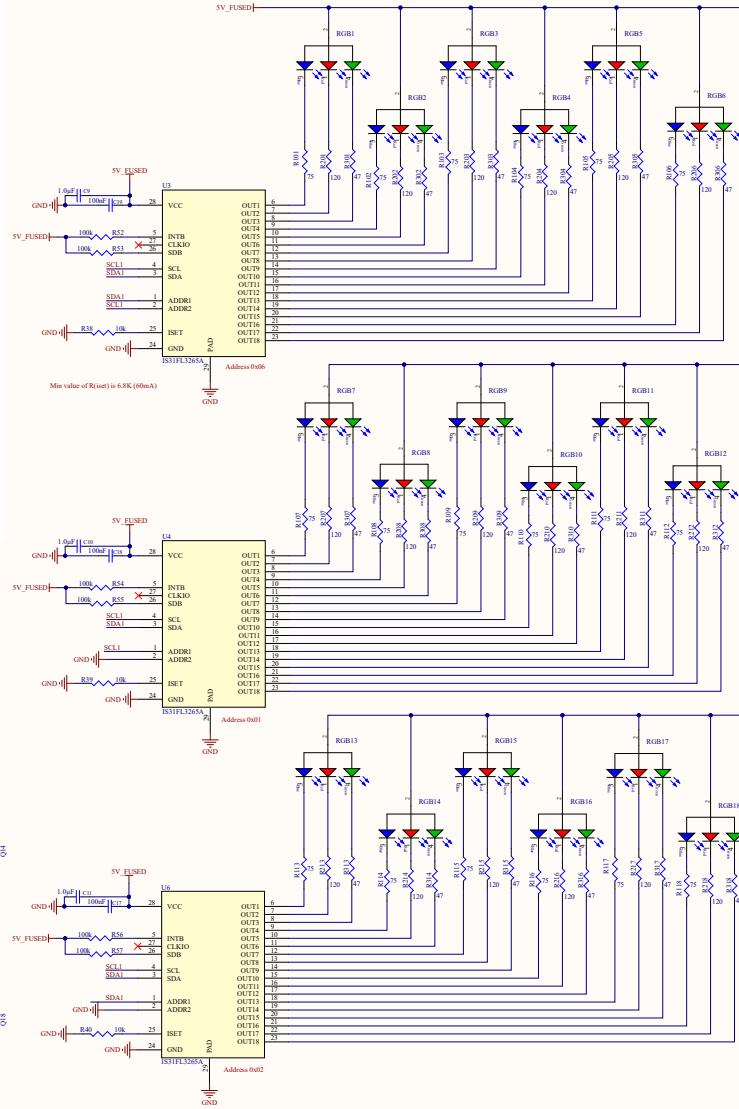




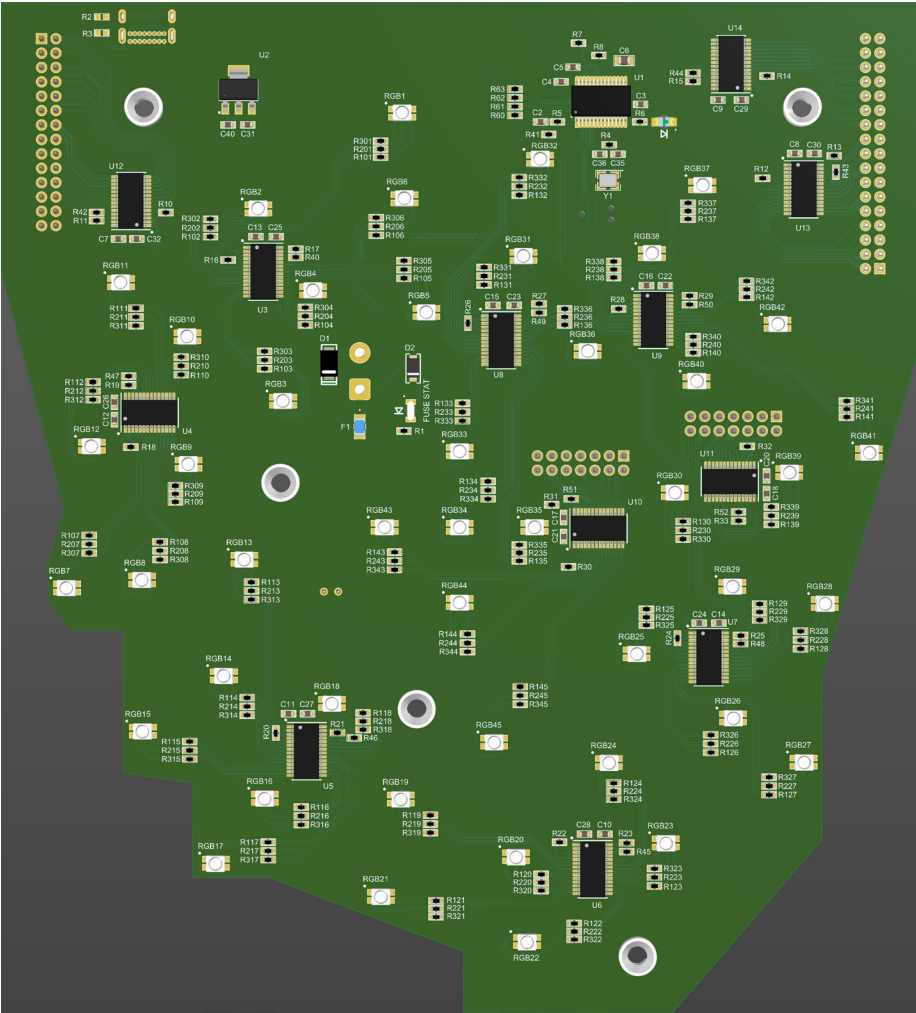
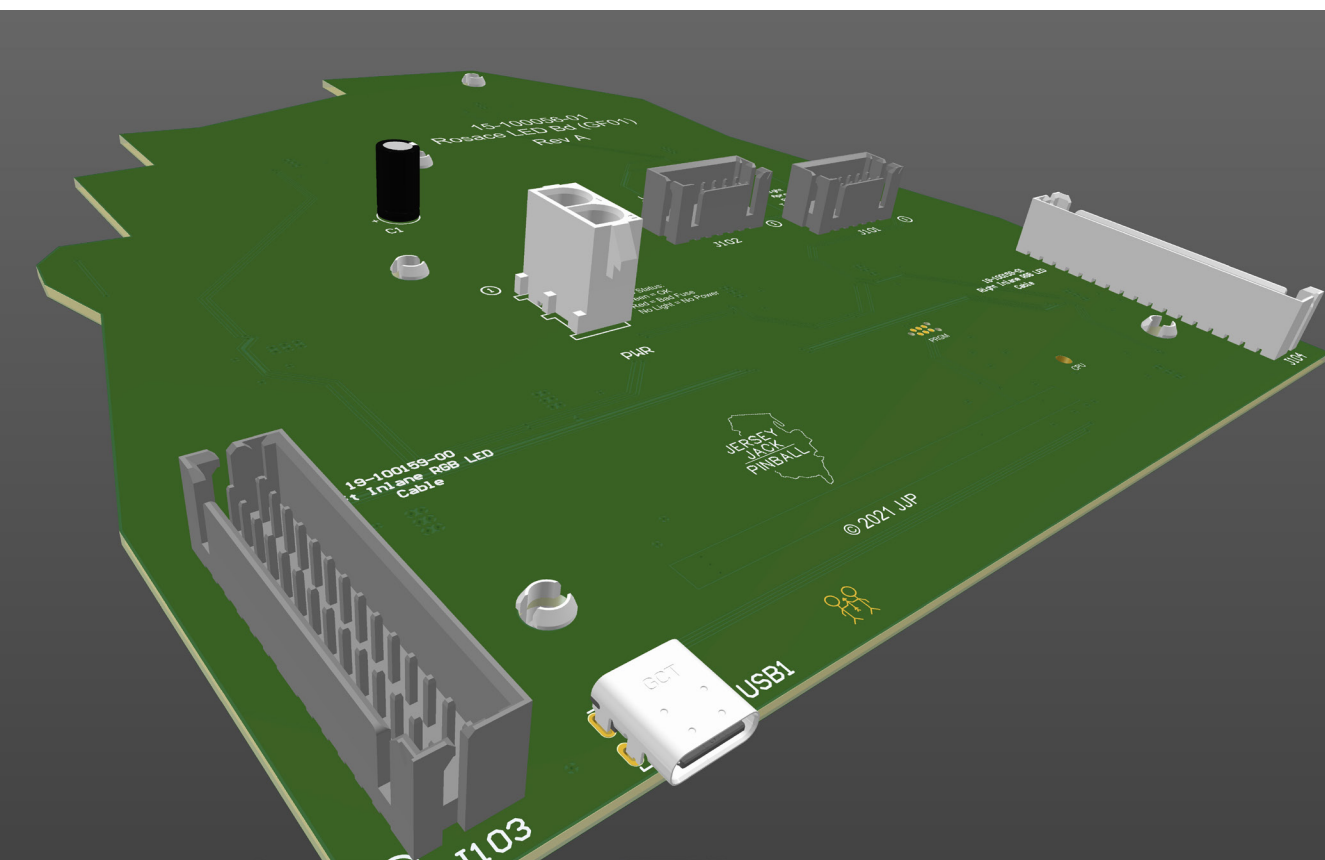
**Table 1 Slave Address**

ADDR2	ADDR1	A7:A5	A4:A3	A2:A1	A0
0	GND	GND	00	00	00
1	GND	SCL	00	01	
2	GND	SDA	00	10	
3	GND	VCC	00	11	
4	SCL	GND	01	00	
5	SCL	SCL	01	01	
6	SCL	VCC	01	11	
7	SDA	GND	10	00	
8	SDA	SCL	10	01	
9	SDA	SDA	10	10	
10	SDA	VCC	10	11	
11	VCC	GND	11	00	
12	VCC	SCL	11	01	
13	VCC	SDA	11	10	
14	VCC	VCC	11	11	
15	VCC	VCC	11	11	

ADDR1/2 connected to GND, (A2:A1)/(A4:A3)=00;  
 ADDR1/2 connected to VCC, (A2:A1)/(A4:A3)=11;  
 ADDR1/2 connected to SCL, (A2:A1)/(A4:A3)=01;  
 ADDR1/2 connected to SDA, (A2:A1)/(A4:A3)=10;



Rosace LED Bd[RevA]  
15-100056-01



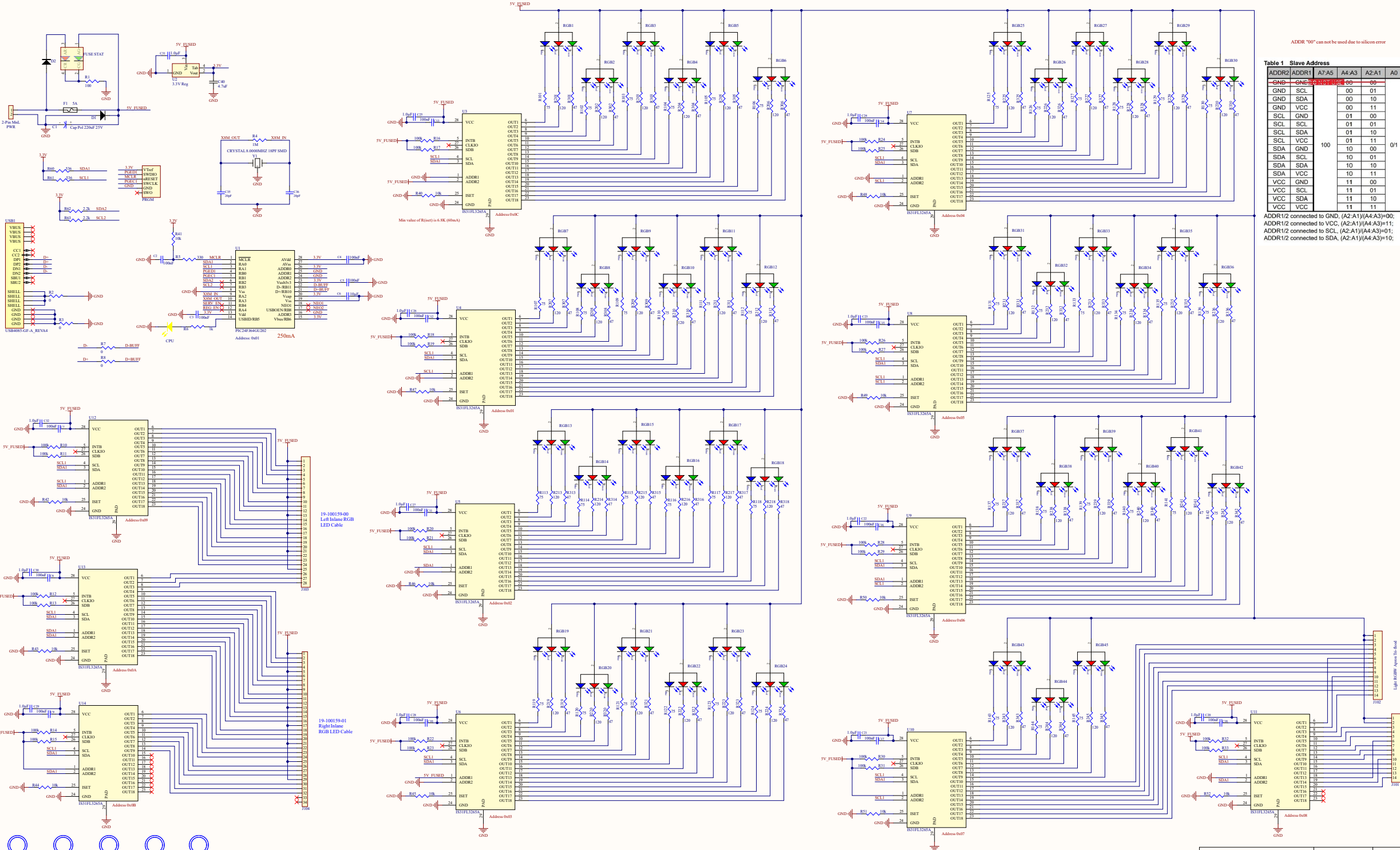
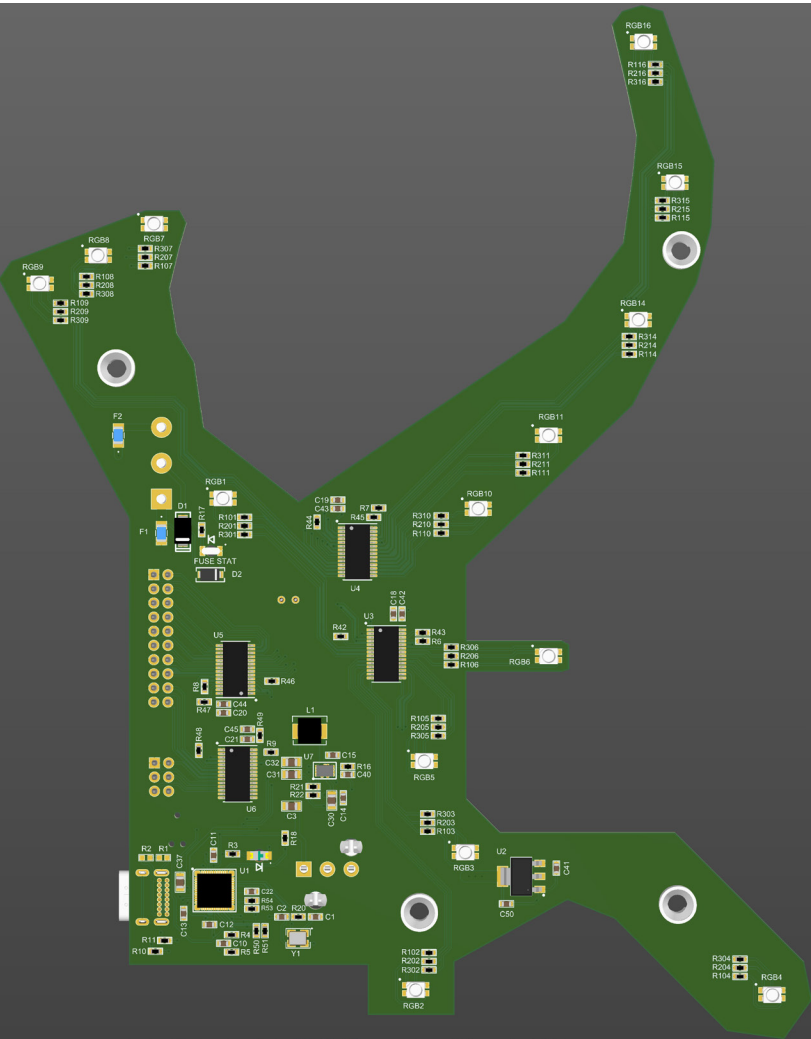
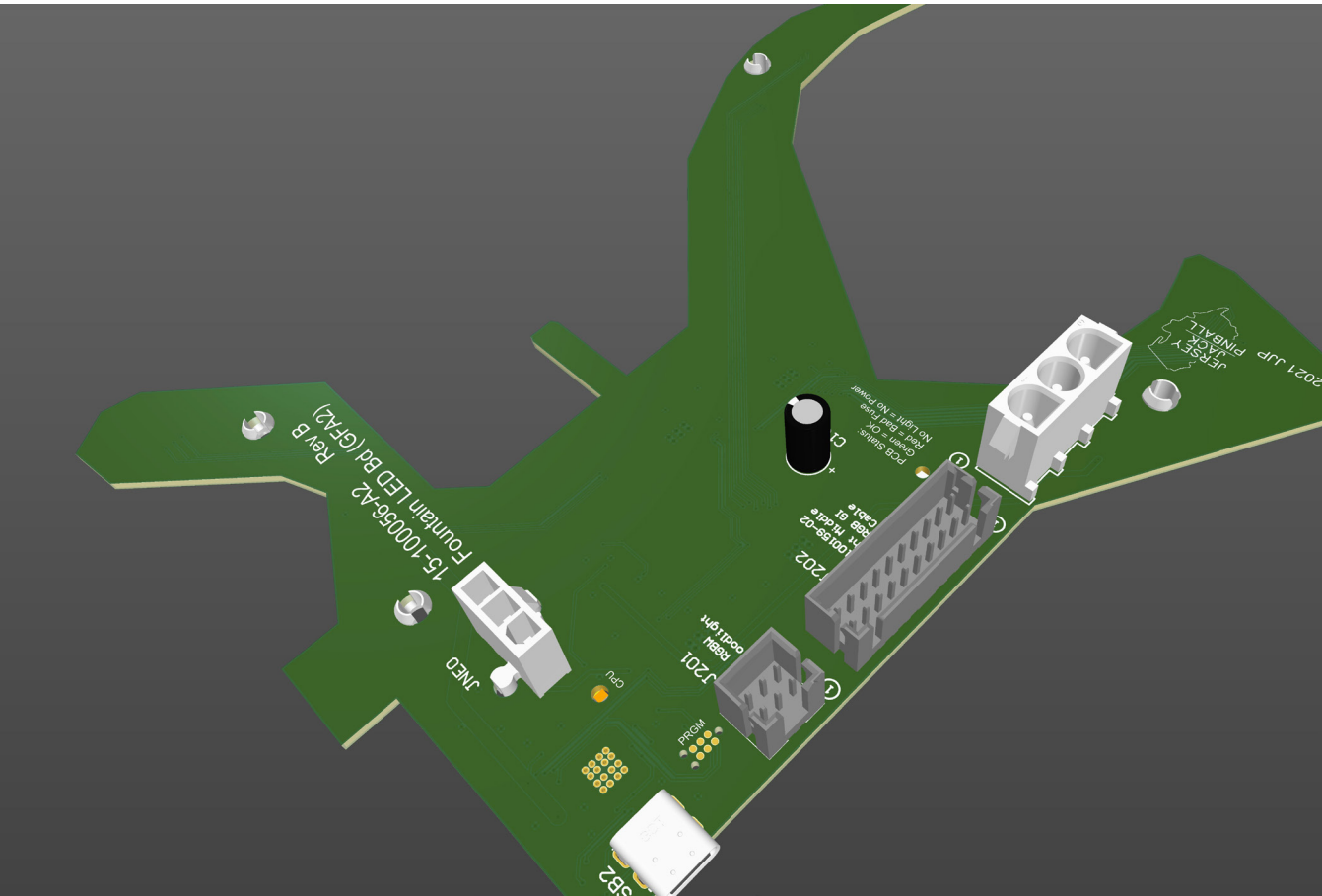


Table 1 Slave Address

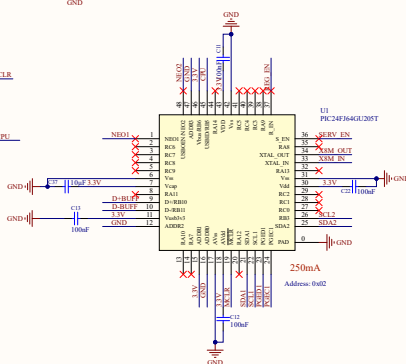
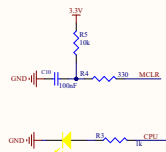
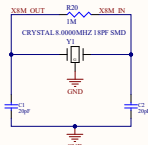
ADDR2	ADDR1	A7:A5	A4:A3	A2:A1	A0
GND	GND	00	00	00	00
GND	SCL	00	01	00	01
GND	SDA	00	10	00	10
GND	VCC	00	11	00	11
SCL	GND	01	00	01	00
SCL	SCL	01	01	01	01
SCL	SDA	01	10	01	10
SDA	GND	10	00	10	00
SDA	SCL	10	01	10	01
SDA	SDA	10	10	10	10
VCC	GND	10	11	10	11
VCC	SCL	11	00	11	00
VCC	SDA	11	01	11	01
VCC	VCC	11	10	11	10
VCC	VCC	11	11	11	11

ADDR1/2 connected to GND, (A2:A1)/(A4:A3)=00;  
 ADDR1/2 connected to VCC, (A2:A1)/(A4:A3)=11;  
 ADDR1/2 connected to SCL, (A2:A1)/(A4:A3)=01;  
 ADDR1/2 connected to SDA, (A2:A1)/(A4:A3)=10;

Fountain LED Bd[RevB]  
15-100056-A2

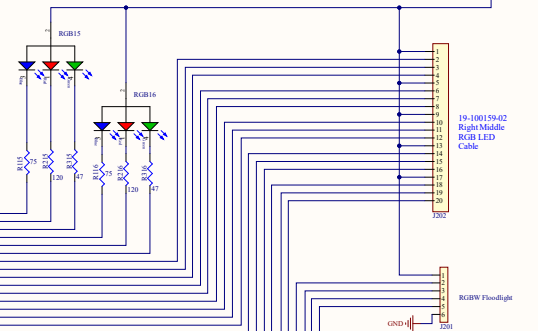
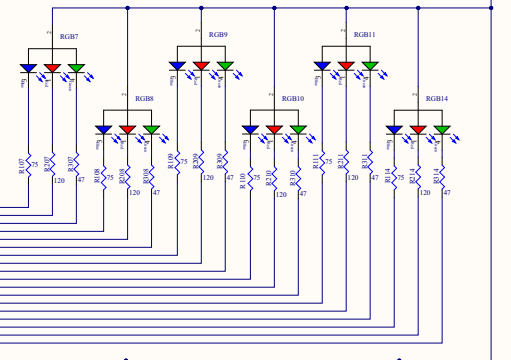
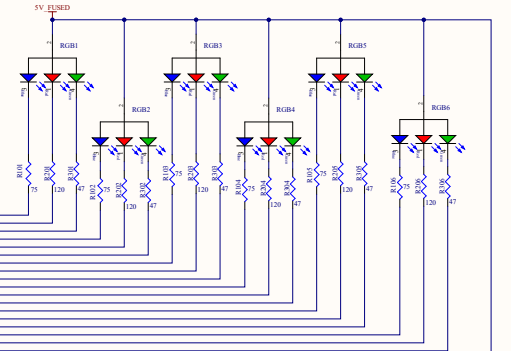
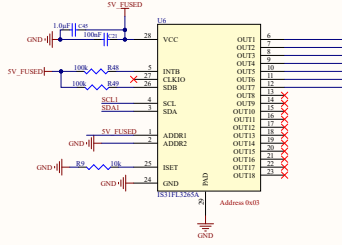
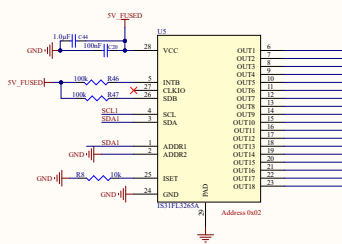
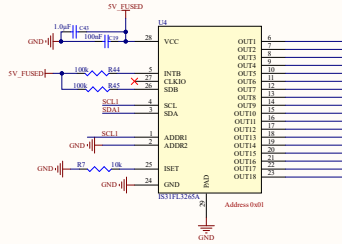




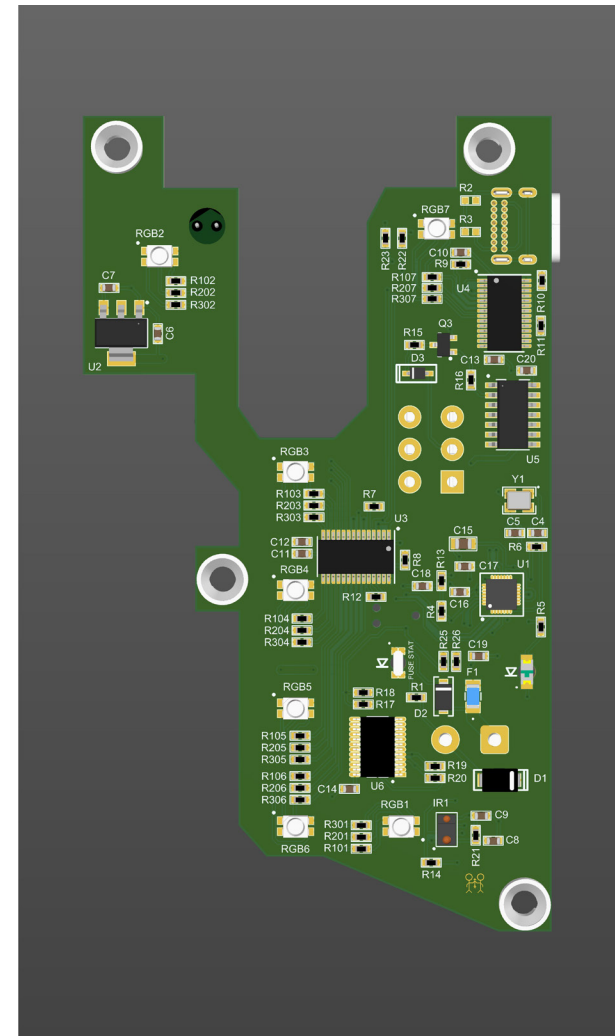
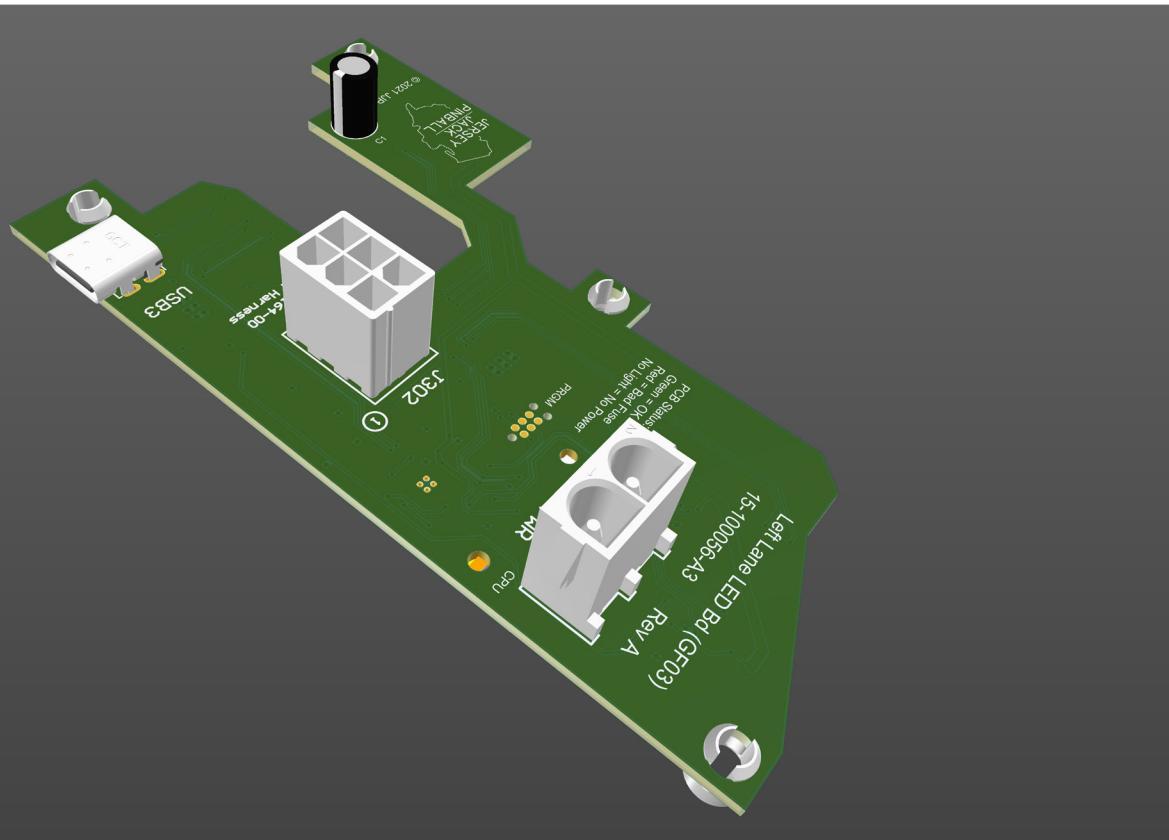


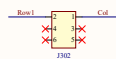
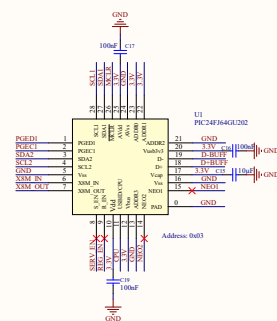
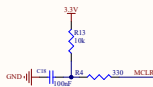
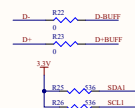
### Table 1 Slave Address

ADDR2	ADDR1	A7-A5	A4-A3	A2-A1	A0
0	GND	0	0	0	0
1	GND	SCL	0	0	1
2	GND	SDA	0	0	1
3	GND	VCC	0	0	11
4	SCL	GND	0	1	00
5	SCL	SCL	0	1	01
6	SCL	VCC	0	1	10
7	SCL	SDA	0	1	11
8	SDA	GND	1	0	00
9	SDA	SCL	1	0	01
10	SDA	SDA	1	0	10
11	SDA	VCC	1	0	11
12	VCC	GND	1	1	00
13	VCC	SCL	1	1	01
14	VCC	SDA	1	1	10
15	VCC	VCC	1	1	11

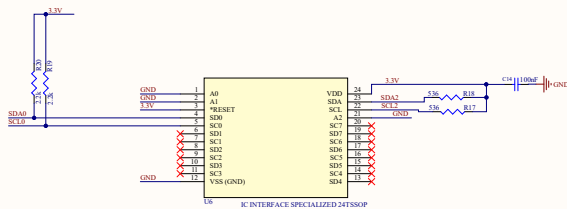
[illegible]

**15-100056-A3**





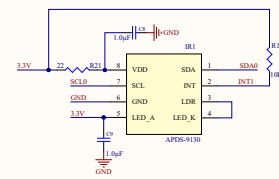
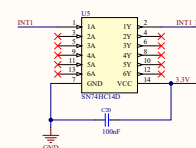
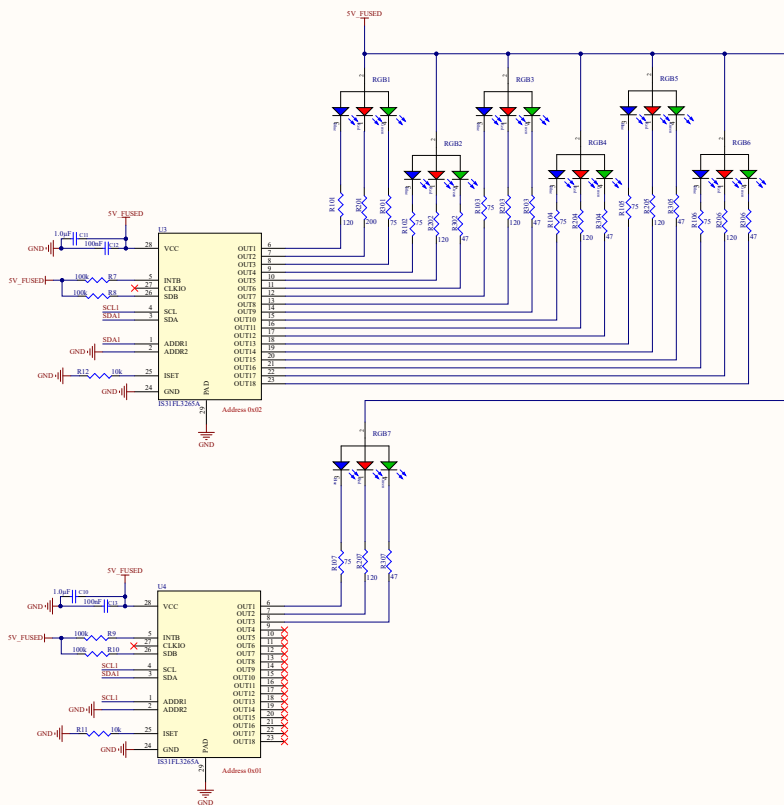
To: 19-100007-00 Matrixed-Dedicated Switch Harness (L13)



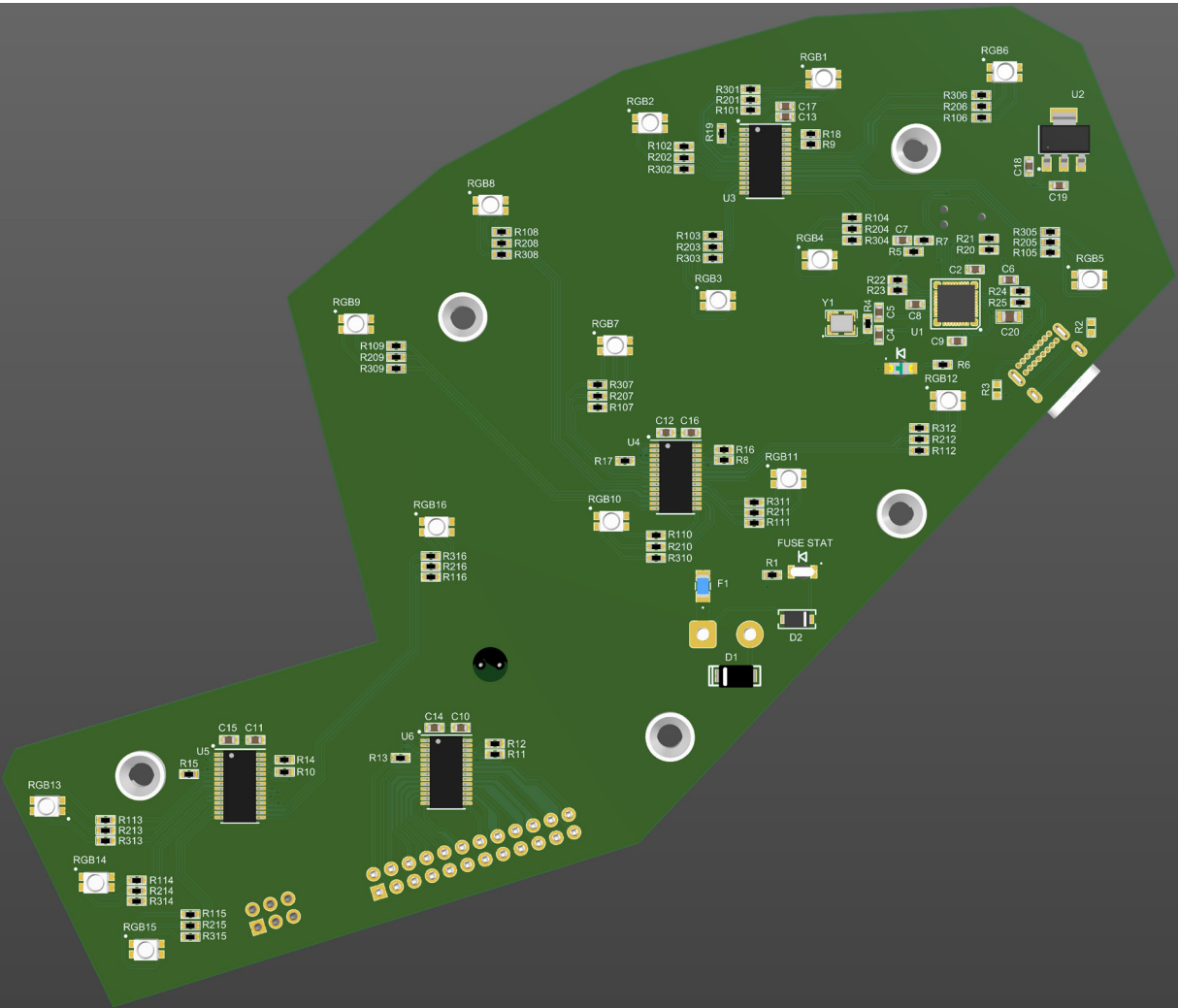
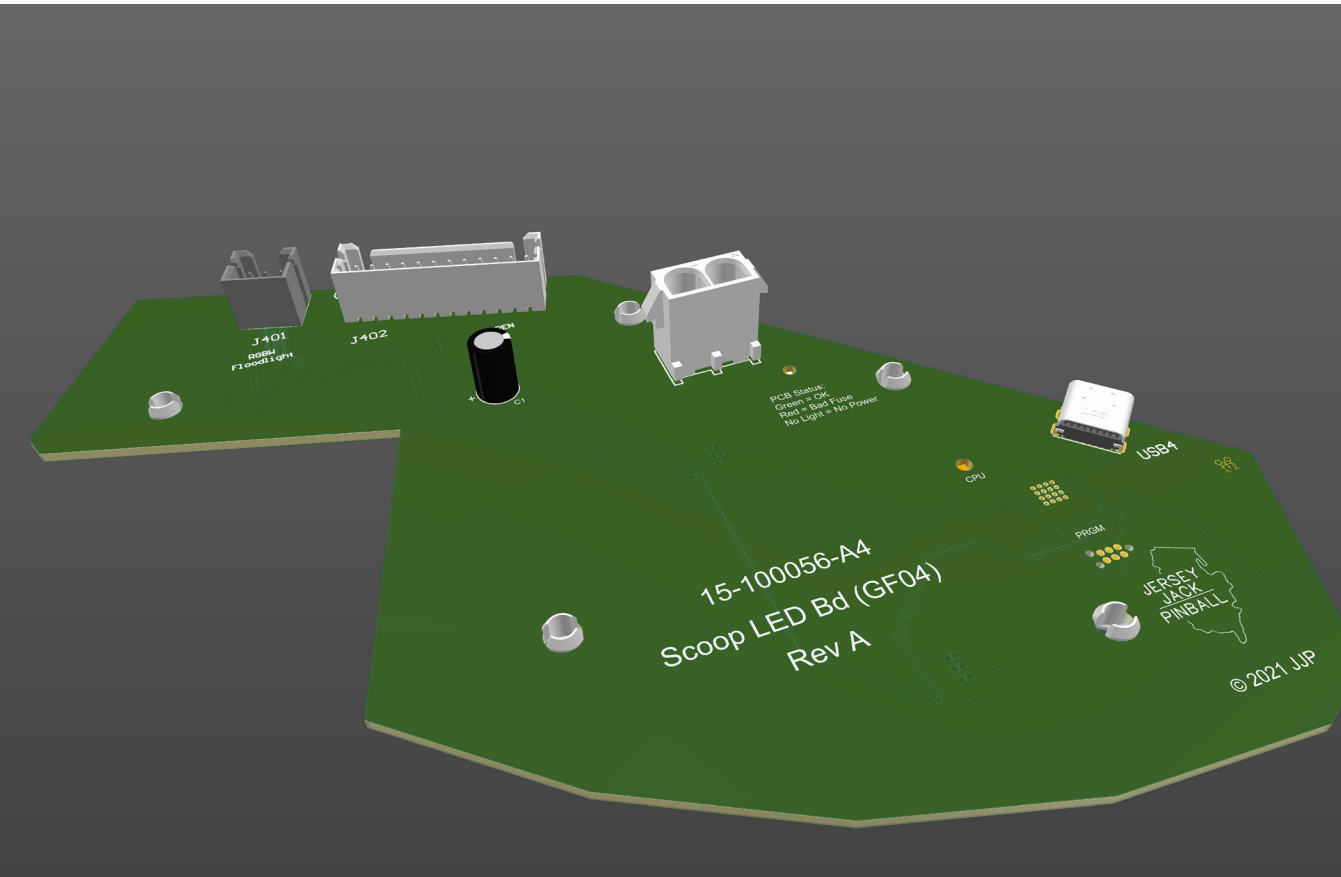
IC INTERFACE SPECIALIZED 24TSSOP

Table 1 Slave Address

ADDR1/2 connected to GND, (A2:A1)/(A4:A3)=00;  
ADDR1/2 connected to VCC, (A2:A1)/(A4:A3)=11;  
ADDR1/2 connected to SCL, (A2:A1)/(A4:A3)=01;  
ADDR1/2 connected to SDA, (A2:A1)/(A4:A3)=10;



Scoop LED Bd[RevA]  
15-100056-A4



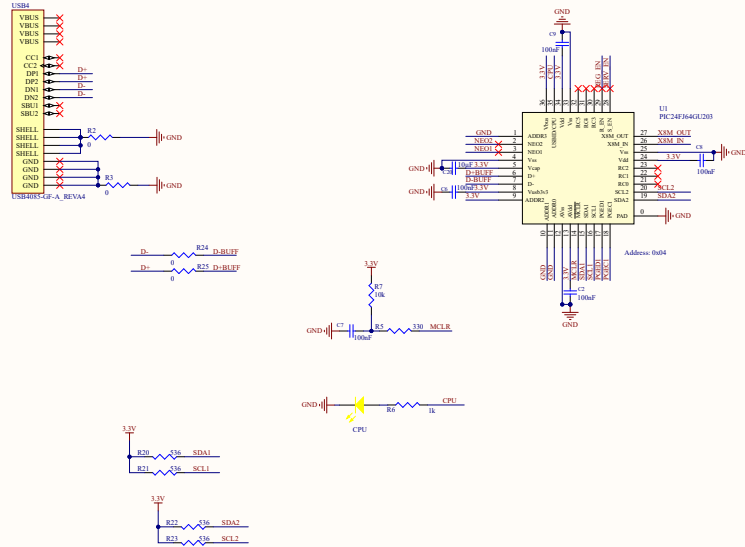
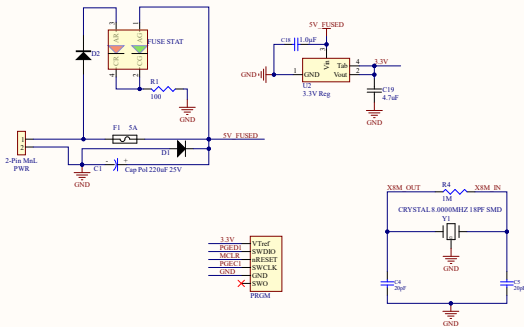
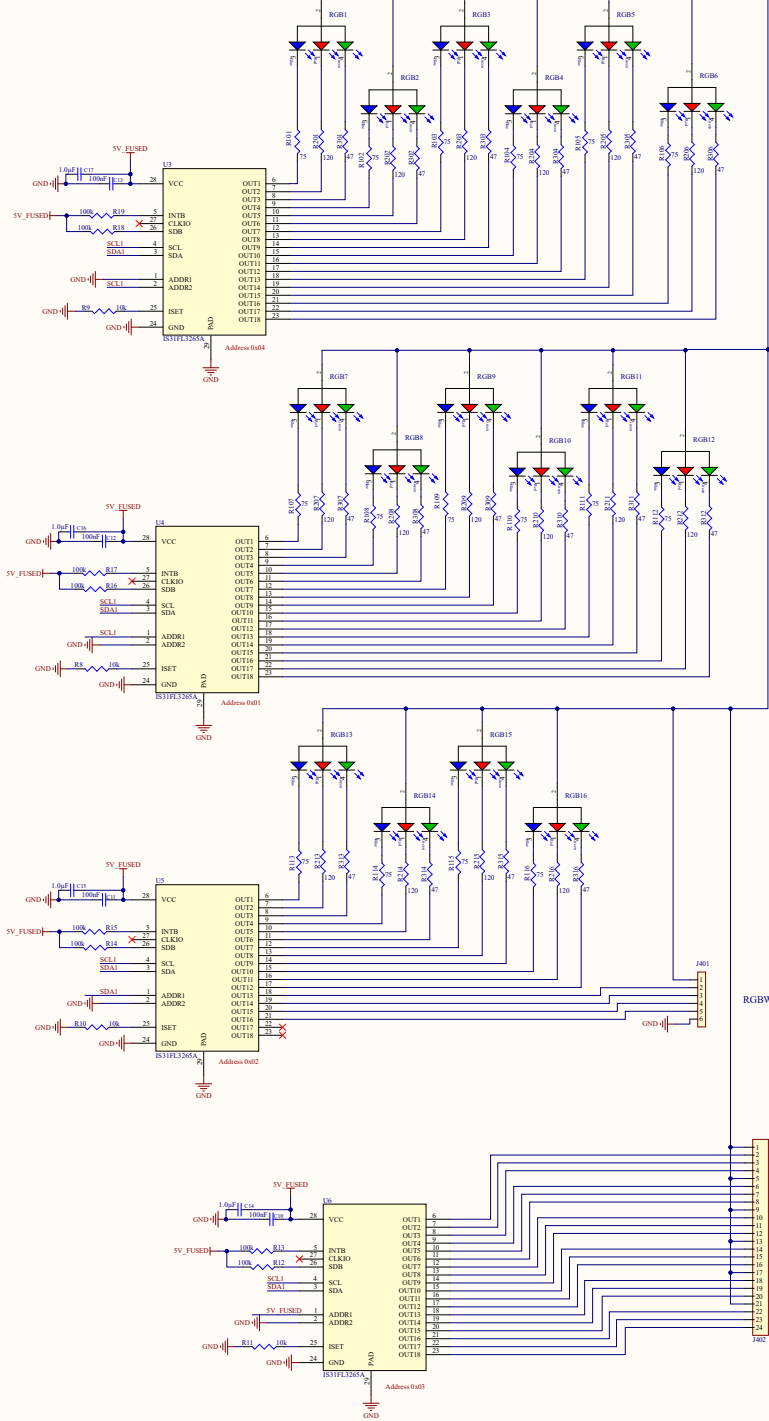


Table 1 Slave Address

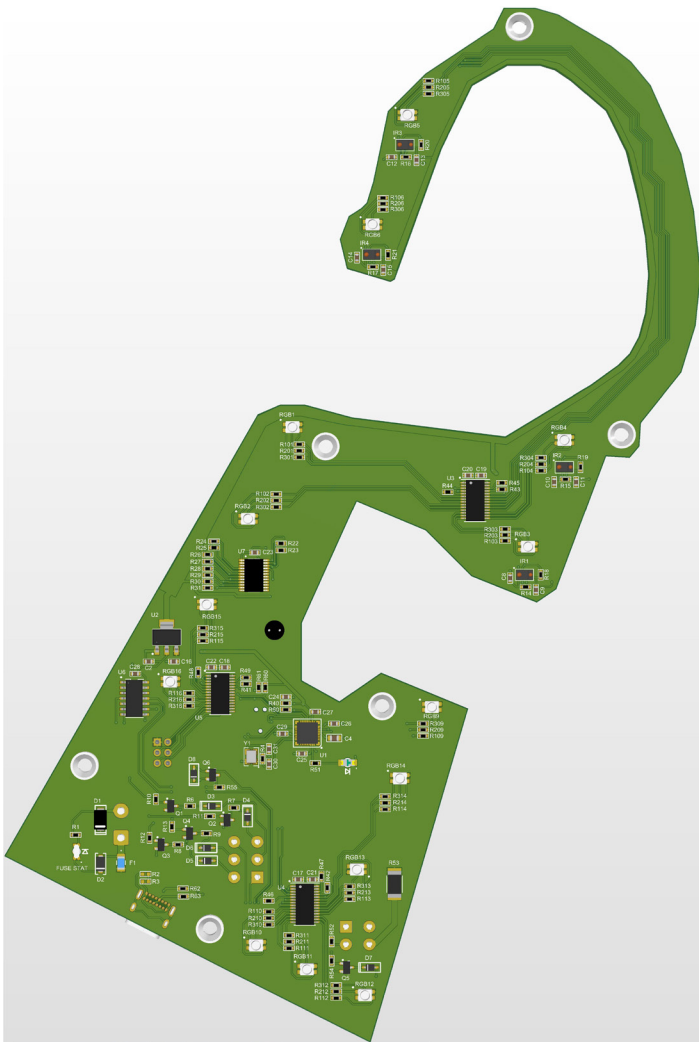
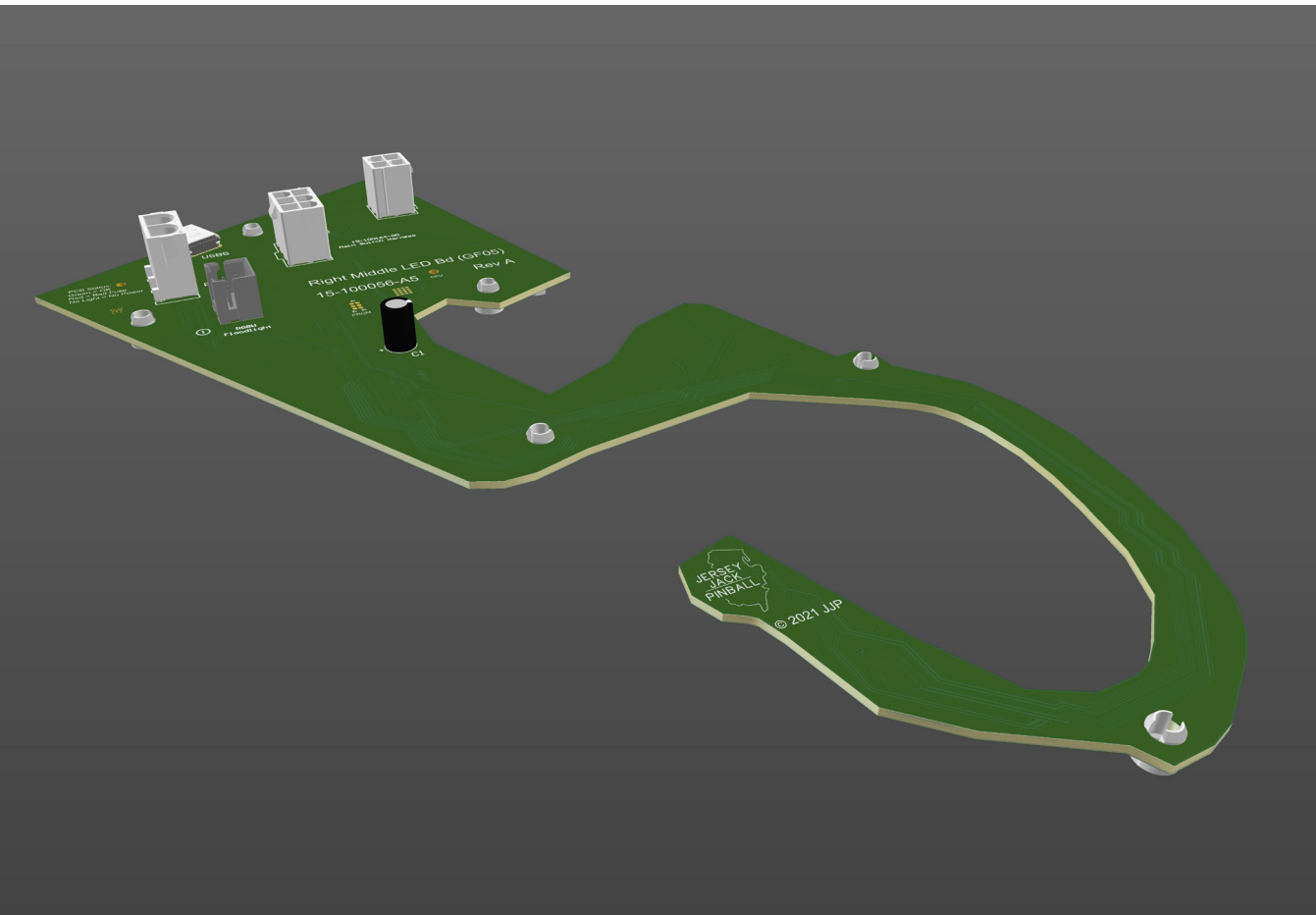
	ADDR2	ADDR1	A7:A5	A4:A3	A2:A1	A0
0	GND	GND	00	00	00	00
1	GND	SCL	00	00	01	00
2	GND	SDA	00	00	10	00
3	GND	VCC	00	00	11	00
4	SCL	GND	01	00	00	00
5	SCL	SCL	01	01	00	00
6	SCL	SDA	01	10	00	00
7	SCL	VCC	01	11	00	00
8	SDA	GND	10	00	00	00
9	SDA	SCL	10	01	00	00
10	SDA	SDA	10	10	00	00
11	SDA	VCC	10	11	00	00
12	VCC	GND	11	00	00	00
13	VCC	SCL	11	01	00	00
14	VCC	SDA	11	10	00	00
15	VCC	VCC	11	11	00	00

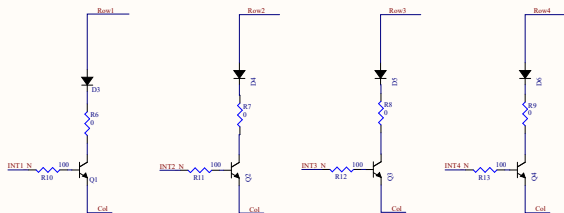
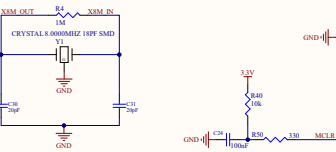
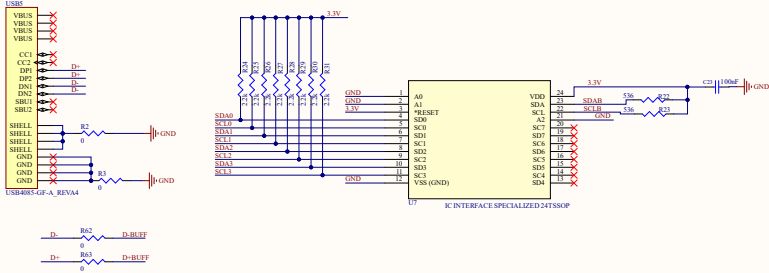
ADDR1/2 connected to GND, (A2:A1)/(A4:A3)=00;  
 ADDR1/2 connected to VCC, (A2:A1)/(A4:A3)=11;  
 ADDR1/2 connected to SCL, (A2:A1)/(A4:A3)=01;  
 ADDR1/2 connected to SDA, (A2:A1)/(A4:A3)=10;



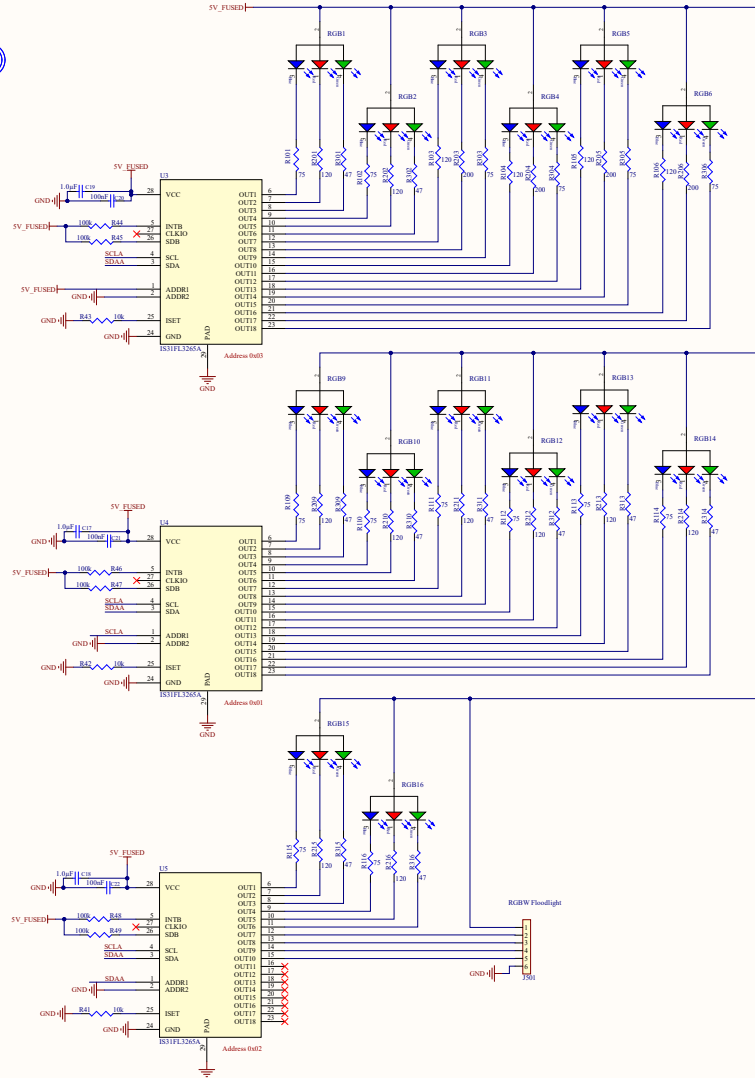
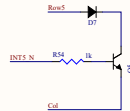


Right Middle LED Bd[RevA]  
15-100056-A5

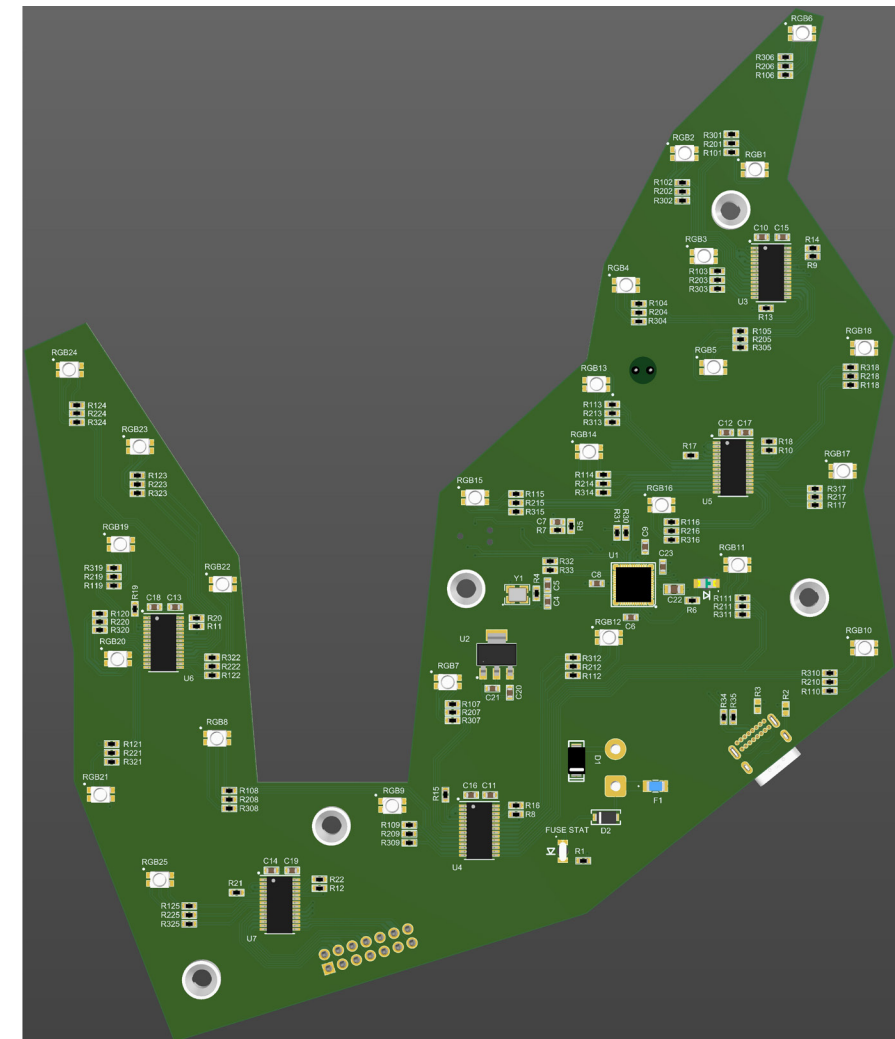
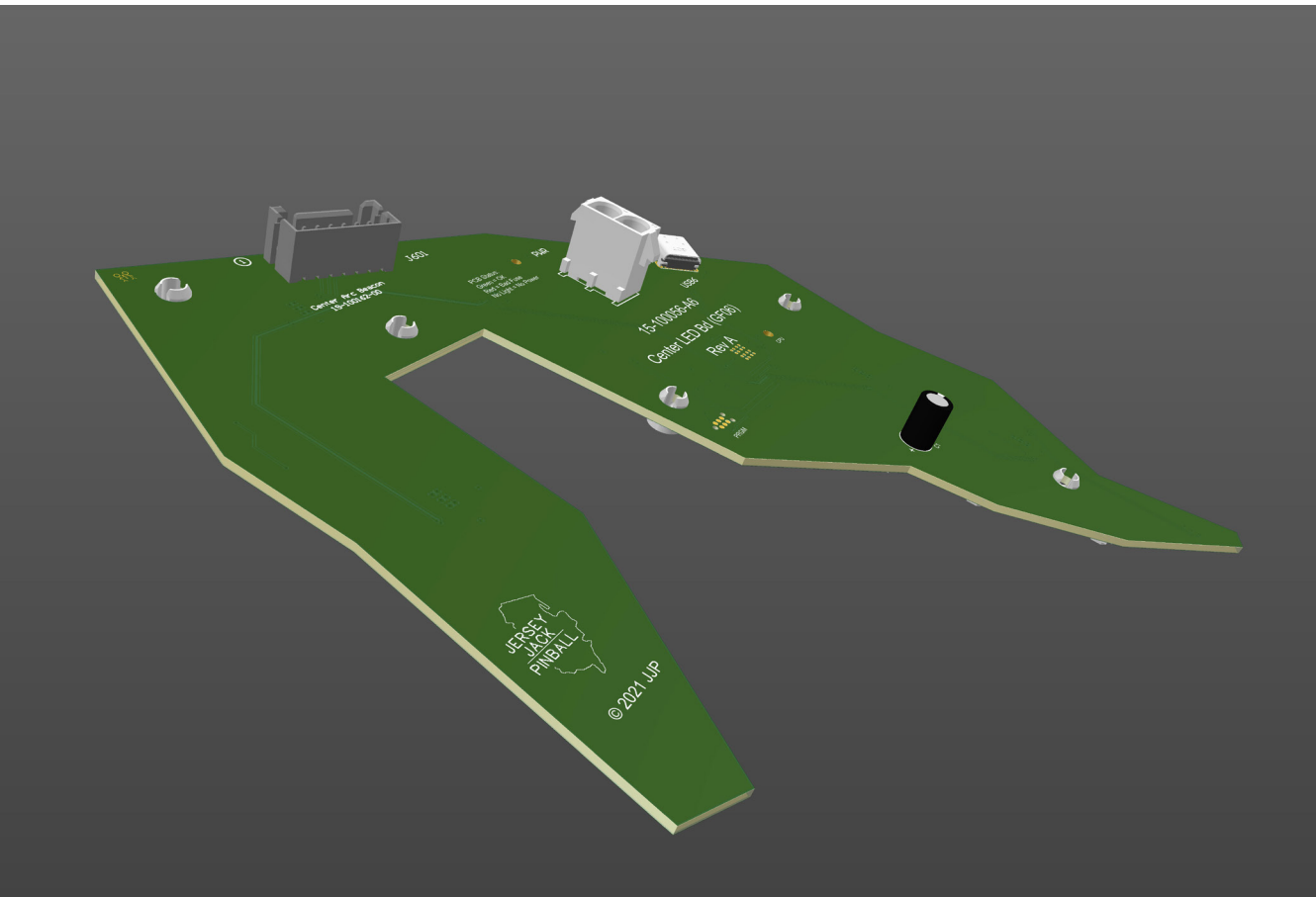




ADDR1/2 connected to GND, (A2:A1)/(A4:A3)=00;  
ADDR1/2 connected to VCC, (A2:A1)/(A4:A3)=11;  
ADDR1/2 connected to SCL, (A2:A1)/(A4:A3)=01;  
ADDR1/2 connected to SDA, (A2:A1)/(A4:A3)=10;



**Center LED Bd[RevA]**  
**15-100056-A6**



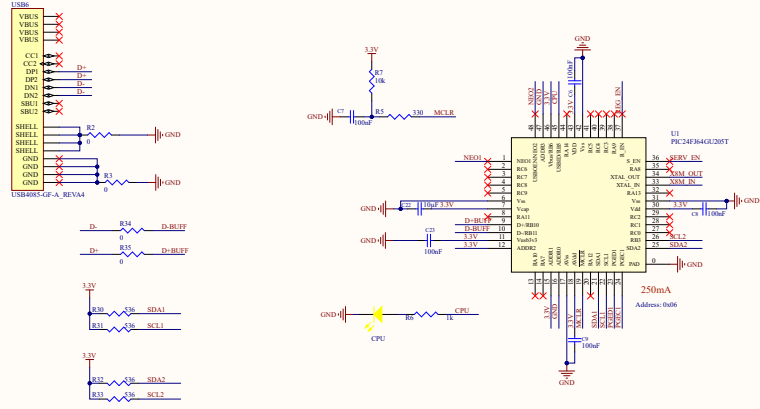
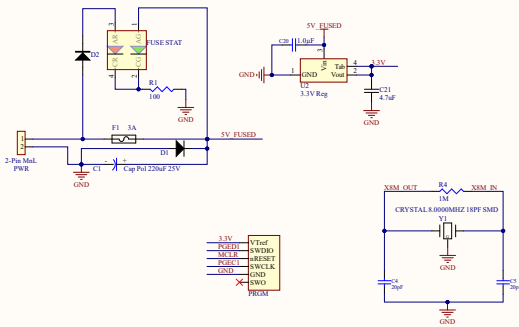
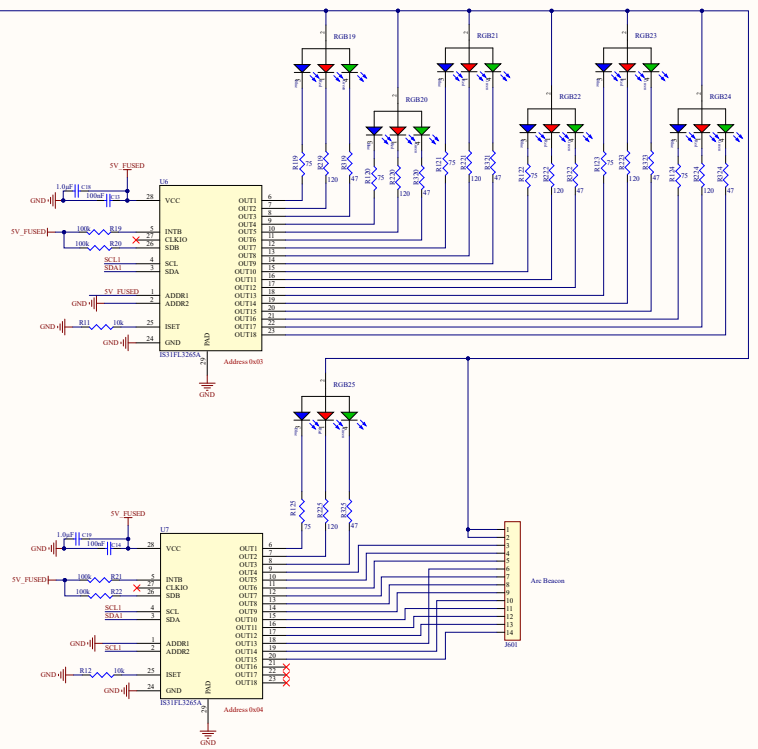
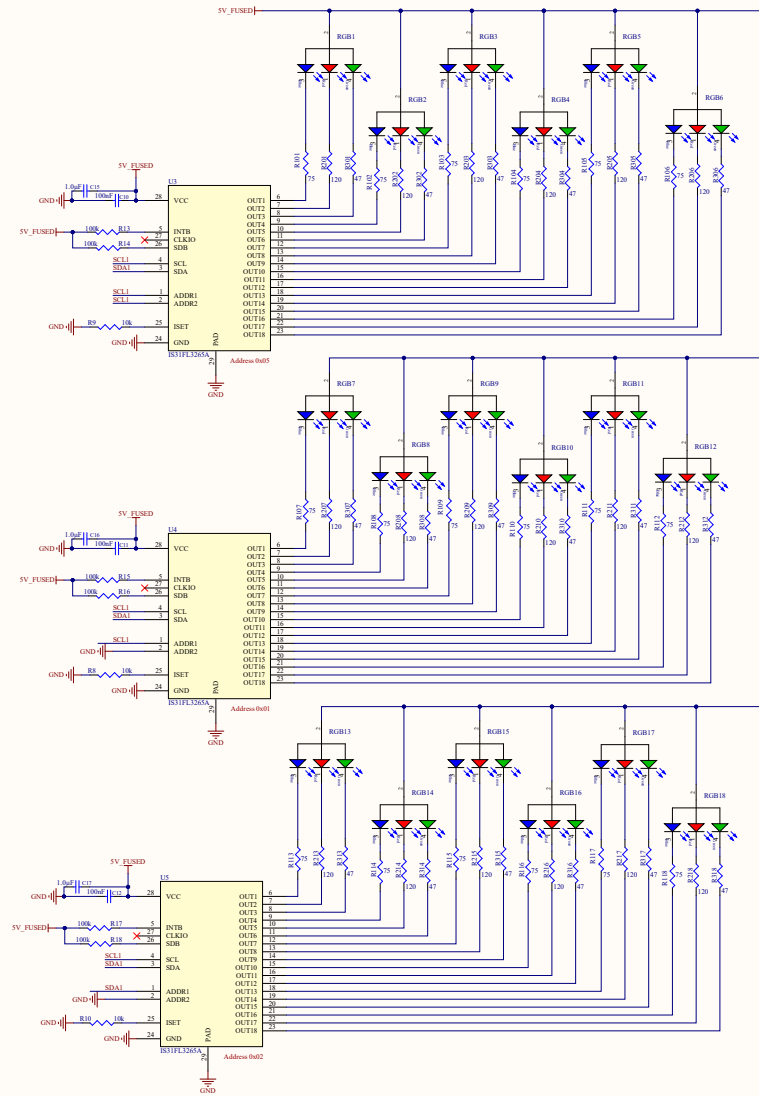


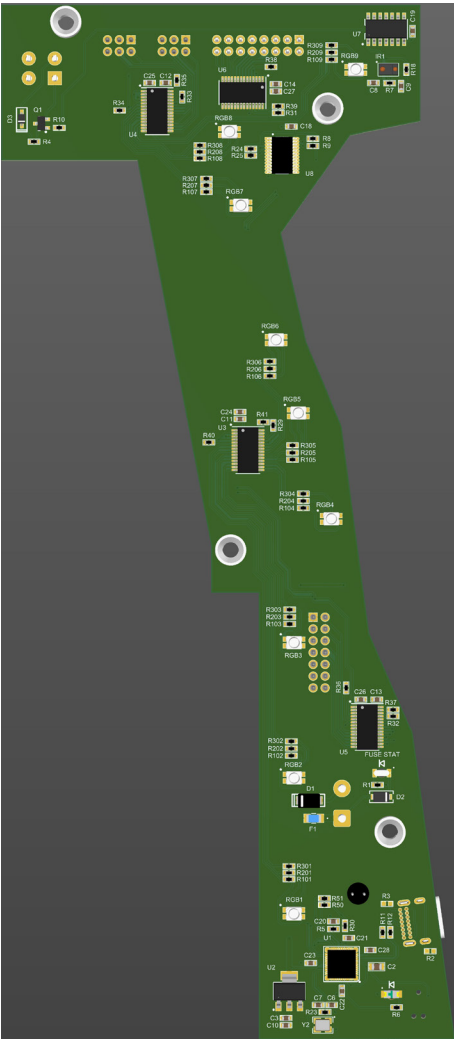
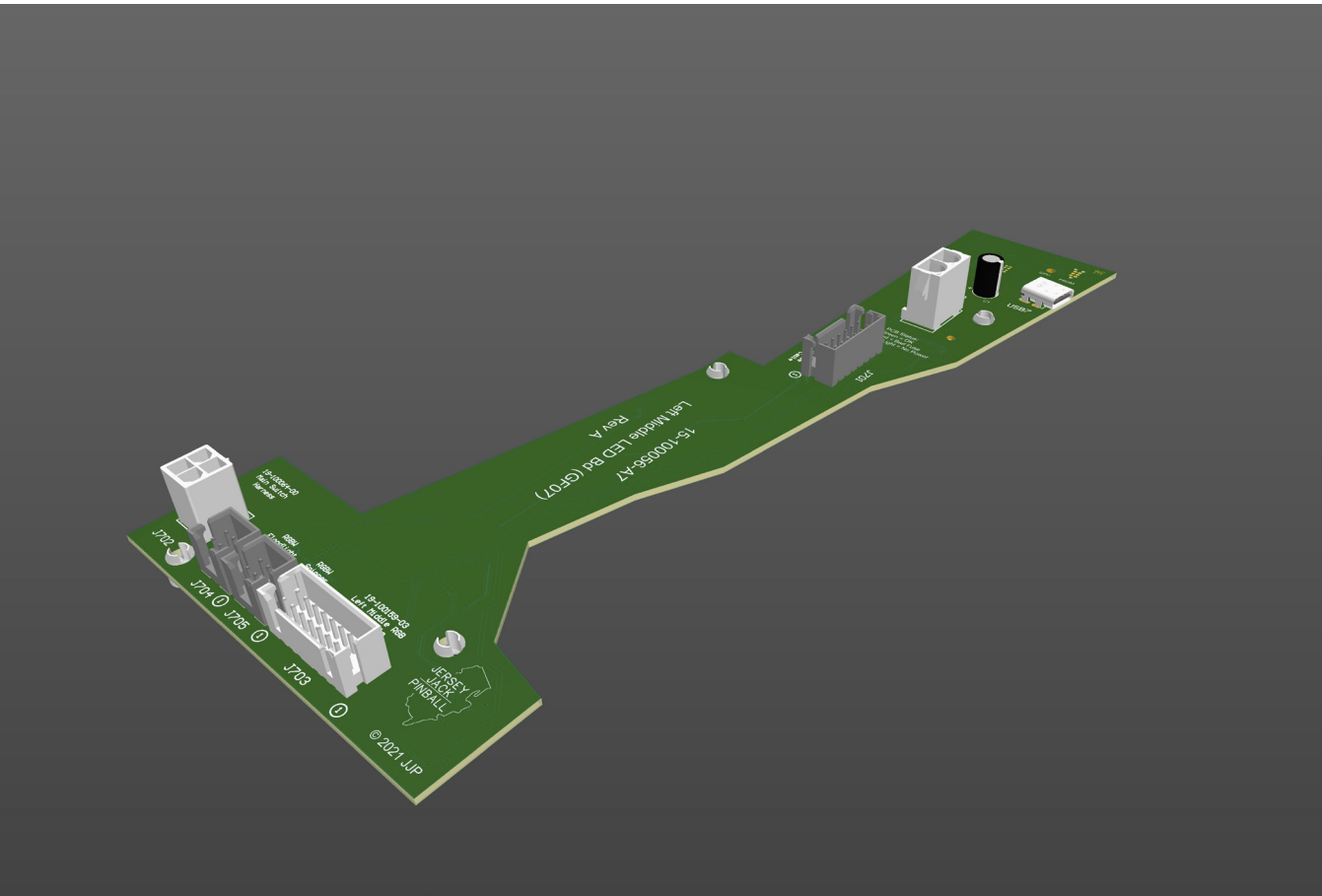
Table 1 Slave Address

	ADDR2	ADDR1	A7:A5	A4:A3	A2:A1	A0
0	GND	GND	00	00	00	00
1	GND	SCL	00	00	01	00
2	GND	SDA	00	00	10	00
3	GND	VCC	00	00	11	00
4	SCL	GND	01	00	00	00
5	SCL	SCL	01	01	01	00
6	SCL	SDA	01	10	10	00
7	SCL	VCC	01	11	11	00
8	SDA	GND	10	00	00	00
9	SDA	SCL	10	01	01	00
10	SDA	SDA	10	10	10	00
11	SDA	VCC	10	11	11	00
12	VCC	GND	11	00	00	00
13	VCC	SCL	11	01	01	00
14	VCC	SDA	11	10	10	00
15	VCC	VCC	11	11	11	00

ADDR1/2 connected to GND, (A2:A1)/(A4:A3)=00;  
 ADDR1/2 connected to VCC, (A2:A1)/(A4:A3)=11;  
 ADDR1/2 connected to SCL, (A2:A1)/(A4:A3)=01;  
 ADDR1/2 connected to SDA, (A2:A1)/(A4:A3)=10;



Left Middle LED Bd[RevA]  
15-100056-A7





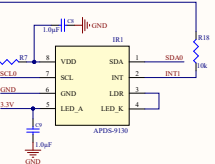
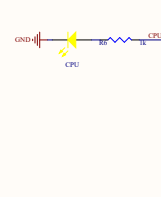
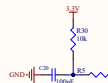
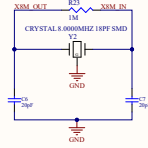
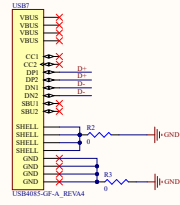
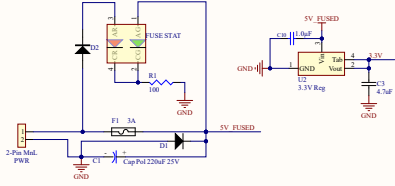
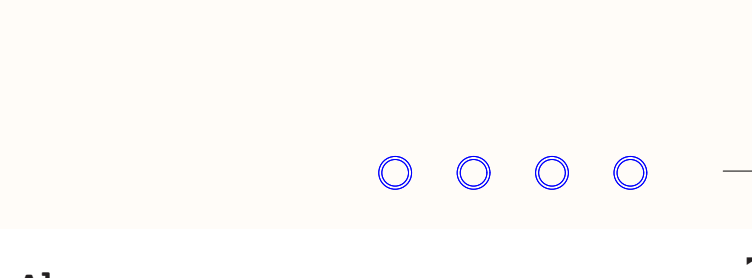
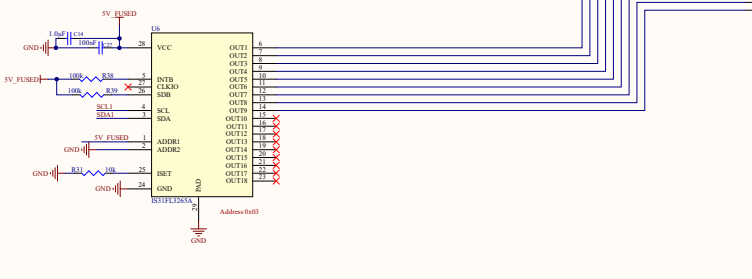
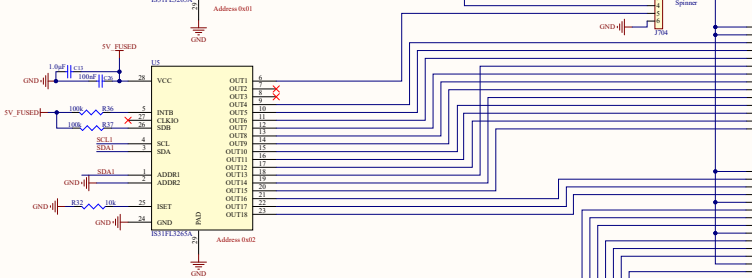
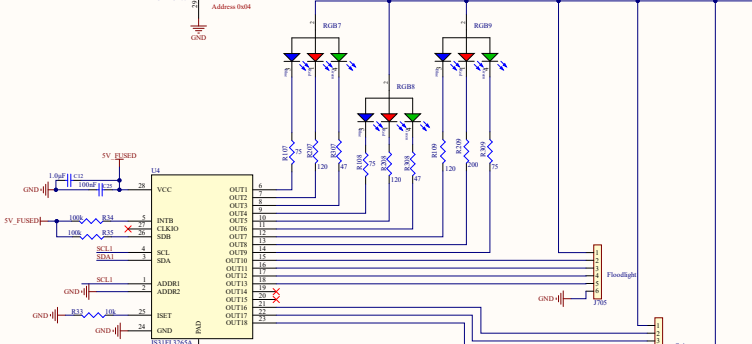
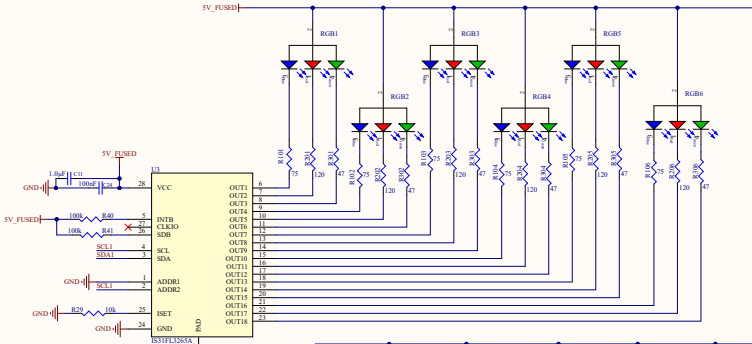


Table 1 Slave Address

ADDR2	ADDR1	A7:A5	A4:A3	A2:A1	A0
0	GND	GND	GND	GND	GND
1	GND	SCL	GND	GND	GND
2	GND	SDA	GND	GND	GND
3	GND	VCC	GND	GND	GND
4	SCL	GND	01	00	GND
5	SCL	SCL	01	01	GND
6	SCL	SDA	01	10	GND
7	SCL	VCC	01	11	GND
8	SDA	GND	10	00	GND
9	SDA	SCL	10	01	GND
10	SDA	SDA	10	10	GND
11	SDA	VCC	10	11	GND
12	VCC	GND	11	00	GND
13	VCC	SCL	11	01	GND
14	VCC	SDA	11	10	GND
15	VCC	VCC	11	11	GND

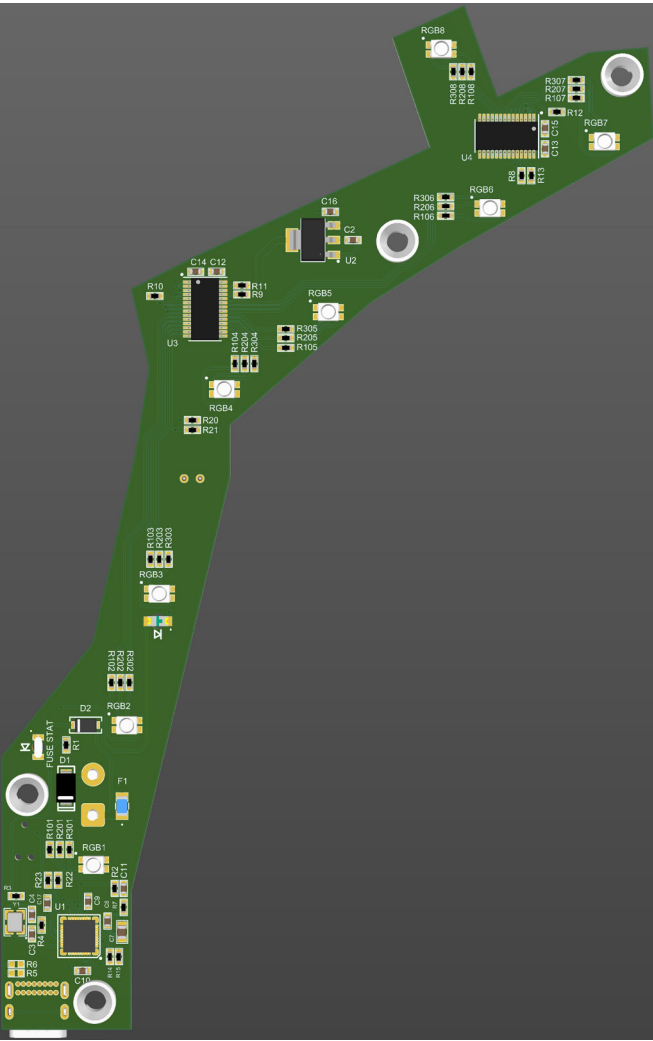
ADDR1/2 connected to GND, (A2:A1)/(A4:A3)=00;  
 ADDR1/2 connected to VCC, (A2:A1)/(A4:A3)=11;  
 ADDR1/2 connected to SCL, (A2:A1)/(A4:A3)=01;  
 ADDR1/2 connected to SDA, (A2:A1)/(A4:A3)=10;

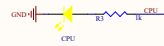
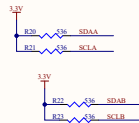
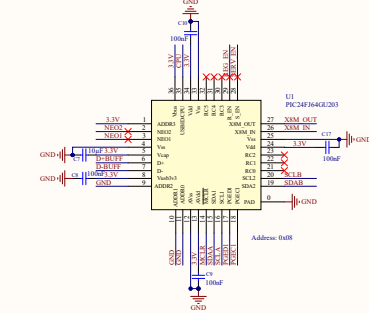
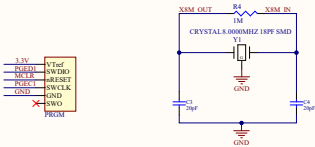
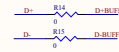
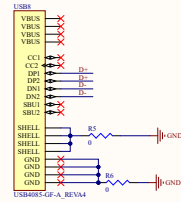
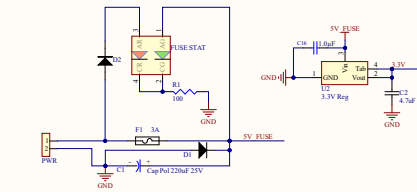


To: ARC Beacon

To: RGB (15-100159-03)

Fence LED Bd[RevA]  
15-100056-A8

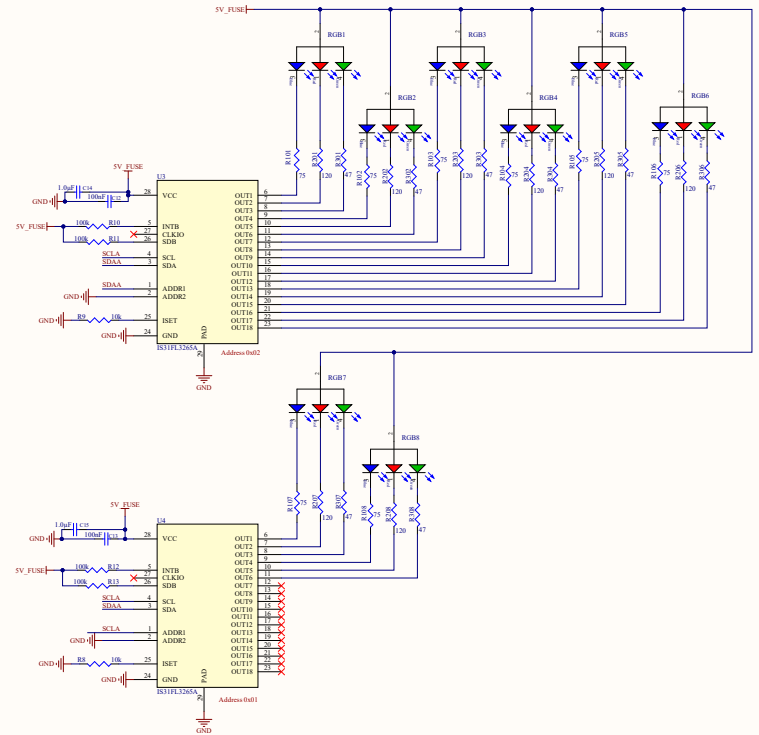




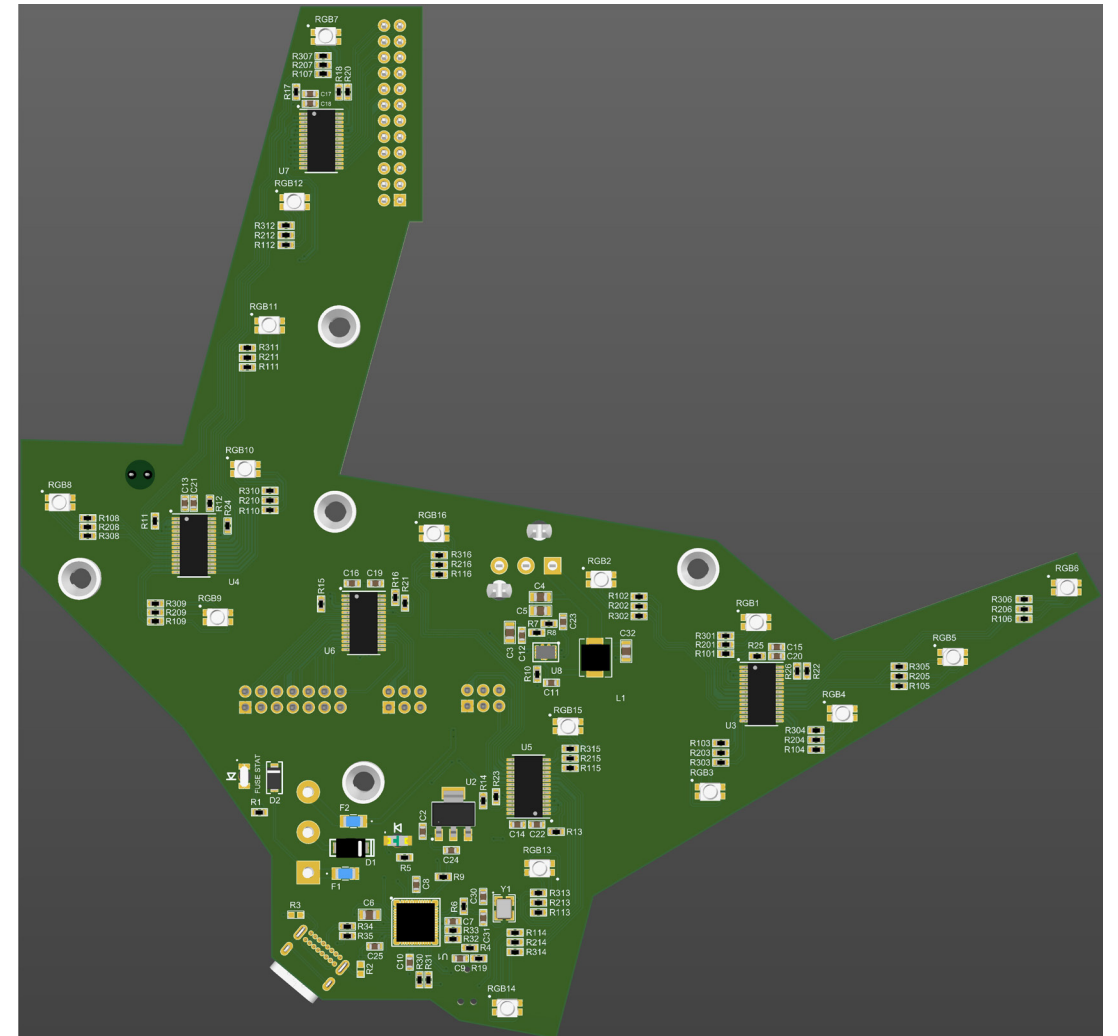
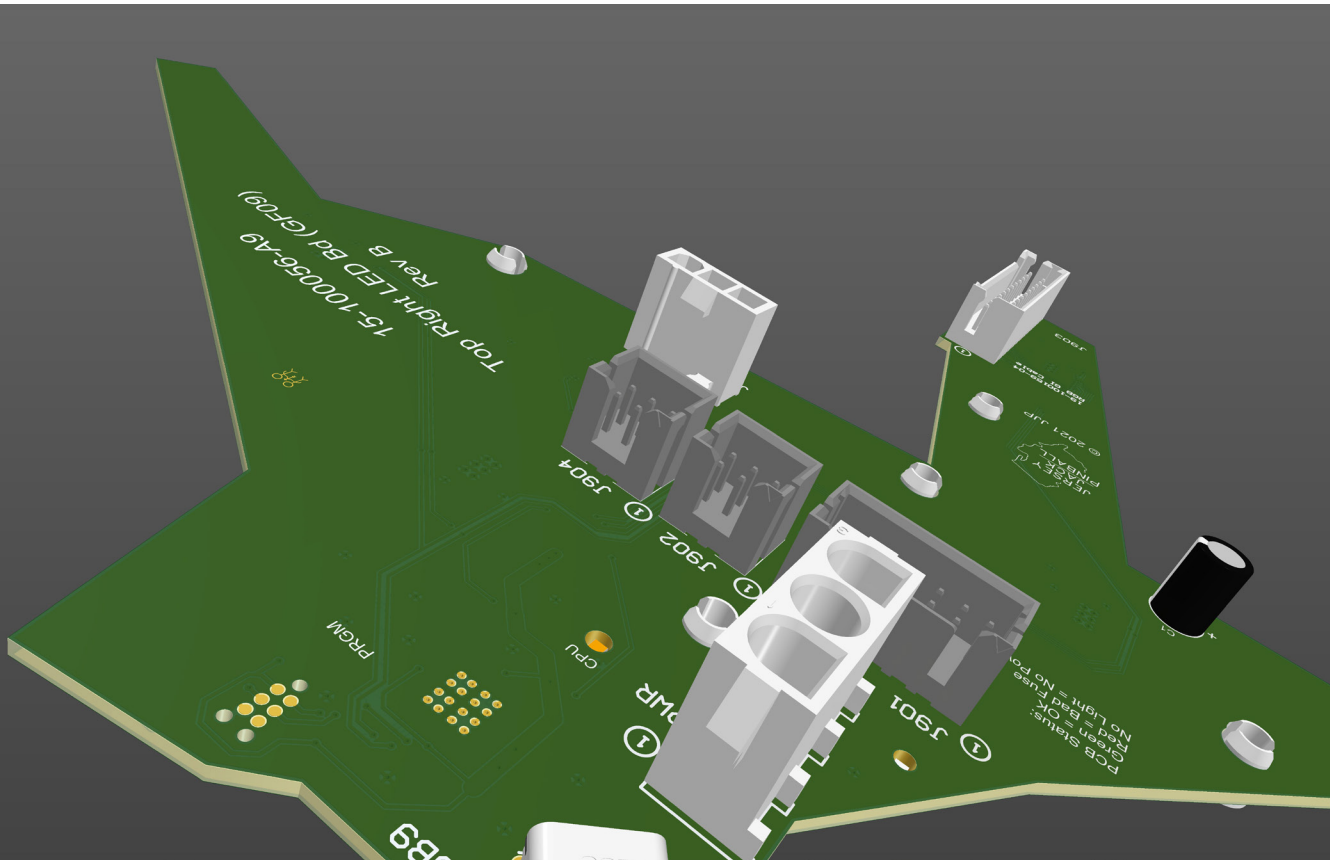
**Table 1 Slave Address**

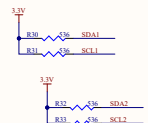
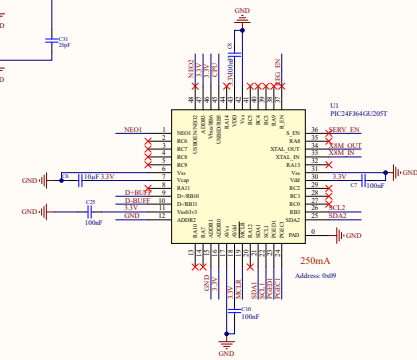
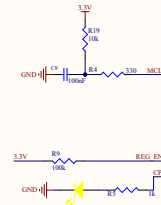
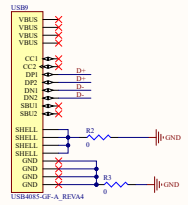
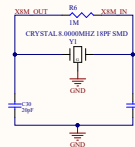
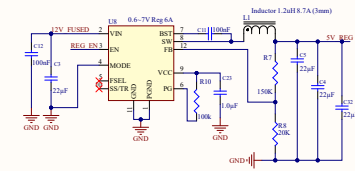
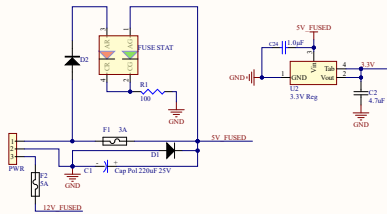
ADDR2	ADDR1	A7:A5	A4:A3	A2:A1	A0
0	GND	GND	00	00	00
1	GND	SCL	00	01	
2	GND	SDA	00	10	
3	GND	VCC	00	11	
4	SCL	GND	01	00	
5	SCL	SCL	01	01	
6	SCL	SDA	01	10	
7	SCL	VCC	01	11	
8	SDA	GND	10	00	
9	SDA	SCL	10	01	
10	SDA	SDA	10	10	
11	SDA	VCC	10	11	
12	VCC	GND	11	00	
13	VCC	SCL	11	01	
14	VCC	SDA	11	10	
15	VCC	VCC	11	11	

ADDR1/2 connected to GND, (A2:A1)/(A4:A3)=00;  
 ADDR1/2 connected to VCC, (A2:A1)/(A4:A3)=11;  
 ADDR1/2 connected to SCL, (A2:A1)/(A4:A3)=01;  
 ADDR1/2 connected to SDA, (A2:A1)/(A4:A3)=10;



**Top Right LED Bd[RevB]**  
**15-100056-A9**

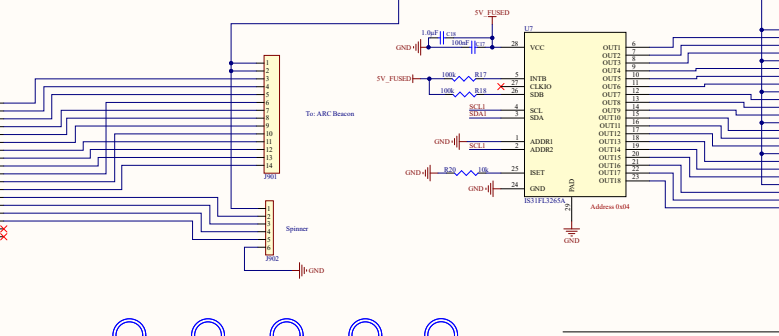
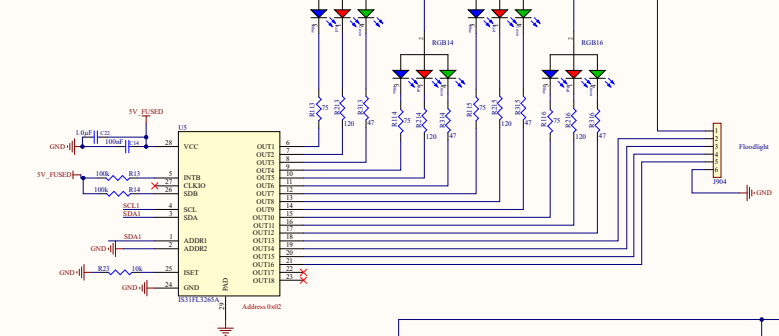
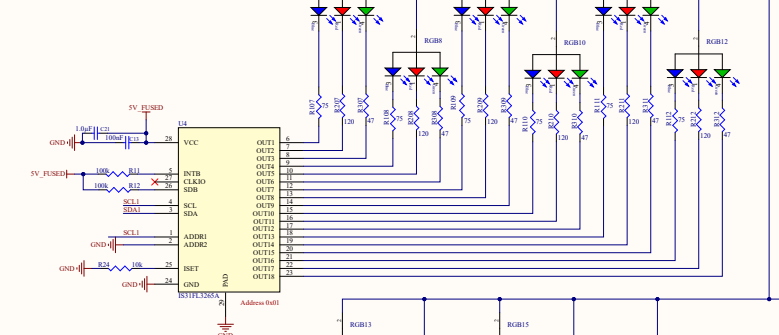
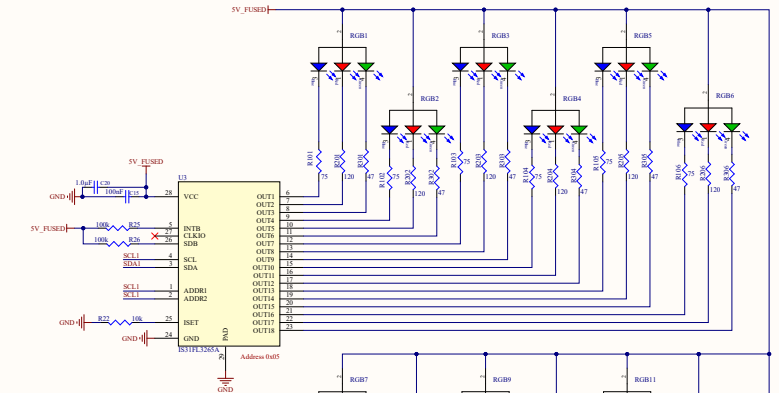




**Table 1 Slave Address**


ADDR2	ADDR1	A7:A5	A4:A3	A2:A1	A0
0	GND	GND	00	00	
1	GND	SCL	00	01	
2	GND	SDA	00	10	
3	GND	VCC	00	11	
4	SCL	GND	01	00	
5	SCL	SCL	01	01	
6	SCL	SDA	01	10	
7	SCL	VCC	01	11	
8	SDA	GND	10	00	
9	SDA	SCL	10	01	
10	SDA	SDA	10	10	
11	SDA	VCC	10	11	
12	VCC	GND	11	00	
13	VCC	SCL	11	01	
14	VCC	SDA	11	10	
15	VCC	VCC	11	11	

ADDR1/2 connected to GND, (A2:A1)/(A4:A3)=00;  
 ADDR1/2 connected to VCC, (A2:A1)/(A4:A3)=11;  
 ADDR1/2 connected to SCL, (A2:A1)/(A4:A3)=01;  
 ADDR1/2 connected to SDA, (A2:A1)/(A4:A3)=10;





# Matrix Switch Wiring Table

 Row	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Column 12	Column 13	Column 14	Column 15	Column 16
	J201-1	J201-2	J201-3	J201-4	J201-5	J201-6	J201-7	J201-8	J202-1	J202-2	J202-3	J202-4	J202-5	J202-6	J202-7	J202-8
	GRN BLK	GRN BRN	GRN RED	GRN ORN	GRN YEL	GRN GRY	GRN BLU	GRN VIO	GRY BLK	GRY BRN	GRY RED	GRY ORN	GRY YEL	GRY GRN	GRY BLU	GRY VIO
Row 1 J200-1	6-Ball Trough #5	Bumper Skill Lane	Upper Loop Ramp Enter	Right Orbit Hi	Disc Enter Rear	Upper Left Slingshot (Hi)		Right Inlane Target (Hi)	Scoop	U-Turn Right Sensor (Lo)	Under Flipper Sensor	Left Inlane Sensor		Bad Guy Home		
WHT BLK	1	9	17	25	33	41	49	57	65	73	81	89	97	105	113	121
Row 2 J200-2	6-Ball Trough #4	Jet Bumper	Right 3-Bank #1 (Hi)		Lift Ramp Target	Upper Left Slingshot (Lo)		Right Slingshot (Hi)		U-Turn Right Sensor (Hi)				Right Orbit Spinner		
WHT BRN	2	10	18	26	34	42	50	58	66	74	82	90	98	106	114	122
Row 3 J200-3	6-Ball Trough #3	Jet Bumper Target	Right 3-Bank #2	Upper Single Target #1 (Left)	Left 3-Bank #1 (Hi)	Left Outlane		Right Slingshot (Lo)		U-Turn Left Sensor (Lo)				Bad Guy Drop Target		
WHT RED	3	11	19	27	35	43	51	59	67	75	83	91	99	107	115	123
Row 4 J200-4	6-Ball Trough #2	Bumper Target #3 (Lo)	Right 3-Bank #3 (Lo)	Upper Single Target #2	Left 3-Bank #2			Right Inlane	Left Orbit Spinner	U-Turn Left Sensor (Hi)				Subway Rear Entry		
WHT ORN	4	12	20	28	36	44	52	60	68	76	84	92	100	108	116	124
Row 5 J200-5	6-Ball Trough #1 (Right)	Bumper Target #2	U-Turn Target	Upper Single Target #3	Left 3-Bank #3 (Lo)	Left Slingshot (Hi)		Right Inlane Target (Lo)	Lockup Trough #1 (Bottom)	Right Drop Target				Left Ramp Enter		
WHT YEL	5	13	21	29	37	45	53	61	69	77	85	93	101	109	117	125
Row 6 J200-6	6-Ball Trough Jam	Bumper Target #1 (Hi)	U-Turn Entry Wall Up	Upper Single Target #4 (Right)	Right Ramp Return	Left Slingshot (Lo)		Right Outlane	Lockup Trough #2					Left Ramp Made		
WHT GRN	6	14	22	30	38	46	54	62	70	78	86	94	102	110	118	126
Row 7 J200-7	6-Ball Trough #6 (Left)			Right Ramp Enter	Left Ramp Return			Auto Launch	Lockup Trough #3 (Top)					Left Orbit Hi		
WHT BLU	7	15	23	31	39	47	55	63	71	79	87	95	103	111	119	127
Row 8 J200-8				Upper Loop Ramp Made	Lift Ramp Up				Disc Enter Front					Subway		
WHT VIO	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128

= Mechanical Switch       = Opto       = Reflective Opto       = Not Used

# Dedicated Switch Wiring Table

	Return 1		Return 2		Return 3		Return 4		Return 5		Return 6		Return 7		Return 8	
	J601-7		J601-6		J601-5		J601-4		J601-2		J601-3		J601-8		J601-9	
	Common	BLK	GRY	BLK	BRN	BLK	RED	BLK	ORN	BLK	YEL	BLK	GRN	BLK	BLU	BLK
J601-1	Left Flipper EOS		Right Flipper OES		Upper Left Flipper EOS		Bad Guy									
BLK	D01		D02		D03		D04		D05		D06		D07		D08	

	Return 9		Return 10		Return 11		Return 12		Return 13		Return 14		Return 15		Return 16	
	J602-7		J602-6		J602-5		J602-4		J602-2		J602-3		J602-8		J602-10	
	Common	Yel	BLK	YEL	BRN	YEL	RED	YEL	ORN	YEL	GRY	YEL	GRN	YEL	BLU	YEL
J602-1	Left Flipper Switch Lower		Left Flipper Switch Upper		Right Flipper Switch Lower				Enter Menu Button		Up Volume + Button		Down Volume - Button		Escape Service Button	
BLK	D09		D10		D11		D12		D13		D14		D15		D16	

	Return 17		Return 18		Return 19		Return 20		Return 21		Return 22		Return 23		Return 24	
	J603-7		J603-6		J603-5		J603-4		J603-2		J603-3		J603-9		J603-10	
	Common	BLU	BLK	BLU	BRN	BLU	RED	BLU	ORN	BLU	YEL	BLU	GRN	BLU	GRY	BLU
J603-1	1st Coin Switch (Right Chute)		2nd Coin Switch (Left Chute)		3rd Coin Switch (DBA)		4th Coin Switch		5th Coin Switch		Ticket Mech Notch Switch					
BLK	D17		D18		D19		D20		D21		D22		D23		D24	

	Return 25		Return 26		Return 27		Return 28		Return 29		Return 30		Return 31		Return 32	
	J604-8		J604-6		J604-5		J604-4		J604-2		J604-3		J604-8		J604-10	
	Common	VIO	BLK	VIO	BRN	VIO	RED	VIO	ORN	VIO	YEL	VIO	GRN	VIO	BLU	VIO
J604-1	START Button		Coin Door Open		Plumb Bob Tilt		Bluetooth		Action Button		Headphone Panel Volume -		Headphone Panel Volume +		Headphone Panel Jack Sense	
BLK	D25		D26		D27		D28		D29		D30		D31		D32	

# 70 Volt Coil Table

70V Power F704	Drive 1		Drive 2		Drive 3		Drive 4		Drive 5		Drive 6		Drive 7		Drive 8	
	J104-9, Q308		J104-8, Q307		J104-7, Q306		J104-6, Q305		J104-5, Q304		J104-4, Q303		J104-3, Q302		J104-2, Q301	
	BRN	BLK	BRN	GRY	BRN	RED	BRN	ORN	BRN	YEL	BRN	GRN	BRN	BLU	BRN	VIO
J104-1													Knocker 1		Knocker 2	
BRN																

70V Power F705	Drive 9		Drive 10		Drive 11		Drive 12		Drive 13		Drive 14		Drive 15		Drive 16	
	J105-10, Q318		J105-8, Q317		J105-7, Q316		J105-6, Q315		J105-5, Q314		J105-4, Q313		J105-3, Q312		J105-2, Q311	
	RED	BLK	RED	BRN	RED	GRY	RED	ORN	RED	YEL	RED	GRN	RED	BLU	RED	VIO
J105-1	Left Flipper Power		Left Flipper Hold		Right Flipper Power		Right Flipper Hold		Trough VUK		Auto Launch		Right Slingshot			
RED																

70V Power F706	Drive 17		Drive 18		Drive 19		Drive 20		Drive 21		Drive 22		Drive 23		Drive 24	
	J106-10, Q328		J106-9, Q327		J106-7, Q326		J106-6, Q325		J106-5, Q324		J106-4, Q323		J106-3, Q322		J106-2, Q321	
	ORN	BLK	ORN	BRN	ORN	RED	ORN	GRY	ORN	YEL	ORN	GRN	ORN	GRY	ORN	VIO
J603-1	Bad Guy Drop Target Up		Bad Guy Drop Target Down													
ORN																

70V Power F707	Drive 25		Drive 26		Drive 27		Drive 28		Drive 29		Drive 30		Drive 31		Drive 32	
	J107-10, Q338		J107-9, Q337		J107-8, Q336		J107-6, Q335		J107-5, Q334		J107-4, Q333		J107-3, Q332		J107-2, Q331	
	TAN	BLK	TAN	BRN	TAN	RED	TAN	ORN	TAN	YEL	TAN	GRN	TAN	BLU	TAN	VIO
J107-1											Jet Bumper		Right Drop Target Up		Right Drop Target Down	
TAN																

70V Power F708	Drive 33		Drive 34		Drive 35		Drive 36		Drive 37		Drive 38		Drive 39		Drive 40	
	J108-10, Q408		J108-9, Q407		J108-8, Q406		J108-7, Q405		J108-5, Q404		J108-4, Q403		J108-3, Q402		J108-2, Q401	
	PNK	BLK	PNK	BRN	PNK	RED	PNK	ORN	PNK	YEL	PNK	GRN	PNK	BLU	PNK	VIO
J108-1	Upper Left Flipper Power		Upper Left Flipper Hold		Left Slingshot		Upper Left Slingshot				Scoop		Lockup Trough		Orbit Magnet	
PNK																

# 20 Volt Coil & Motor Table

20V Power F710	Drive 49		Drive 50		Drive 51		Drive 52		Drive 53		Drive 54		Drive 55		Drive 56	
	J110-2, Q421		J110-3, Q422		J110-5, Q423		J110-6, Q424		J110-7, Q425		J110-8, Q426		J110-9, Q427		J110-10, Q428	
	PLM	BLK	PLM	BRN	PLM	RED	PLM	ORN	PLM	YEL	PLM	GRN	PLM	BLU	PLM	GRY
J110-1	Lift Ramp Up		Lift Ramp Down				Lockup Diverter		Under-Ramp Post							
PLM	49		50		51		52		53		54		55		56	

20V Power F711	Drive 57		Drive 58		Drive 59		Drive 60		Drive 61		Drive 62		Drive 63		Drive 64	
	J111-2, Q431		J111-4, Q432		J111-5, Q433		J111-6, Q434		J111-7, Q435		J111-8, Q436		J111-9, Q437		J111-10, Q438	
	BLU	BLK	BLU	BRN	BLU	GRY	BLU	ORN	BLU	YEL	BLU	GRN	BLU	GRY	BLU	VIO
J111-1	U-turn Entry Up		U-turn Entry Down		U-turn Divider Down				Orbit Diverter							
BLU	57		58		59		60		61		62		63		64	

20V Power F712	Drive 65		Drive 66		Drive 67		Drive 68		Drive 69		Drive 70		Drive 71		Drive 72	
	J112-3, Q501		J112-4, Q502		J112-5, Q503		J112-6, Q504		J112-7, Q505		J112-8, Q506		J112-9, Q507		J112-10, Q508	
	VIO	BLK	VIO	BRN	VIO	RED	VIO	ORN	VIO	YEL	VIO	GRN	VIO	BLU	VIO	GRY
J112-1																
VIO	65		66		67		68		69		70		71		72	

# 12 Volt Motor, Relay & Light Table

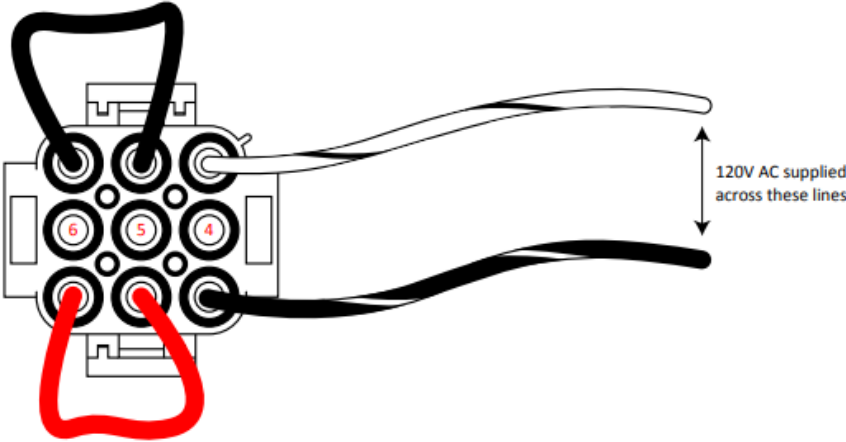
12V Power F709	Drive 41		Drive 42		Drive 43		Drive 44		Drive 45		Drive 46		Drive 47		Drive 48	
	J109-2, Q 411		J109-3, Q412		J109-4, Q413		J109-6, Q414		J109-7, Q415		J109-8, Q416		J109-9, Q417		J109-10, Q418	
	YEL	BLK	YEL	BRN	YEL	RED	YEL	ORN	YEL	GRY	YEL	GRN	YEL	BLU	YEL	VIO
J109-1	Bad Guy Stepper Pin 3 (C-Drive)		Bad Guy Stepper Pin 1 (A-Drive)		Bad Guy Stepper Pin 6 (D-Drive)		Bad Guy Stepper Pin 4 (B-Drive)		Spinning Disk Motor		Spinning Disk Motor Relay					
YEL	41		42		43		44		45		46		47		48	

12V Power F713	Drive 73		Drive 74		Drive 75		Drive 76		Drive 77		Drive 78		Drive 79		Drive 80	
	J113-3, Q511		J113-4, Q512		J113-5, Q513		J113-6, Q514		J113-7, Q515		J113-8, Q516		J113-9, Q517		J113-10, Q518	
	LT BLU	BLK	LT BLU	BRN	LT BLU	RED	LT BLU	ORN	LT BLU	YEL	LT BLU	GRN	LT BLU	GRY	LT BLU	VIO
J113-2	Shaker Motor				Ticket Mech Motor Drive								Start Button Light		Flash Bulb Topper	
LT BLU	73		74		75		76		77		78		79		80	

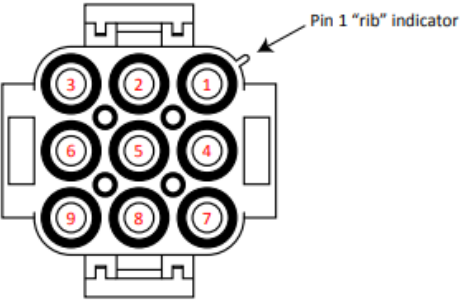
12V Power Topper	Drive 81		Drive 82		Drive 83		Drive 84		Drive 85		Drive 86		Drive 87		Drive 88	
	Topper		Topper		Topper		Topper		Topper		Topper		Topper		Topper	
Topper	Topper Back Illumination		Topper Left Illumination		Topper Right Illumination											
	81		82		83		84		85		86		87		88	



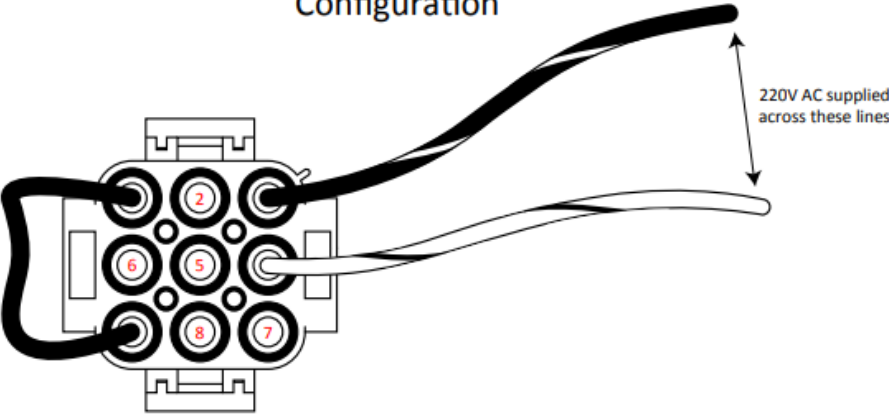
120V AC Input Configuration



Voltage Conversion Connector Pin-out



220V AC Input Configuration



Supply Voltage Conversion

If you need to convert your game to a different supply voltage than it was wired for at the factory, locate the 9-pin connector at the input of the transformer, in the bottom of the lower cabinet, see illustration to the left.

**Power the game down** and disconnect the 9-pin connector (it has locking tabs on each side). Looking at the back of the jumpered connector (the end with the wires protruding), locate the pin 1 “rib” indicator and orient the connector so that it is in the upper right hand corner, as shown opposite. The red numbers show pin numbers for the entire connector.

Look at the illustration for the desired configuration and compare it to the current configuration. Using a 0.084” pin extractor, remove all pins that require repositioning by pushing them out of the back of the connector, from the front. You can reuse existing wires as long as they were not damaged during the removal process. Fashion new, short jumper wires, as needed.

Using the appropriate illustration for reference, insert the jumper pins all the way into the connector, in the proper positions, from the back side, until they lock in place.

For a 120V supply voltage, connect the AC inputs across pins 1 & 7. Next, jumper pins 2 & 3 together with a short piece of black wire. Lastly, jumper pins 8 & 9 together with a short piece of orange wire.

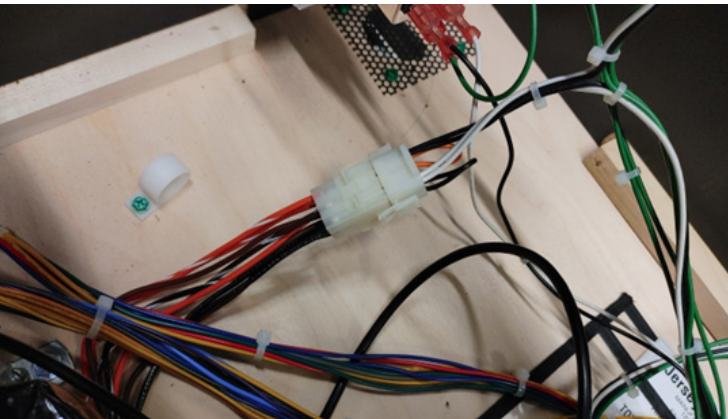
For a 220V supply voltage, connect the AC inputs across pins 1 & 4. Then jumper pins 3 & 9 together with a short piece of black wire.

**Note:** Your game has an ATX power supply. This power supply may have a voltage selection slide switches on its back panels that must be in the proper position (120V or 220V) before applying power to the game.

If re-pinning is not feasible, converting to 220V or 100V usage is also possible through plug in cabling adapters. Please reference part number “19-100117-00 - 220V AC Voltage Converter Cable” or “19-100116-00 - 100V AC Voltage Converter Cable” with JJP Customer Service.

**IMPORTANT NOTE:** If converting from 110V to 220V, the varistor and thermistor inside the service box **MUST** be changed to components rated for 220V service. Parts can be acquired via JJP customer Service.

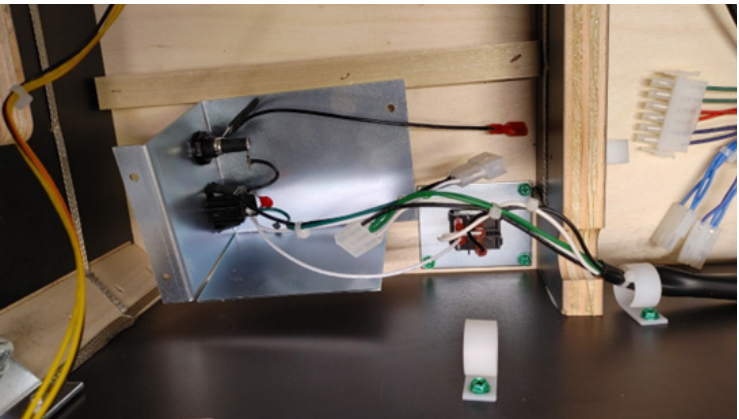
# 120V Operation (Default)



Connect cabinet harness directly to transformer tap as shown.

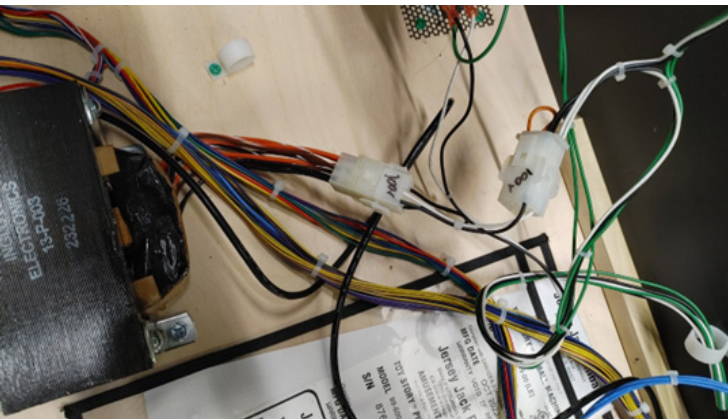


Standard 120v Service Box - 10A Fuse Installed



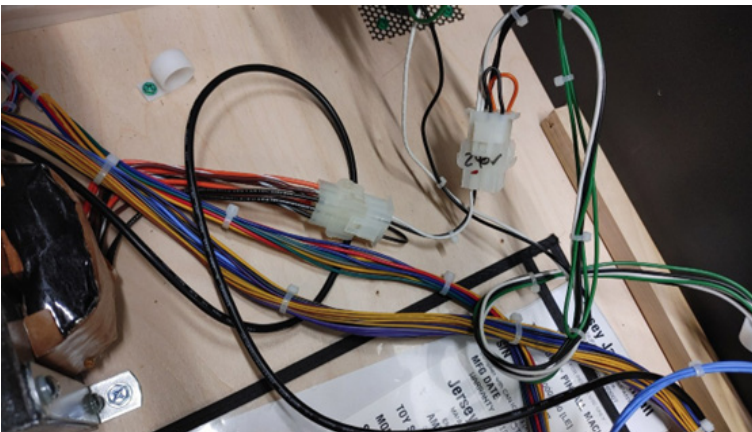
Internal connections for Service Box

# 100V Operation



Use 100v intermediate harness as shown.  
Service Box used is same as 120v.

# 220~240V Operation



Use 240v intermediate harness as shown.  
240v Service Box uses 5A fuse (pictured right)





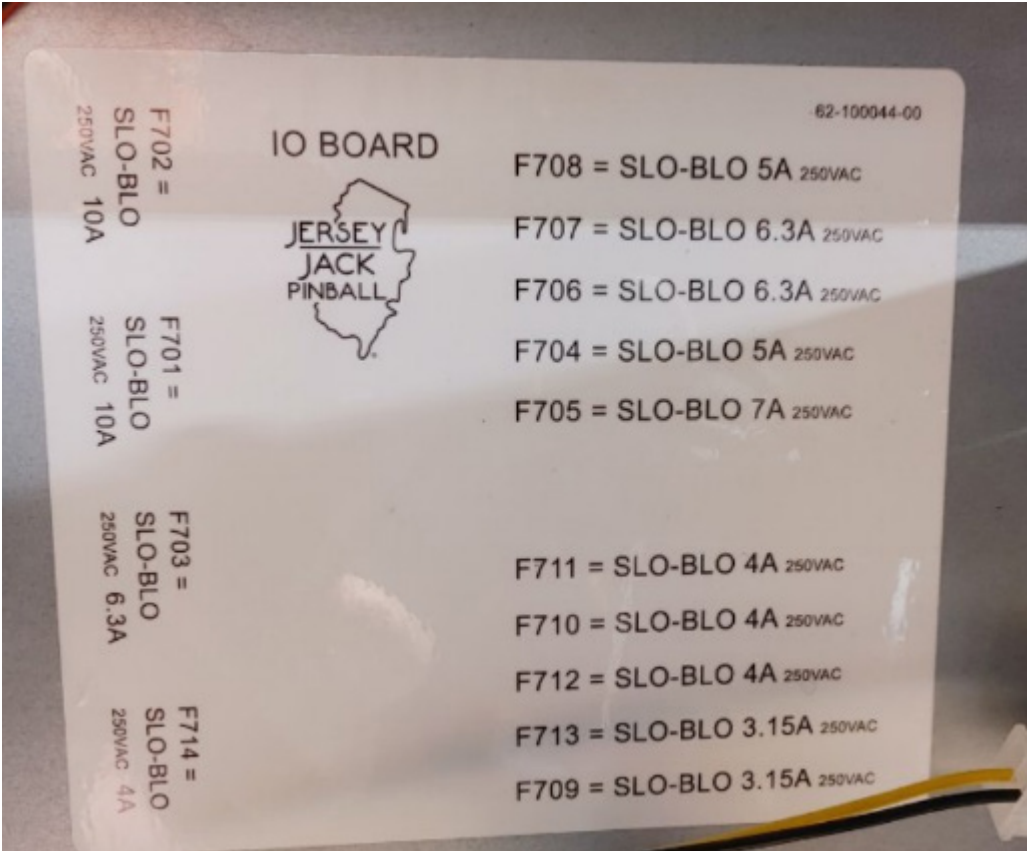
# FUSE INFORMATION

## Power Box - Line Fuse

US 10 AMP Slow Blow, 125 Volt, .25" X 1.25", 3AG  
EURO 5 AMP Slow Blow, 250 Volt, .25" X 1.25", 3AG

## Amplifier

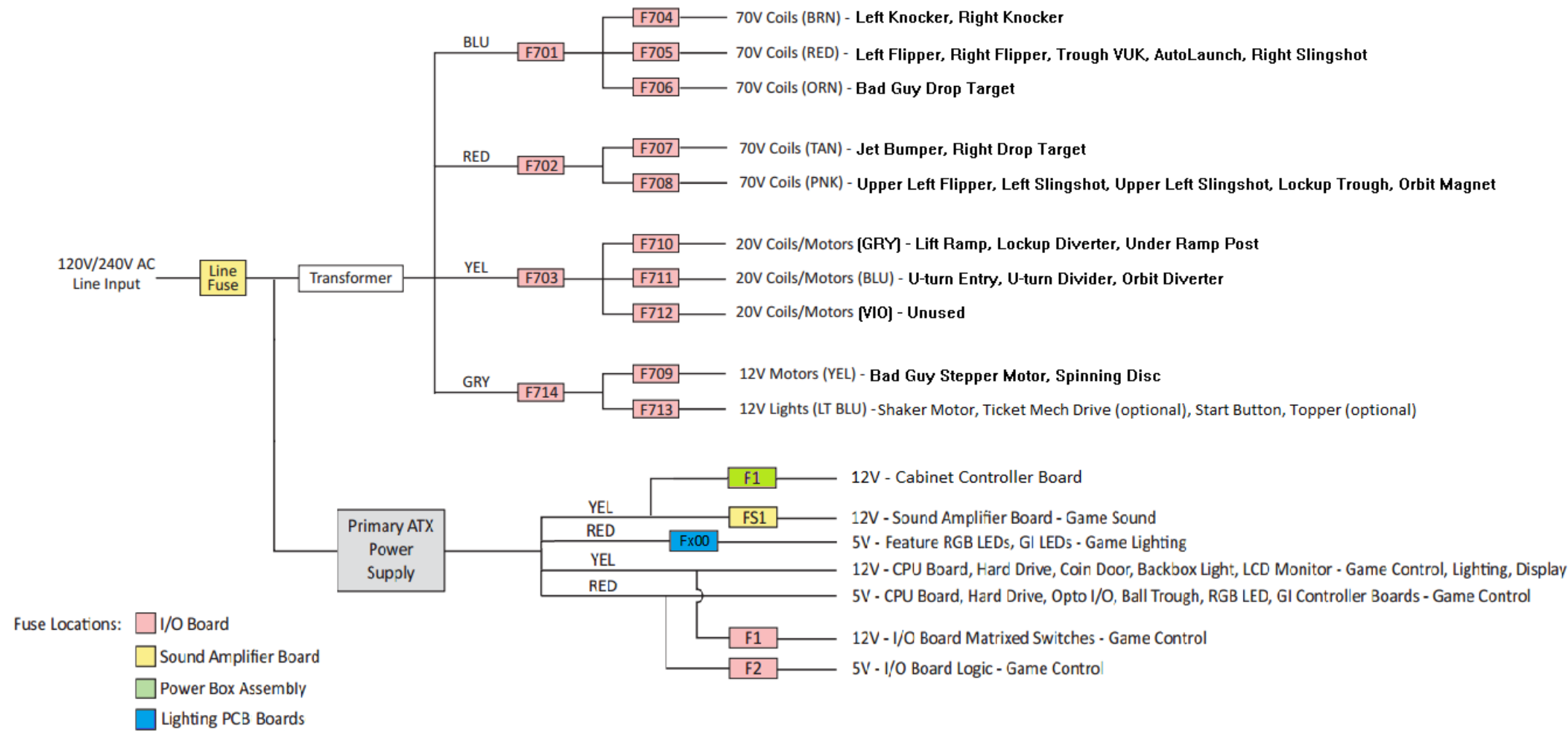
FS1 5 AMP Fast Blow, 250 Volt, 5X20mm



LOCATION	PART #	DESCRIPTION
POWER BOX		
LINE FUSE US	170-000110-SR	Fuse, Slow Blow, 10A, 125V, 0.25" x 1.25", 3AG
LINE FUSE EU	170-000205-SR	5A Slow Blow Glass Fuse 250V
AMPLIFIER		
FS1	170-000105-SM	5a 5x20mm glass blow fuse 125v
IO BOARD		
F1	Surface Mount	2a mini blade, 32v
F2	Surface Mount	2a mini blade, 32v
IO 701	170-000110-SM	10a 5x20mm glass slow blow fuse
IO 702	170-000110-SM	10a 5x20mm glass slow blow fuse
IO 703	170-000163-SM	6.3a 5x20mm glass slow blow fuse 125v
IO 704	170-000105-SM	5a 5x20mm glass blow fuse 125v
IO 705	170-000107-SM	7a 5x20mm glass slow blow fuse 125v
IO 706	170-000163-SM	6.3a 5x20mm glass slow blow fuse 125v
IO 707	170-000163-SM	6.3a 5x20mm glass slow blow fuse 125v
IO 708	170-000105-SM	5a 5x20mm glass blow fuse 125v
IO 709	170-000132-SM	3.15a 5x20mm glass slow blow fuse 125v
IO 710	170-000104-SM	4a 5x20mm glass slow blow fuse 125v
IO 711	170-000104-SM	4a 5x20mm glass slow blow fuse 125v
IO 712	170-000104-SM	4a 5x20mm glass slow blow fuse 125v
IO 713	170-000132-SM	3.15a 5x20mm glass slow blow fuse 125v
IO 714	170-000104-SM	4a 5x20mm glass slow blow fuse 125v

# THE GODFATHER FUSED POWER STREAM

## Fused Power Stream



Reference Diagrams & Schematics

# Notes

