



NOT IN THIS  
LIFETIME

# PINBALL MACHINE OWNERS MANUAL



JERSEY  
JACK  
PINBALL

# 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. We use the finest materials and processes available to build each machine, however there are certain things outside of our control. Overtime, your machine can show signs of wear, which is normal. Balls should be replaced at the first sign of imperfections on the ball surface.

### **JJP's Limited 90 Day Bumper to Post Warranty**

**What is covered on the game?** Our Bumper to Post " Limited Warranty" covers every part in your new Jersey Jack Pinball Machine for 90 days from the date of purchase written on your invoice. The LCD monitor will be covered for 1 year from the date of purchase written on your invoice.

**What is not covered?** Tax, labor, service calls, loss of income, negligence, misuse, abuse, alteration, 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, damaged caused by converting game from one region to another.

**Who is entitled to Warranty coverage?** The original owner.

**What will JJP do?** During the warranty period If a 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 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 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 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.

# 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**

GUNS N ROSES and all related elements © & ™ of GUNS N ROSES. INVISIGLASS® is a registered trademark of Jersey Jack Pinball®. The entire contents of this manual are ©201209 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!**

## CONGRATULATIONS ON YOUR GUNS N' ROSES PINBALL EXPERIENCE!

Everyone at Jersey Jack Pinball has worked very hard, with Passion for years to bring this amazing game to life.

In my longtime friendship with Slash we often spoke over the years about creating an amazing game that would bring the GnR concert excitement to the player. Eric and his Team have done that and perhaps even more.....it's sensory overload !

Our loyal customers and players love what we create (they have Patience ;-)  
and we are grateful and mindful that our games are forever-treasured playable works of art. We strive to capture the best and to give our players the greatest pinball games possible.

Special thanks to Axl, Duff, Slash, Fernando, Meegan, everyone at GnR and all of the people backstage that we count on to create our games. Thanks to everyone at JJP for the love and attention to detail that went into this game, we hope it brings smiles and happiness forever.

Keep Rockin' the Pinball Machine.

Thank You,  
Jack Guarnieri  
Jersey Jack



**GUNS N ROSES**

# GUNS N ROSES

## DOCUMENT REVISION HISTORY

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Manual Written By: Barry Engler

Special thanks to

Ax Man D

Joe Katz

Mark Molitor

And the JJP Crew

FOR SERVICE CALL YOUR AUTHORIZED DISTRIBUTOR

# JERSEY JACK PINBALL

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GUNS N ROSES

# TABLE OF CONTENTS

Explicit Mode Setting.....	I
GN'R Topper Installation.....	II
Setting up Bluetooth & WIFI.....	III
Sensor calibration.....	31

## *Game Assembly & Setup*

Unpacking Your Guns N' Roses Game .....	1
Unboxing Game .....	2
Removing Playfield Glass .....	6
Playfield Positions.....	7
Adjusting Plumb Bob Tilt .....	9
Playfield Pitch Bubble Level.....	10
Guns N Roses Rules Flowchart.....	11

## *The GnR Menu System*

Menu System Basics.....	13
Tests.....	15
Settings .....	33
Audits.....	53
Utilities .....	54
Install Presets.....	73
Reports.....	74
Resets.....	75

## *Game Parts Information*

GnR Lower Cabinet Assembles .....	77
Backbox Assembly Outside .....	82
Backbox Assembly Inside.....	84
Backbox PCB Base Assembly PN 51-100041-01.....	86
Backbox Speaker Bar Assy. PN 51-100051-00.....	87
Back Glass Assembly.....	88
Above-Playfield Assemblies .....	89

*Game Parts Information Continued*

Under-Playfield Assemblies ..... 90

Shooter Lane Rail Assy PN: 51-100103-00..... 91

Lower Bumper Exit Gate Assy. PN 51-100118-00..... 92

Shooter Lane Gate Assy. PN: 51-100121-00 ..... 92

Center Spinner Guard Assy. LE PN 51-100124-00 ..... 93

Center Spinner Guard Assy. SE PN 51-100124-01 ..... 93

    Upper Playfield Ball Trap Assy. LE PN: 51-100112-00

    CE PN: 51-100112-02..... 94

Upper Playfield Gate Assy. LE & CE PN: 51-100096-00 ..... 94

Pop Bumper Plastic Guard SE PN: 51-100110-01

    LE PM: 51-100110-00 CE PN: 51-100110-02..... 95

Left Orbit Ball Trap Assy. SE PN: 51-100125-01

    LE PN: 51-100125-00 LE PN: 51-100125-02..... 96

Slash Right Pamp Mount Bracket PN: 51-100081-00 ..... 97

Upper Right Plastic Guard SE PN: 51-100111-01

    LE PN: 51-100111-00 CE PN: 51-100111-02..... 97

Center Spinner Guard Assy. CE PN: 51-100124-02 ..... 98

Pop Bumper Ring Assy. PN: 11-005004-01..... 98

Pop Bumper Top Assy. PN: 51-100162-XXX..... 99

Pop Bumper Bottom Assy. PN: 51-000004-01..... 100

Upper Loop Ramp Switch PN: 51-100077-00..... 101

Slash Flap Gate PN: 51-100079-00..... 101

Back Panel Assy. SE PN: 51-100052-01..... 102

Back Panel Assy. LE PN: 51-100052-00..... 103

Back Panel Assy. CE PN: 51-100052-02..... 104

DrumStick Target Assy> SE PN: 51-100053-01..... 105

DrumStick Target Assy. LE PN: 51-100053-00

    CE PN: 51-100053-02..... 105

Plastic Right Ramp Assy. PN: 51-100054-00..... 106

Plastic Left Ramp Assy. SE PN: 51-100061-01..... 107

Plastic Left Ramp Assy. LE & CE PN: 51-100061-00..... 108

Slash Return Switch Left PN: 51-100074-00..... 109

Acrylic Guitar Assy SE PN: 51-100128-00..... 110

Spinning Guitar Pick Assy. PN: 51-100066-00..... 110

Snubber Side Bracket Assy. Left PN: 51-100065-00..... 111

*Game Parts Information Continued*

Snubber Side Bracket Assy. Right PN: 51-100065-01..... 111

Drumstick Ramp SE & LE PN: 51-100055-00  
 CE PN: 51-100055-01..... 112

CatWalk Ramp Assy. PN: 51-100142-00..... 112

CatWalk Diverter Assy. PN: 51-100062-00..... 113

Apron Assy. SE & LE PN: 52-100013-XX..... 114

Apron Assy CE PN: 52-100016-00..... 115

Coma Ball Lock Down Post CE PN: 51-100020-00..... 116

Hat Assy. PN 51-100080-00..... 117

Single Coil Magnet Assy. PN: 51-100012-00..... 117

Rock Stage SE PN: 51-100123-00..... 118

Flipper Assy. Right Bottom PN: 52-000121-00  
 Top PN: 52-000131-00..... 119

Flipper Assy. Left PN: 52-000132-00..... 120

Upper Playfield Flipper Assy. LE & CE PN: 52-000151-00..... 121

Bass Head Assy. LE & CE PN: 52-100082-00..... 122

PopUp Diverter Assy. LE & CE PN: 52-100063-00..... 123

Dual UP Down Posts LE & CE PN: 52-100067-00..... 124

6 Ball Trough Assy. PN: 51-100022-00..... 125

Auto Launch Assy. PN: 51-000026-00..... 126

SlingShot Assy. PN: 51-000003-00..... 127

Playfield Support Bracket PN: 51-100001-00..... 127

Playfield Controller Board Assy. PN: 51-000103-05..... 128

Opto Board Assy. PN: 52-100008-00..... 128

Record Assy. PN: 51-100058-00..... 129

Saucer VUK PN: 51-100104-00..... 130

VUK Assy. LE & CE PN: 51-100109-00..... 131

Upper Playfield Ball Guide Assy. LE PN: 51-100183-00  
 CE PN: 51-100083-01..... 132

Left Return Lane Assy. SE & LE PN: 51-100106-00  
 CE PN: 51-100147-00..... 133

Right Return Lane Assy. SE & LE PN: 51-100106-01  
 CE PN: 51-100127-01..... 133

High Hat Assy. LE & CE PN: 51-100092-00..... 134



*Game Parts Information Continued*

High Hat Mounting Assy. LE & CE PN: 51-100086-00..... 134

Cybal Assy. LE & CE PN: 51-100092-00..... 135

Upper Center Loop Ramp Assy. PN: 51-100076-00..... 135

Right Ramp Gate Assy. PN: 51-100122-00..... 136

Left Ramp Rear Mount PN: 51-100087-00..... 136

Inner Ball Trough Assy. CE PN: 51-100100-00..... 137

USB Camera Assy. PN: 51-005041-00..... 137

SSD BackBox Mount PN: 51-005044-03..... 138

Monitor Magnet Latch PN: 51-100050-00..... 138

27" LCD Monitor Assy. PN: 51-100021-00..... 139

Door & Interlock Switch Assy. PN: 51-000035-00..... 140

Line Filter Box Assy. PN: 51-005023-00..... 140

Action Button, Lockdown Assy PN: 51-000066-10..... 141

Headpone / Bluetooth Assy. PN: 51-000035-00..... 141

Cabinet Power Box Assy, U.S. PN: 51-006001-02..... 142

Cabinet Power Box Assy, International PN: 51-006001-11..... 143

Hot Rail, Short - Right Side PN: 51-100141-00 SE  
     51-100164-00 LE & CE..... 144

Hot Rail, Long - Left Side PN: 51-100170-00 SE  
     PN: 51-100165-00 LE & CE..... 145

Lockdown Bar Assy. With Button PN: 51-100101-01 SE  
     PN: 51-100101-00 LE PN: 51-100134-00 CE..... 146

Ball Shooter Assy. PN: 51-000092-09 SE PN: 51-100092-08 LE..... 147

Ball Shooter Assy. PN: 51-100131-01 CE..... 148

*Reference Diagrams & Schematics*

6 - Ball Trough Opto Receiver Board PN: 15-100004-00..... 150

6 - Ball Trough Opto Transmitter Board PN: 15-100002-00..... 152

Opto IO Board PN: 15-100005-00..... 153

Playfield Controller Board PN: 15-100019-00..... 155

I/O PCB Assy PN: 15-004001-01..... 157

LED Boards and Cables..... 176

Single RGB Board PN: 15-100008-00 & 15-100008-01..... 177

Flipper Area RGB LED Board PN: 15-100016-01..... 178

American Tour RGB LED Board PN: 15-100016-02..... 180

EURO Tour RGB LED Board PN: 15-100016-03..... 182

Pacific Tour RGB LED Board PN: 15-100016-04..... 184

Shooter Lane RGB LED Board PN: 15-100016-05..... 186

UR Flipper RGB LED Board PN: 15-100016-06..... 188

LP Area RGB LED Board PN: 15-100016-07..... 189

Left Ramp Area RGB LED Board PN: 15-100016-09..... 191

Drums Area RGB LED Board PN: 15-100016-10..... 193

Lighting Truss LED Board PN: 15-100016-13..... 195

Left Inlane RGB LED Board PN: 15-100016-14..... 197

AXL Lane Area RGB LED Board PN: 15-100016-15..... 198

RGBW PCN No Connector Assy. PN: 15-100023-01..... 199

Single Reflective Opto Board PN: 15-100024-02..... 200

RGB GI PCB Assy. PN: 15-004251-05..... 201

Single RGBW LED Board No Connector PN: 15-004328-00..... 202

Double RGB LED Board PN: 15-004129-05..... 203

Matrix Switch Wiring Table..... 204

Dedicated Switch Wiring Table..... 205

70 Volt Coil Table..... 206

20 Volt Coil & Motor Table..... 207

12 Volt Coil Motor, Relay & Light Table..... 207

GNR Fused Power Stream..... 208



**NOTICE**

**NOTICE**

# EXPLICIT MODE TURNED OFF

**THIS GAME IS SET - UP FOR FAMILY FRIENDLY MODE OUT OF THE BOX.  
YOU MUST CHANGE THE SETTINGS TO ENABLE EXPLICIT MODE.**

**PARENTAL  
ADVISORY  
EXPLICIT CONTENT**

## EXPLICIT MODE FEATURES:

**PARENTAL  
ADVISORY  
EXPLICIT CONTENT**

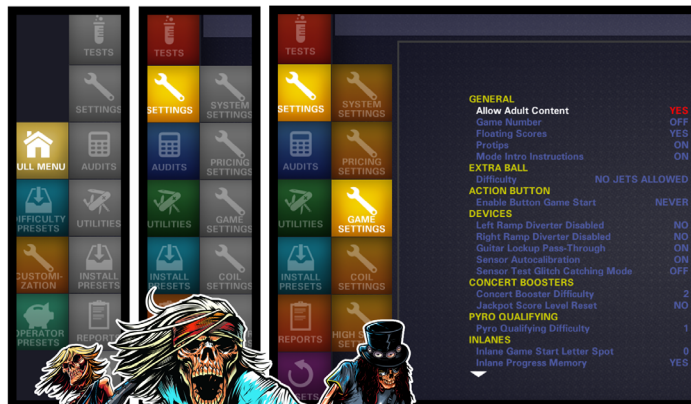
EXPLICIT SONGS NOT AVAILABLE IN FAMILY MODE:

**IT'S SO EASY, MR. BROWNSTONE,  
OUT TA GET ME, COMA, DOUBLE TALKIN' JIVE**  
EXPLICIT AUDIO CALLS AND VIDEO CLIPS

### TO CHANGE SETTINGS:

- OPEN COIN DOOR
- HIT ENTER BUTTON (TO ENTER DIAGNOSTICS)
- GO TO FULL MENU
- GO TO SETTINGS
- GO TO GAME SETTINGS
- UNDER THE GENERAL HEADER ALLOW ADULT CONTENT CHANGE TO YES

\*NOTE THE GAME WILL REBOOT AFTER SAVING THIS CHANGE\*



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PINBALL

70-100007-00

# GET THE MOST OUT OF YOUR GAME

**Dont forget to adjust the mode setting**

**IT'S SO EASY  
MR. BROWNSTONE**

**OUT TA GET ME**

**COMA**

**DOUBLE TALKIN' JIVE**

**ARE ONLY AVAILABLE WITH THE EXPLICIT MODE ENABLED**



# GN'R TOPPER INSTALLATION INSTRUCTIONS



## TABLE OF CONTENTS:

**SPEAKER BOX INSTALL**  
 ATTACHING SPEAKER BRACKET  
 ATTACHING SPEAKER ASSEMBLY TO CABINET  
 ATTACHING CABLES

**ACRYLIC SIGN INSTALL**  
 MOUNTING ACRYLIC SIGN TO BRACKET  
 ATTACHING POWER CABLES FOR LIGHTS



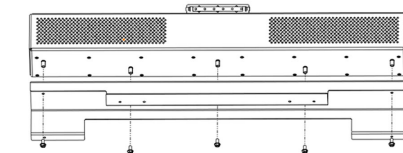
**IMPORTANT: TURN OFF & UNPLUG GAME FROM WALL BEFORE INSTALLING TOPPER. TOPPER IS HEAVY, USE 2 PEOPLE TO INSTALL.**

## SPEAKER BOX INSTALL ATTACHING SPEAKER BRACKET

**1**  
 OPEN TOPPER BOX & CAREFULLY UN-PACK THE ENCLOSED ITEMS.



**2**  
 ATTACH SPEAKER BRACKET TO SPEAKER BOX BY TIGHTENING THE 5 SUPPLIED #10-32 SCREWS USING PHILLIPS SCREWDRIVER.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	10-100174-00	TOP SOUND BAR MOUNTING BRKT	1
2	51-005010-02	SOUND BAR	1
3	80-002010-06	#10-32 x 3/8" HWH Phillips MS. Serrated	5

## ATTACHING SPEAKER ASSEMBLY TO CABINET

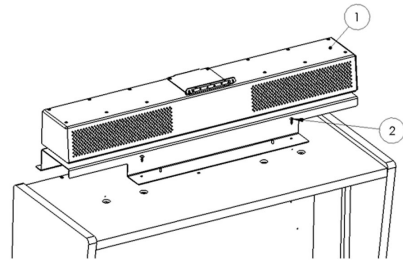
**3**  
 PLACE SPEAKER BOX WITH ATTACHED BRACKET ON TOP OF CABINET.



**4**  
 LINE-UP PRE-DRILLED HOLES IN CABINET WITH SPEAKER BRACKET.



**5**  
 TIGHTEN THE 4 SUPPLIED #6 x 1/2" SCREWS INTO PRE-DRILLED HOLES USING PHILLIPS SCREWDRIVER.



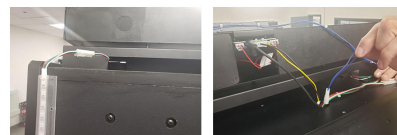
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	51-100116-00	SOUND BAR TOPPER ASM	1
2	82-007006-08	#6 x 1/2" TH SMS	4

## ATTACHING CABLES

**6**  
 PLUG IN AUDIOJACK AND SPEAKER POWER CABLE.



**7**  
 PLUG IN LIGHT STRIPS AND FEED BLUE CABLE FROM TOPPER INTO THE BACKBOX.



PAGE 1 of 2

#71-100011-00

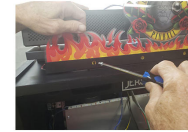
## ACRYLIC SIGN INSTALL

### MOUNTING ACRYLIC SIGN TO BRACKET

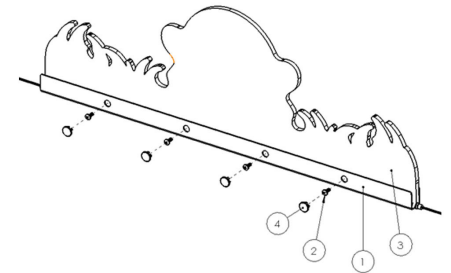
**8**  
 SLIDE ACRYLIC TOPPER SIGN INTO BRACKET. LINE-UP THE FOUR HOLES.



**9**  
 ATTACH THE 4 SUPPLIED #8 SCREWS BY SLIDING FASTENER THROUGH BRACKET HOLE AND ACRYLIC TOPPER BRACKET. TIGHTEN SCREW USING PHILLIPS SCREWDRIVER.



**10**  
 COVER HOLES WITH SNAP IN PLUGS BY PRESSING PLUGS IN BY HAND.



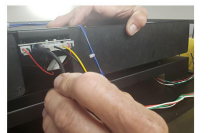
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	10-100189-00	SLSH ACRYLIC TOPPER BRKT	1
2	80-000008-06	8-32 x 3/8" PPH MS	4
3	30-100064-00	SLSH ACRYLIC TOPPER	1
4	30-000095-01	.375 LD. NYLON PLASTIC SNAP-IN PANEL PLUG	4

### ATTACHING POWER CABLES FOR LIGHTS AND SPEAKERS

**11**  
 LOCATE THE BLUE CABLE (ACRYLIC TOPPER LIGHT) FROM STEP #7 AND PLUG IT INTO THE MATCHING BLUE CABLE AS SHOWN.



**12**  
 ATTACH SPEAKER POWER CABLE ON THE BACK OF THE TOPPER AS SHOWN.



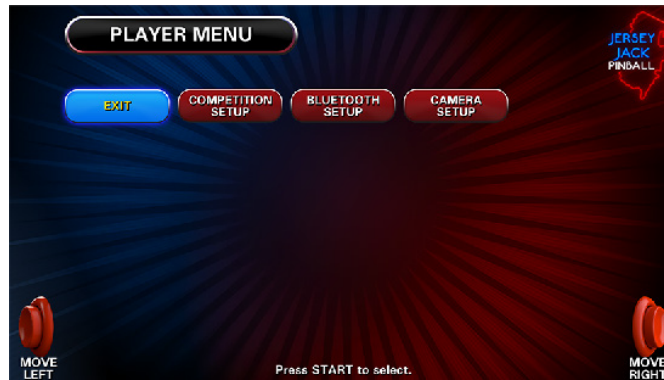
PAGE 2 of 2

#71-100011-00

# 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

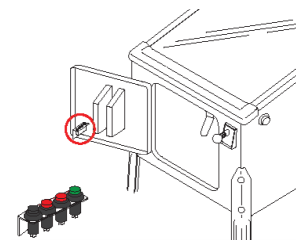
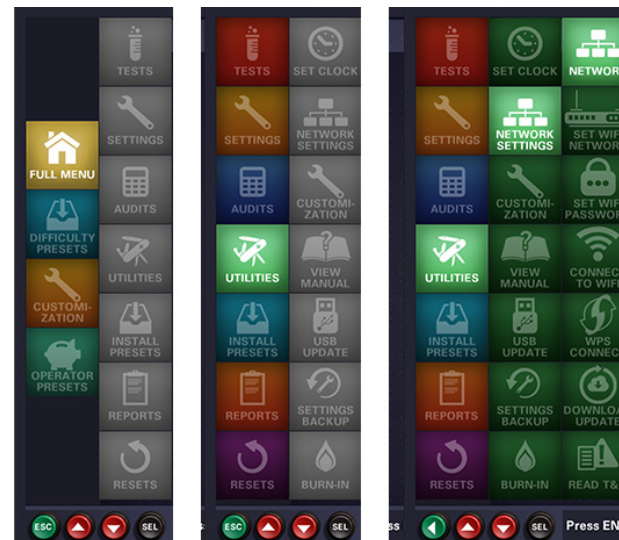


Once in Bluetooth menu it will attempt to scan for Bluetooth devices.  
 Make sure your device is in pairing mode.  
 Once the Bluetooth device shows up in the list, select it with the start button.  
 Bluetooth should pair the device and start working.

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.

Currently enabling WIFI allows for downloading code updates.  
 To setup WIFI on your machine.

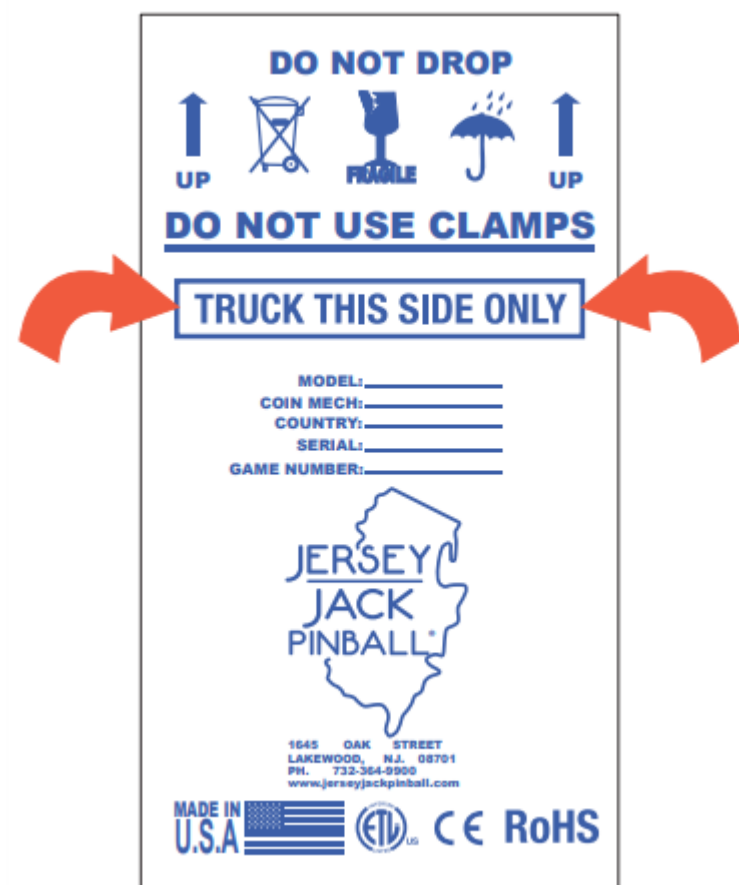
Enter the "Test Menu" by pressing the black button once.  
 Using either red button, highlight "Utilities", select with the black button.  
 Using either red button, highlight "Network Settings", select with the black button.  
 Terms and Conditions.  
 Press the black button to read.  
 Press either red button to scroll through T&C.  
 Once "Terms Accepted" is displayed, press the green button to exit.  
 Using either red button, highlight "Set WIFI Network", Select with the black button.  
 Press the black button to "Scan Available Networks".  
 Using the red buttons highlight your Network, select with the black button.  
 Exit out of "Set WIFI" by pressing the green button.  
 Using the red buttons, highlight "Set WIFI Password", select with the black button.  
 Use flipper buttons to change the character set.  
 Use black and green buttons to move cursor between characters.  
 Use red buttons to change characters within a character set.  
 Press "Start Button" to save password once you're finished.  
 Exit out of "Set WIFI Password" by pressing the green button.  
 Using the red buttons, highlight "Connect to WIFI", select with the black button.  
 Connected to Network "xxxx" will be shown once connected to network.  
 Using the red buttons, highlight "Network", select with the black button.  
 Press the "Start Button" to test the Network.  
 Last Network test "Passed" displayed.  
 Press the red button to "Turn Off Network".  
 Press the Black Button to "Forget Network".  
 Press the green button to "Exit".



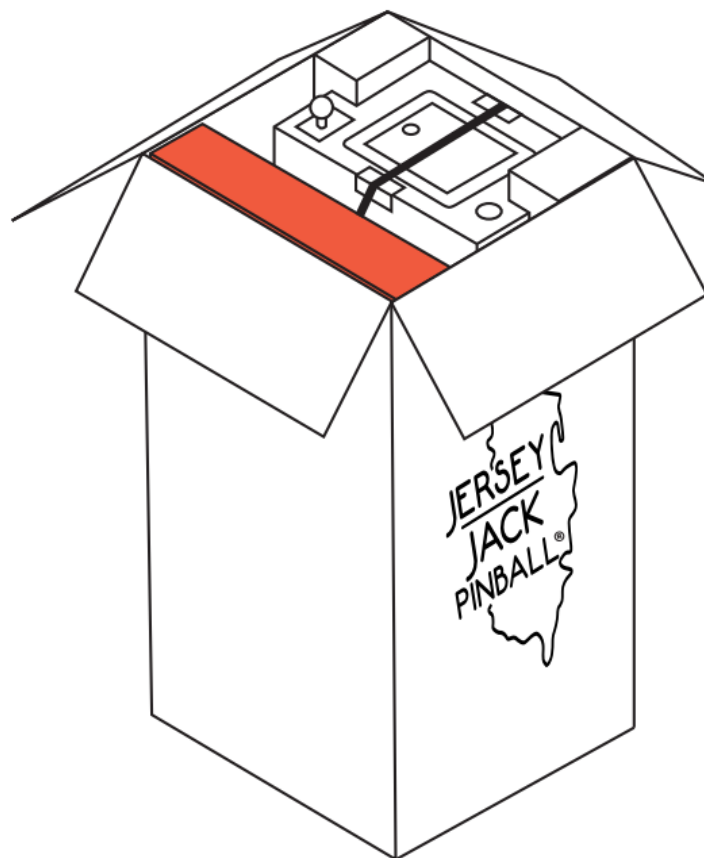
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# UNPACKING YOUR GUNS N ROSES GAME

1) Using wire cutters or scissors, remove all shipping bands from the outside of the carton, noting the side with the “TRUCK THIS SIDE ONLY” marking. With a utility knife and needle-nose pliers, carefully cut the tape and remove all staples along the seams of the carton’s top flaps, then fold them open. Remove the large, flat sheet of cardboard. Pull out the legs tray and remove all parts. Check all loose parts against the packing list on this page.



The “TRUCK THIS SIDE ONLY” side of the box.



Opening the shipping carton.

## Tools Required:

- Wire cutters or Scissors
- Needle-nose pliers
- Utility knife
- Ratchet and 5/8” socket (or 5/8” wrench)
- #2 Phillips screwdriver
- Torpedo bubble level

## Loose Parts Packing List

- 4 pinball machine legs, with levelers and tightening nuts
- 8 acorn-head leg bolts
- 6 steel mirror-finish pinballs
- 1 USA line power cable
- 1 “L”-shaped, 5/16” hex key
- 1 steel setup multi-tool
- 1 flipper gauge
- spare guitar pick spinner decals
- spare set of slingshot plastics
- assorted plastic game key fobs
- 1 mylar slingshot PF protector set
- set of ball drop and corner protector
- 1 GnR pricing card set
- 2 3/16” ID mini post silicone, clear
- 2 2” silicone ring, clear
- 2 black plastic push-in, ribbed rivets
- 2 spare slingshot silicone rings
- 1 3/8” OD silicone mini post rubber
- 2 3/16” ID silicone mini post rubbers
- 4 heavy, felt cabinet protectors
- 1 topper (CE games only)

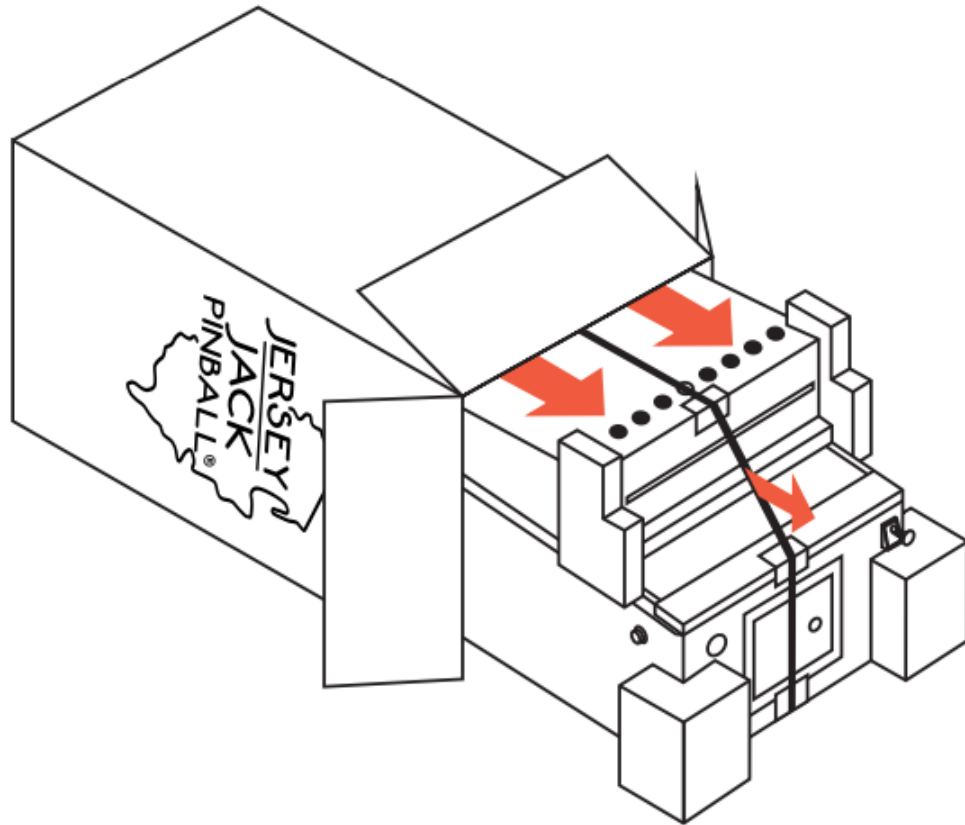
**Note:** If anything is missing from your loose parts, send an email to [warranty@jerseyjackpinball.com](mailto:warranty@jerseyjackpinball.com) for a replacement.

### If you wish to save your shipping carton:

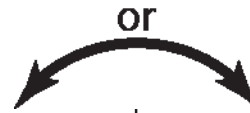
2) With the help of at least one other person, carefully tip the carton over and lay it on its “TRUCK THIS SIDE ONLY” side. Using the nylon strap as a handle (**DO NOT PULL ON THE GAME'S BALL SHOOTER!**), slide the game and packing materials out of the carton.

**Note:** You may need to spread a blanket or some other form of cushion under the game to protect the floor.

3) **DO NOT CUT THE NYLON STRAP** holding the backbox down at this point. Remove the foam padding from the corners of the game and carefully stand it upright again (as it was in the carton during shipping).



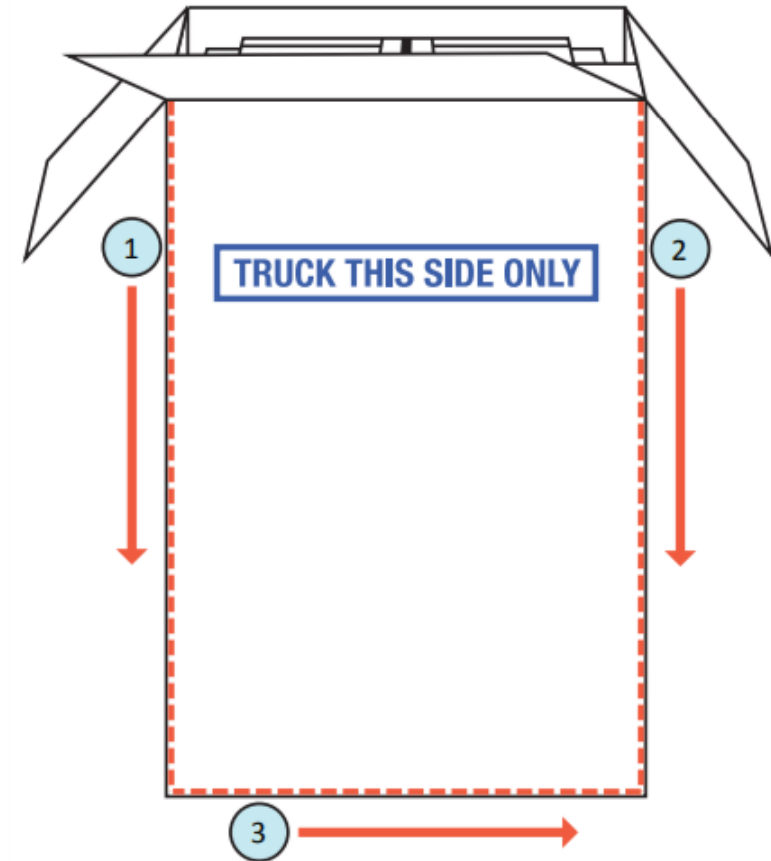
Sliding the game out of the carton.



### If you do not wish to save your shipping carton:

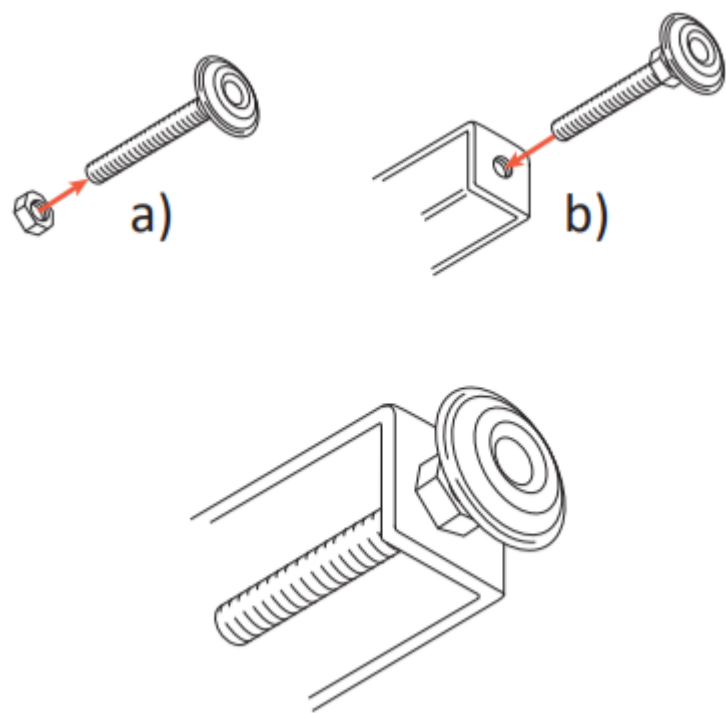
2) Using a utility knife, remove the “TRUCK THIS SIDE ONLY” side of the shipping carton. Carefully cut down the left and right sides of the box. Let the flap fall to the floor, then cut across the bottom edge (taking care not to damage the floor).

3) **DO NOT CUT THE NYLON STRAP** holding the backbox down at this point. Remove the foam padding from the corners of the game.



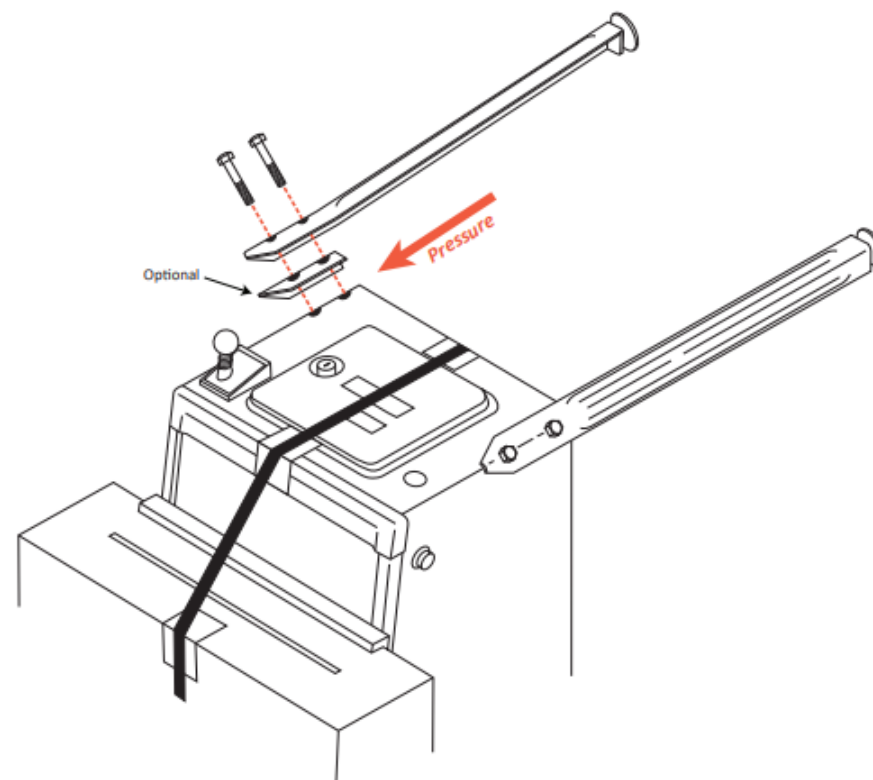
Removing the “TRUCK THIS SIDE ONLY” side of the carton.

**4)** Locate the game's four legs & four tightening nuts. Add a tightening nut and a leg leveler to each leg as shown in figure below: a) Install a tightening nut onto each leveler; hand thread it all the way down, next to the foot of the leveler. b) Hand thread the leveler/nut into each leg until the tightening nut is against the base of the leg. With the cabinet set up on a perfectly level surface, this should provide a playfield pitch of approximately 6.5°, front-to-back.



Installing a leg leveler and tightening nut.

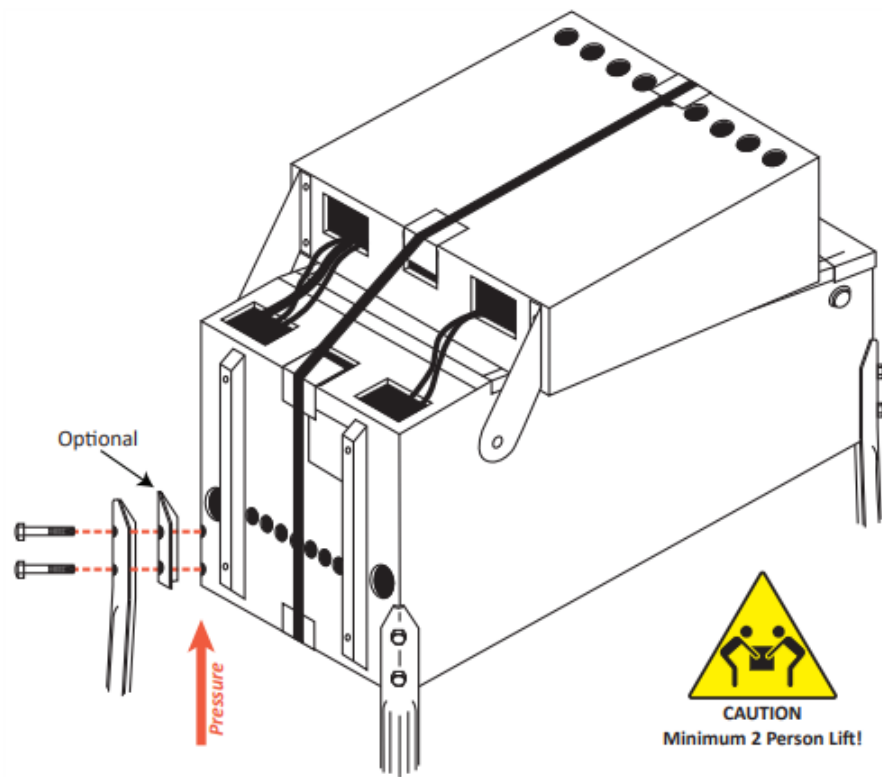
**5)** Locate the eight acorn-head leg bolts in the loose parts. Thread 2 leg bolts through each leg (and through a heavy felt cabinet protector, if desired) and attach it to the cabinet. Using a 5/8" socket and ratchet, a 5/8" wrench, or the cut-out in the provided multi-tool, tighten the bolts firmly, while maintaining pressure (in the direction of the red arrow) on each leg.



Installing the front legs and cabinet protectors.

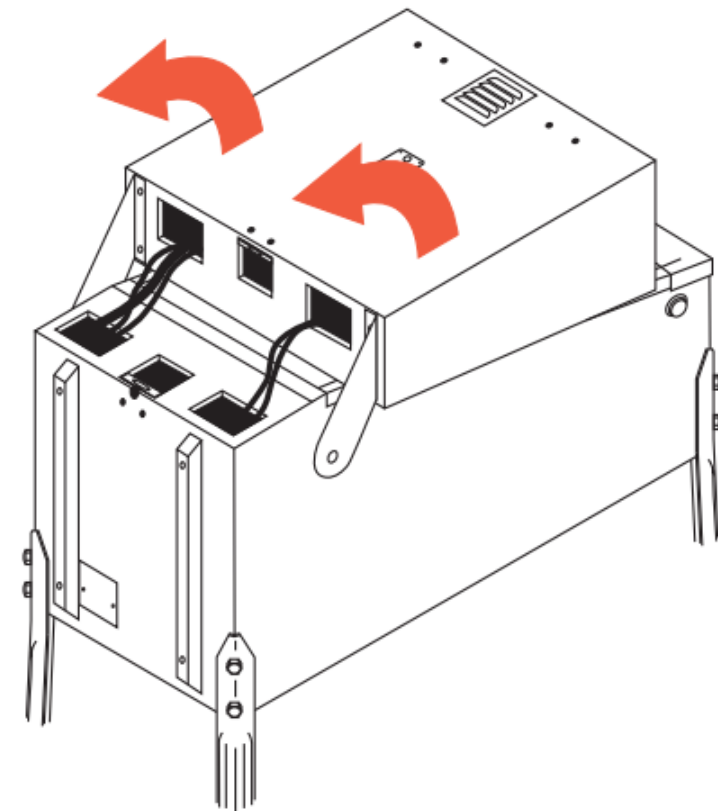


6) With the help of at least one other person, carefully tip the game onto its front legs. Lift the rear of the cabinet and have **two people** hold it or place it on a sturdy support. As with the front legs, attach the two rear legs, using the four remaining acorn-head bolts (and heavy felt cabinet protectors, if desired). Tighten all bolts firmly, while maintaining upward pressure on the legs. Lower the game onto its four legs.

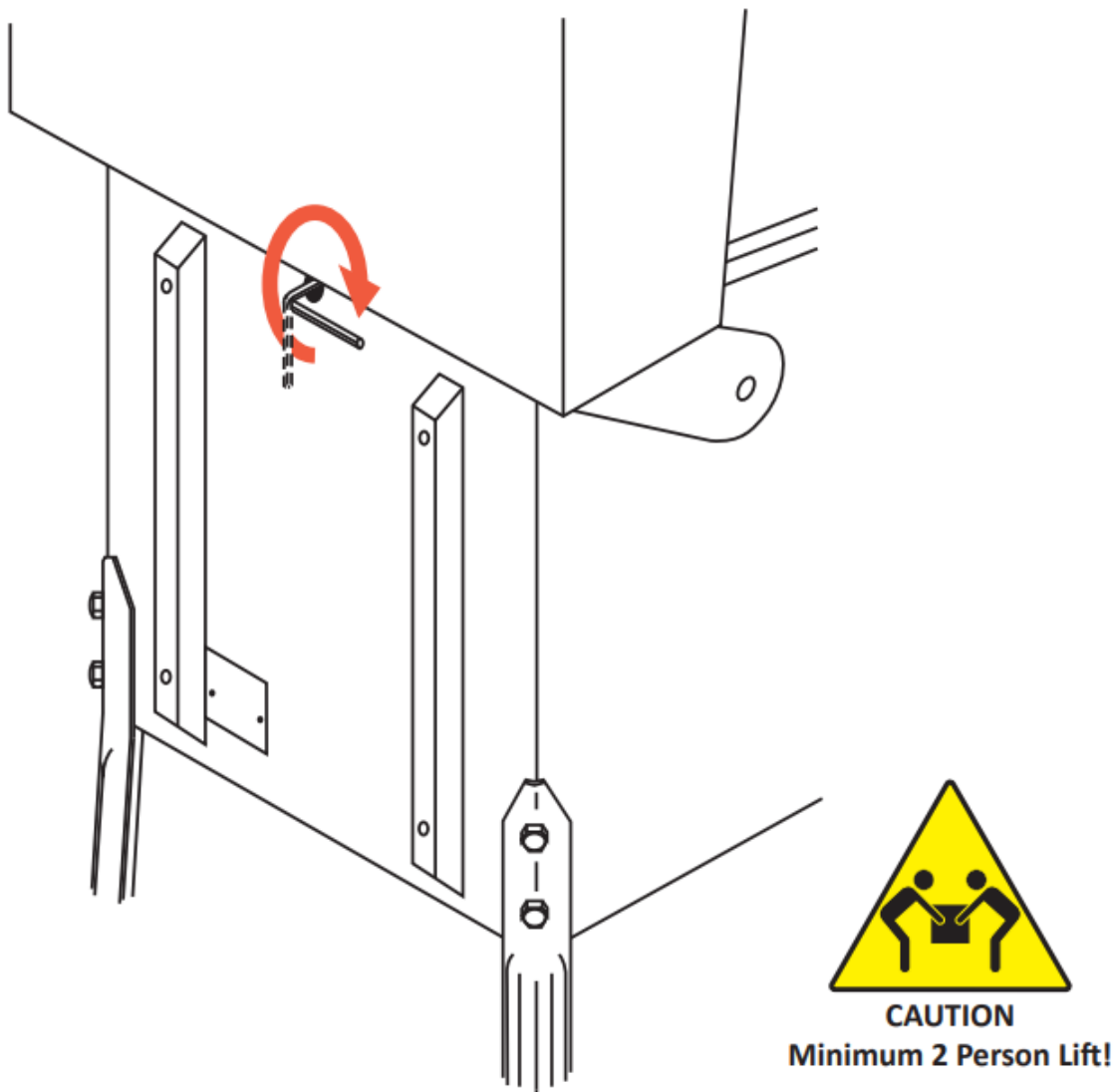


Installing the rear legs and cabinet protectors.

7) Using wire cutters or scissors, cut the nylon strap holding the backbox down (**CAUTION: PROTECT YOUR EYES** and have helpers/bystanders move away! The sharp ends of the cut strap may whip violently away from the game!). Remove the remainder of the packing material from the game and raise the backbox to its upright position. Ensure that the cables and wires in the neck of the game do not get pinched at any time during this process.



Raising the backbox to its upright position.



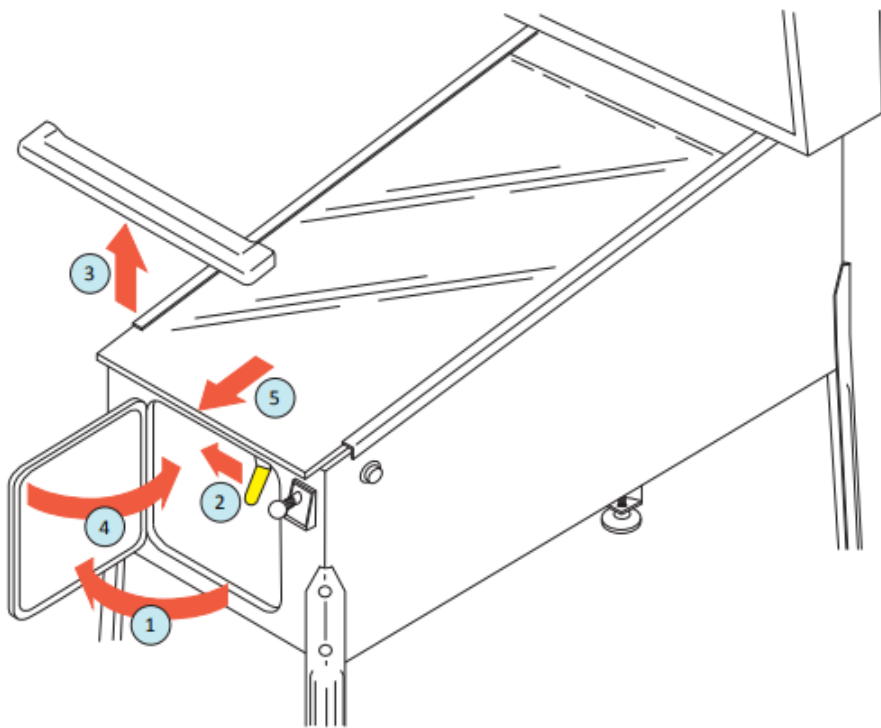
Locking the backbox in the upright position.

**8)** You will find the coin door keys attached to the ball shooter, on the front of the game. Cut them loose with a pair of wire cutters or scissors. Open the coin door, reach inside, remove the hairpin clip holding the cash box to the lower cabinet and remove the cash box from the game. Remove the loose parts from the cash box and compare to the packing list on [page 1](#). Locate the “L”-shaped, 5/16” hex key for the backbox Roto-Lock in the loose parts. Insert it into the hole at the base of the backbox and turn it a full 270 degrees, CW.

**Note:** When the Roto-Lock is in the fully locked position, the key will not turn any further in the CW direction.

**9)** Using at least **two people**, lift the game and move it to the intended play area. **DO NOT SLIDE LEGS ACROSS THE FLOOR.**

**10)** Remove the playfield glass: 1) open the coin door, 2) slide the yellow lockdown bar lever to the left, 3) lift the lockdown bar straight up and out, 4) CLOSE AND LOCK THE COIN DOOR (to prevent scratching of playfield glass), then 5) slide the playfield glass off of the front of the cabinet. Carefully set the glass aside. **CAUTION:** Lay the playfield glass flat or on a padded surface. NEVER place the playfield glass, on edge, on a hard surface! Protect and safeguard the edges; they are the weakest part of the glass. Shock to the edges could shatter the tempered glass!

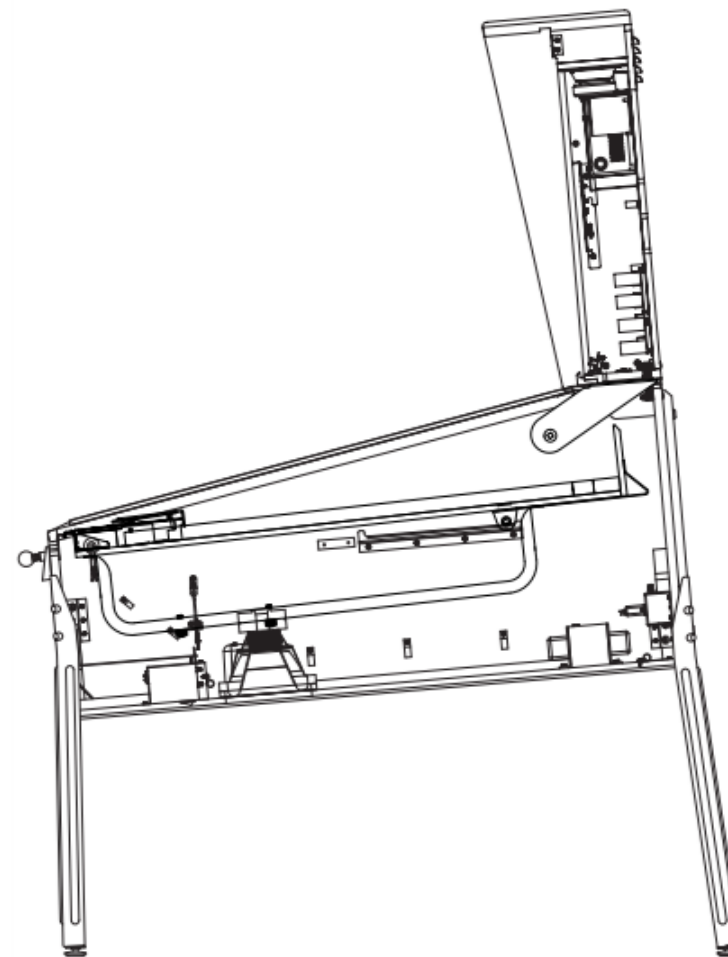


**Removing the playfield glass.**

**11)** Locate the game's six pinballs in the loose parts. Wipe the balls with a soft rag to remove any anti-rust compounds before use. Place all six balls in the ball trough (drop them onto the playfield, below the flippers, and allow them to drain). Level the game side-to-side by placing a bubble level on the playfield surface (top and bottom)

and adjusting the leg levelers and tightening nuts accordingly. When finished, secure the tightening nut against the underside of each leg.

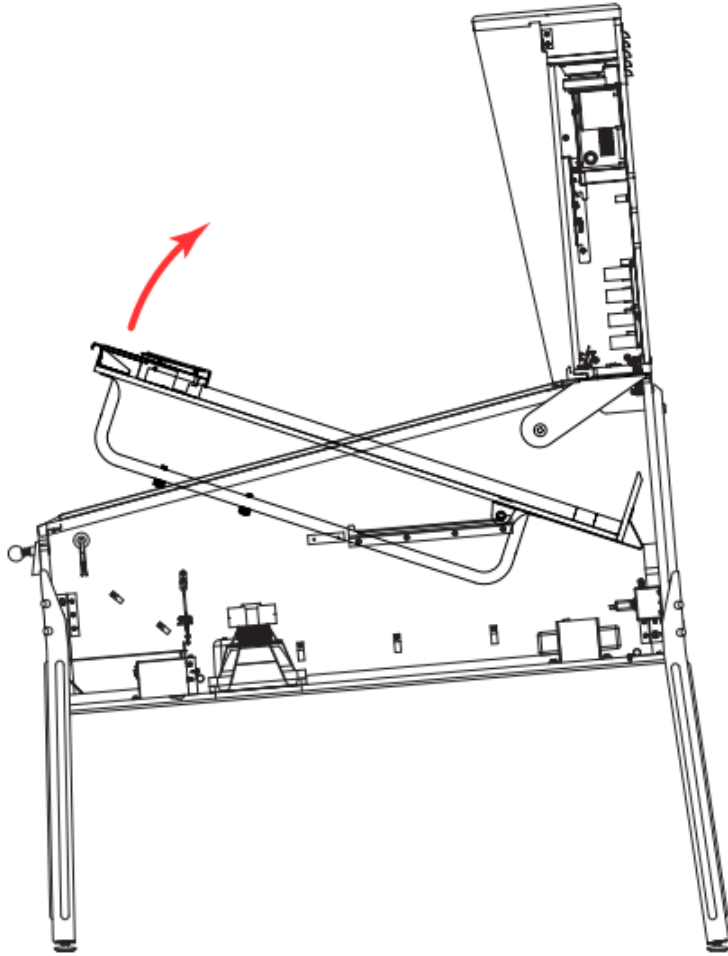
**12)** Your Jersey Jack Pinball® playfield is designed to rest in four distinct positions in its cabinet for game play, cleaning and maintenance. Figure below shows the playfield in its standard position.



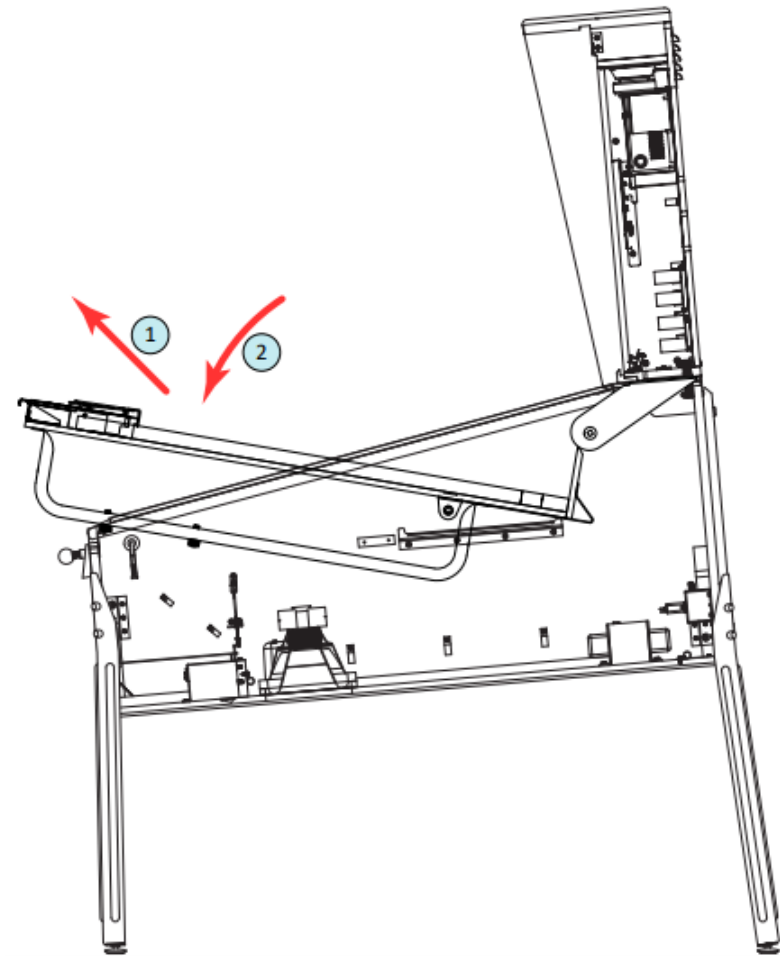
**Playfield in the game play position.**

**13)** Grasp the playfield under its bottom arch and swing it upward until the playfield support tubes underneath are fully visible. Move the playfield to position 2. Pull it upward and outward until the first pair of feet reach the top of the lockdown bar receiver; then lower the playfield, resting the feet in the steel channel.

**Note:** The game has a safety mechanism to keep the balls in the trough from falling out when the playfield is lifted.

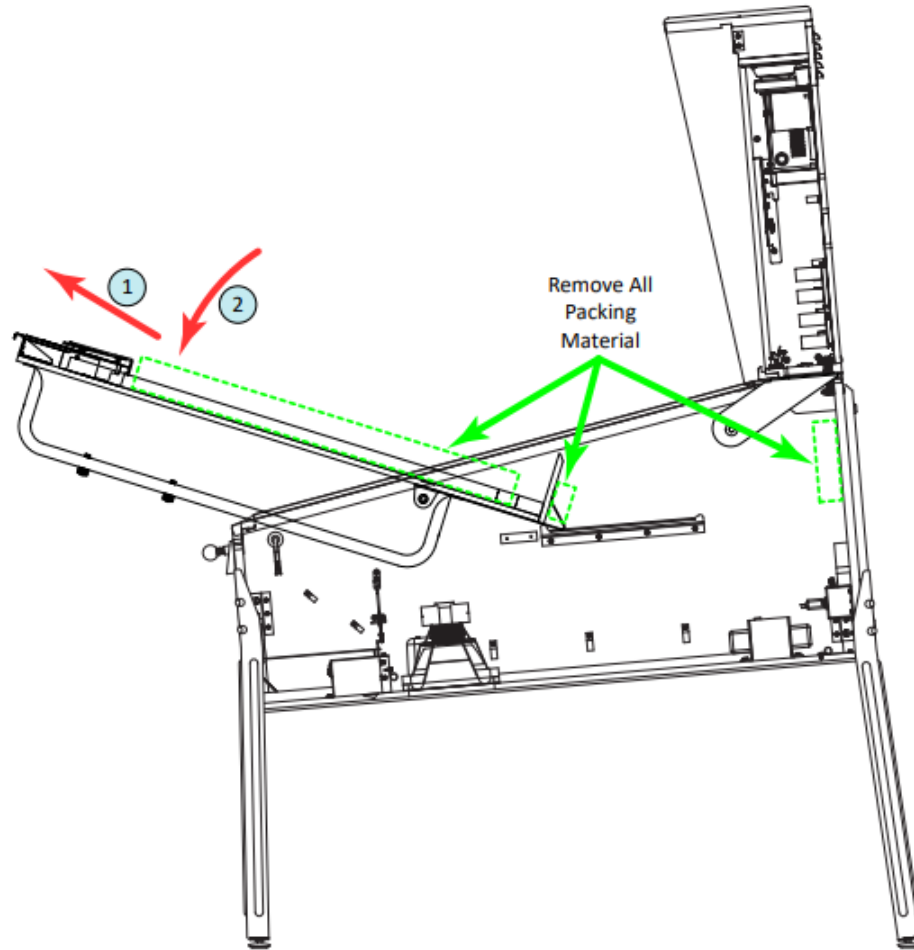


Swing the playfield upward.



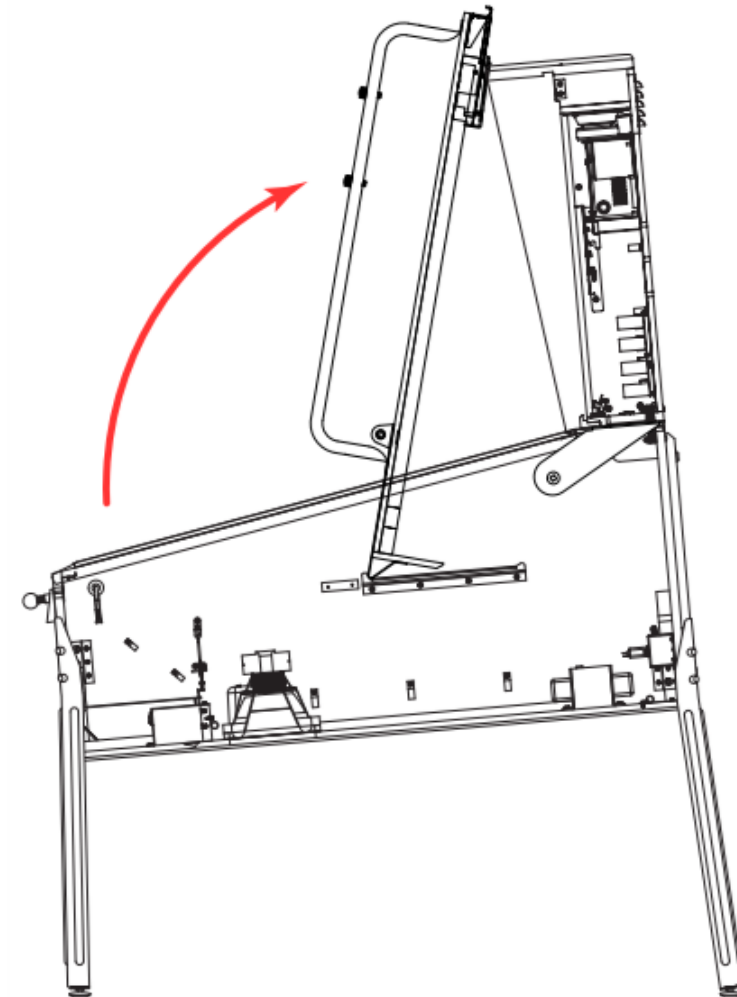
Moving the playfield to position 2.

**14)** Move the playfield from position 2 to 3. Pull it upward and outward until the second pair of feet in the support tubes reach the top of the lockdown bar receiver; again, lower the playfield, resting the feet in the channel. Remove any packing material from the playfield surface and/or shipping blocks from behind the back panel of the playfield/lower cabinet interior.



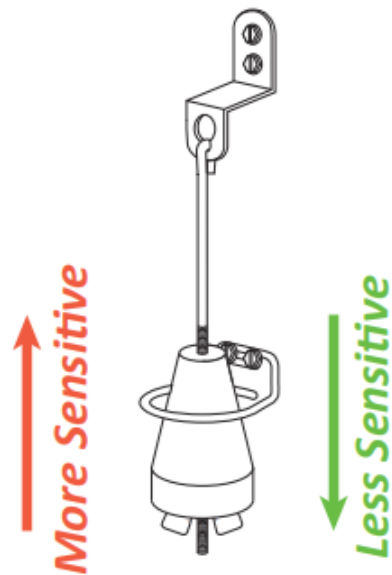
**Moving the playfield to position 3; removing packing material.**

**15)** Move the playfield from position 3 to 4. Grasp the two playfield support tubes and pull the playfield outward until the playfield support/slide bracket stop is reached; then swing the playfield up, carefully resting the bottom arch against the front of the backbox.



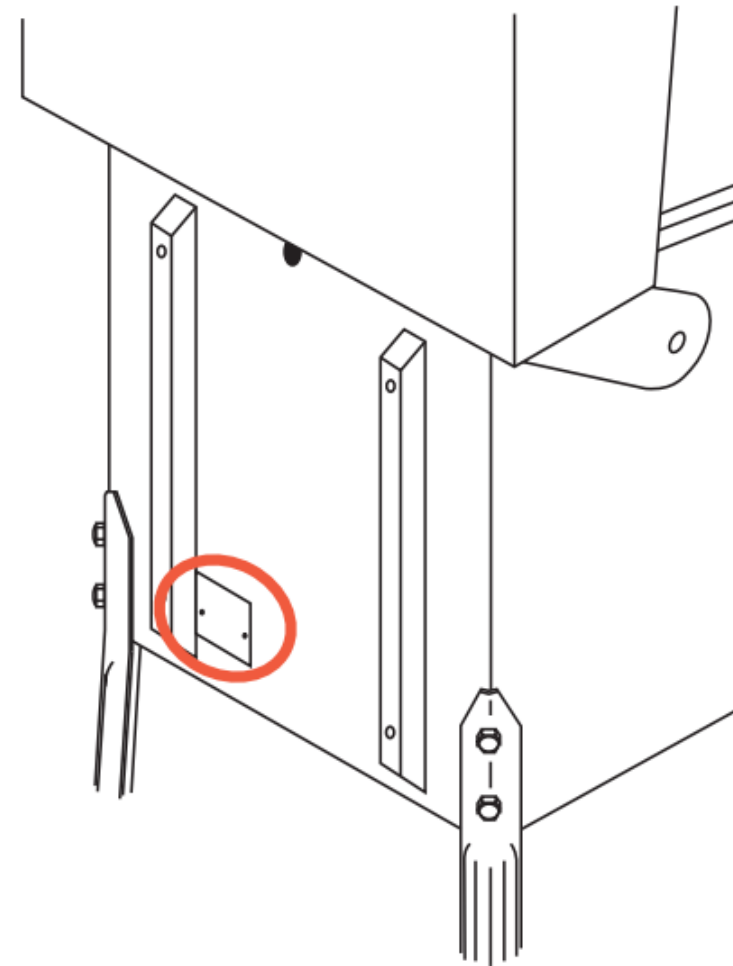
**Moving the playfield to position 4.**

**16)** Locate the plumb bob assembly, mounted to the left sidewall of the cabinet interior, near the front. Remove the shipping block from around the plumb bob tilt mechanism. 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. Carefully lower the playfield and slide it straight back into the cabinet, ensuring that the two hanger brackets rest in the slots in the lockdown bar receiver channel. Carefully reinstall the playfield glass and lockdown bar by reversing the steps in **10)** above.



**Assembled plumb bob tilt mechanism.**

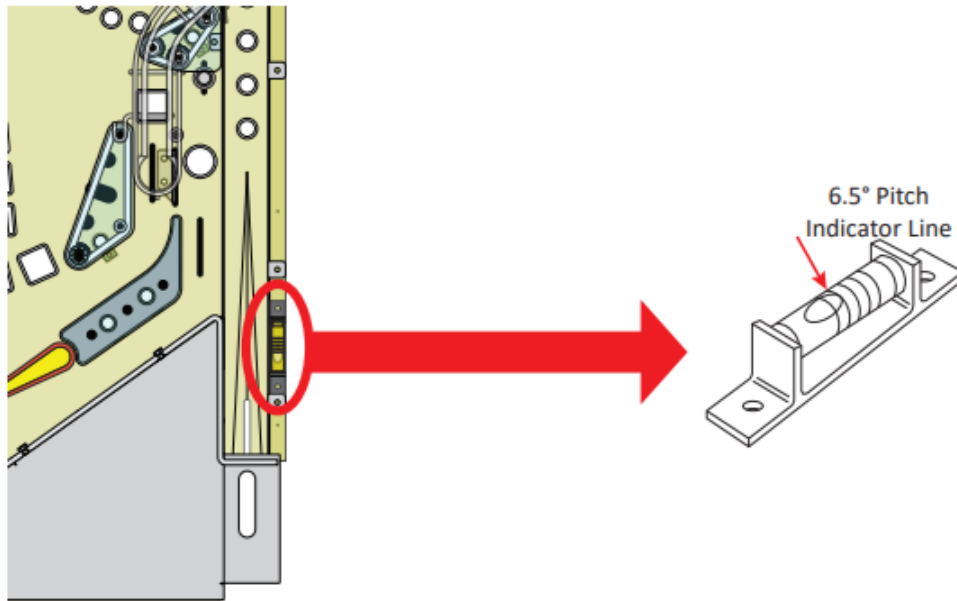
**17)** Locate the power cord in the loose parts. Using the slot end of the supplied multi-tool, remove the line cord cover plate from the rear of the lower cabinet. Plug the female end of the power cord into the exposed receptacle, inside of the back of the machine. Replace the line cord cover plate and plug the other end of the power cord into a grounded wall outlet. **DO NOT CUT THE GROUND LUG OFF OF THE POWER CORD!**



**Line cord cover location.**

**18)** A bubble level is attached to the playfield's right woodrail, next to the ball shooter lane, to indicate the optimal pitch of the playfield (front-to-back) for game play. Adjust the levelers and tightening nuts on the game's four legs until the top of the bubble in the level is just touching the second reference line, as shown in figure. This will provide a playfield pitch angle of 6.5°.

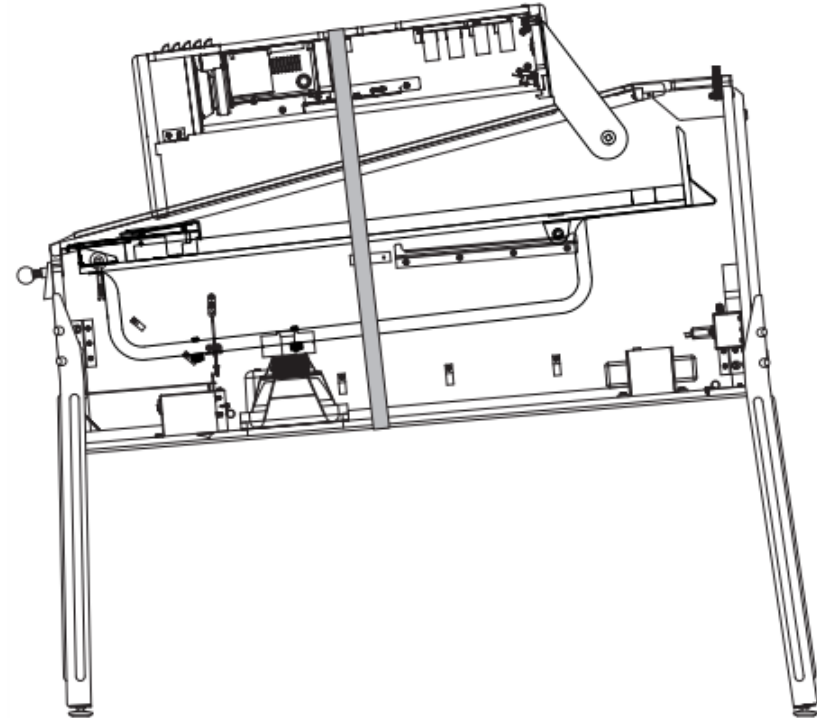
**Note:** Ensure that the playfield remains level, side-to-side, as you adjust its pitch.



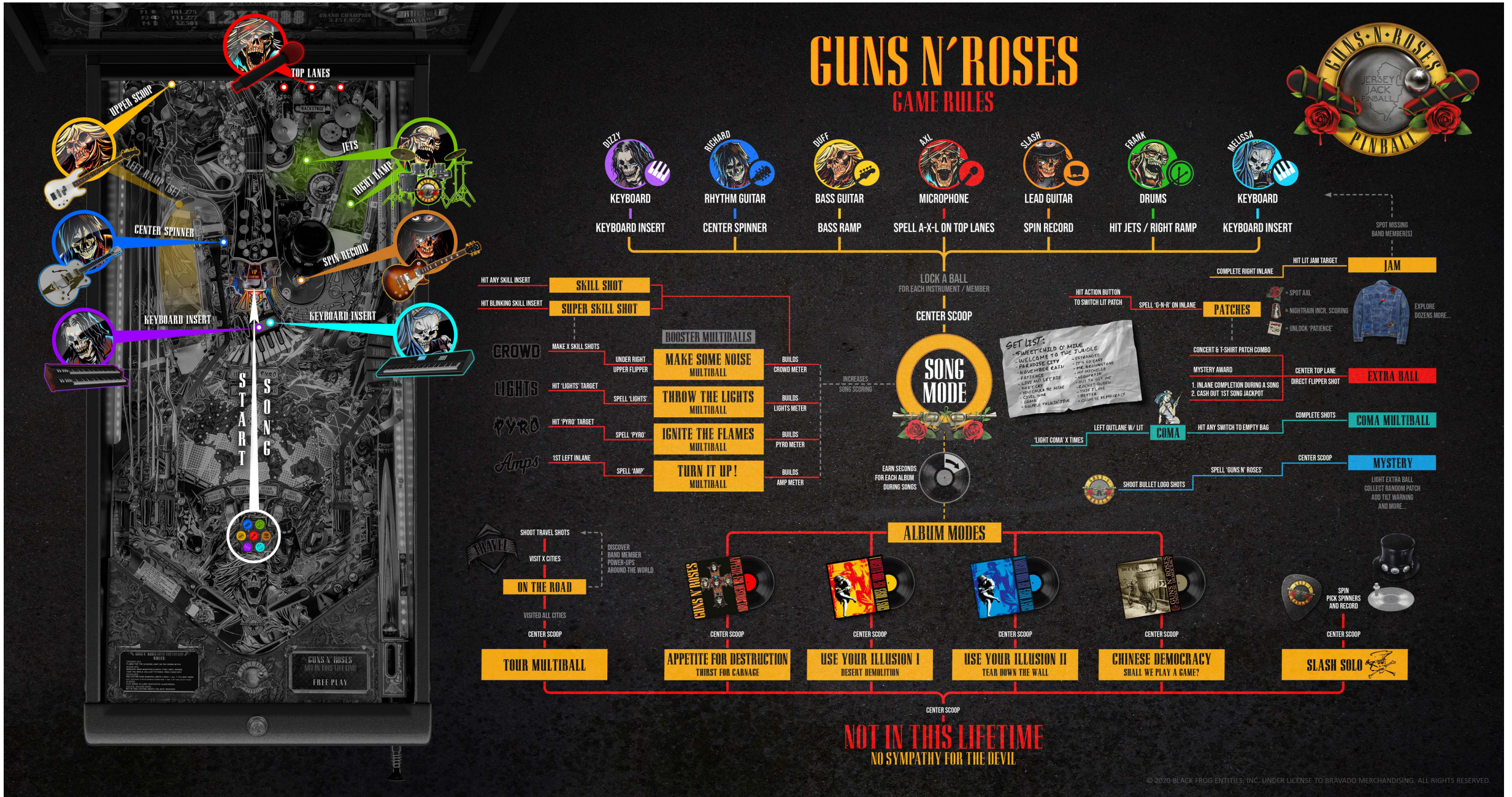
**Playfield pitch bubble level.**

**19)** Power up the game (the on/off switch is located under the cabinet, just behind the right front leg; it rocks in one direction to turn the game on and in the reverse direction to turn it off) and test it for proper operation. Adjust game settings as appropriate (see [Game Menu System, page 33](#)). Your game is ready to play!

**Note:** Before transporting the game, lower the backbox. Insert the 5/16" hex key into the hole at the base of the backbox and turn it a full 270 degrees CCW. Ensure that cables and wires in the neck of the machine do not get pinched or pulled taut as the backbox is laid down. Place a large piece of cardboard (or the piece of foam used when the game was shipped) between the top lip of the backbox and the lower cabinet to protect the cabinet side rails. Tie or strap the backbox securely to the cabinet to prevent it from bouncing during transit.



**Transport game with the backbox lowered and secured.**

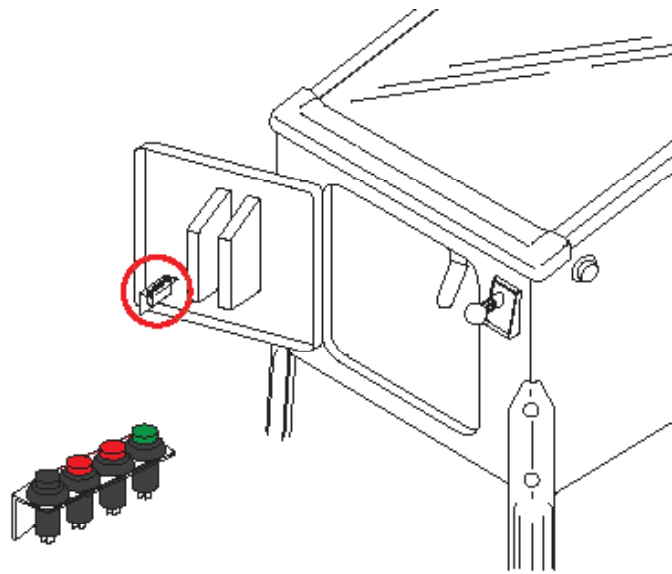


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# THE GNR MENU SYSTEM



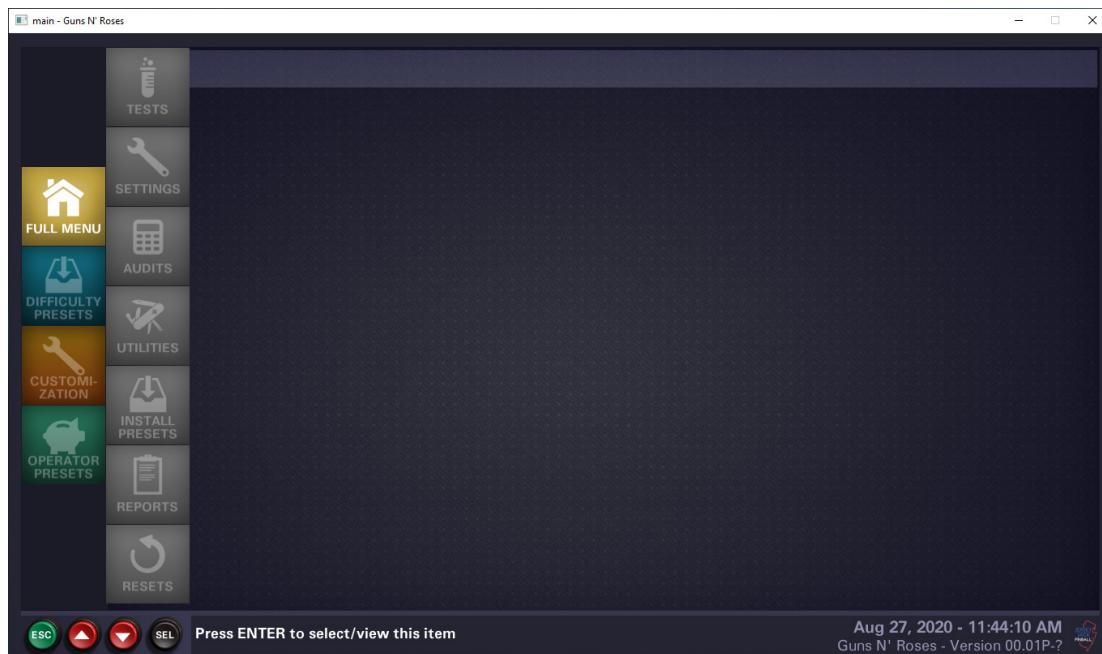
## MENU SYSTEM BASICS

The GnR 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).

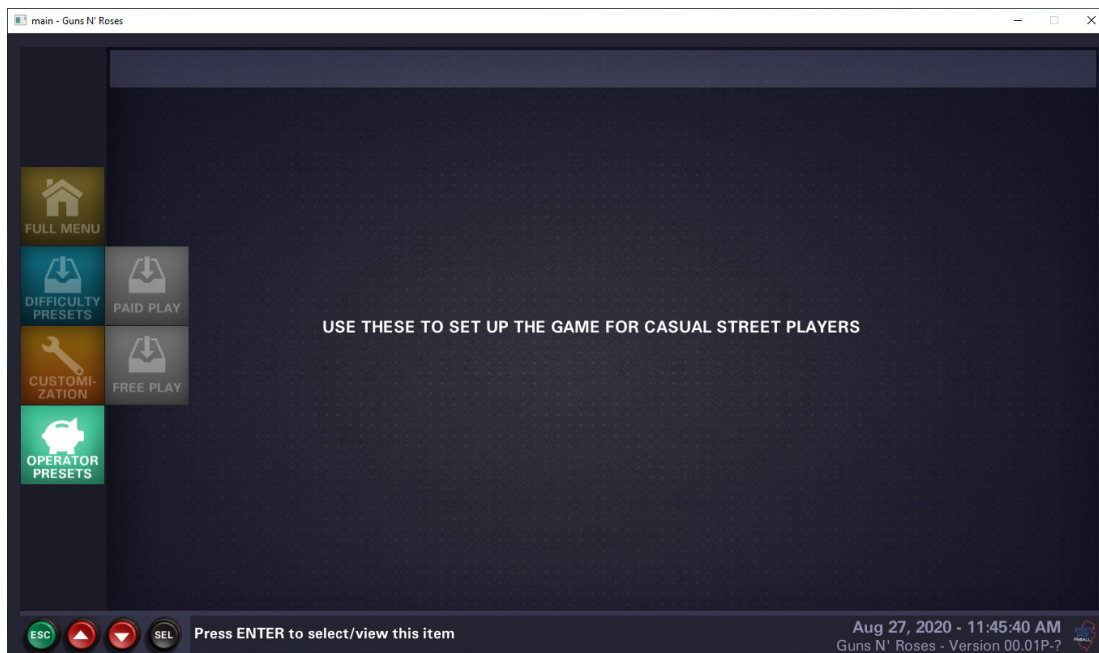
The buttons are labeled: black is **Enter**, red next to it is **Up/+**, next red is **Down/-** and green is **Back/Escape**. Each time you press a button, you will hear an audio response through the game's speakers. Use **Enter** to enter a sub-menu, select a menu item to change or execute a command. 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!**



GnR menu system's main menu screen.



Operator Presets screen.

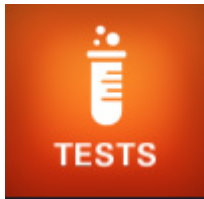
From the main menu screen, you can access the game's **Test Report**. From this screen, you can also readily jump into the **Difficulty Presets, Customization & Operator Presets** sub-menus to quickly customize your game. **Full Menu** gives you access to device/component tests, game settings, audits, 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 B-58 for additional information.

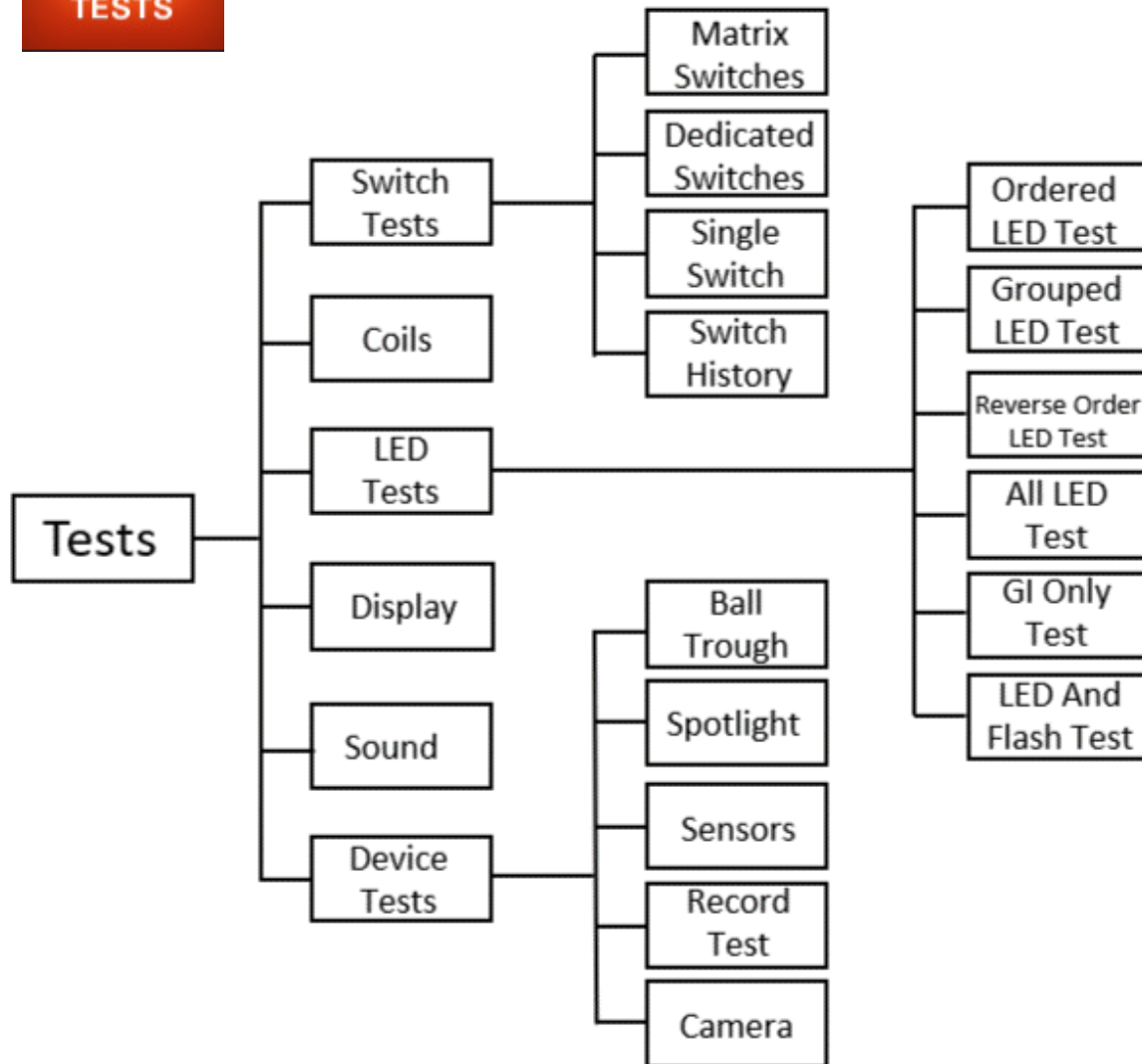
The **Customization** sub-menu provides a quick shortcut to the **Customization** branch of the **Utilities** menu item. This sub-menu allows you to add, edit or remove custom messages and/or graphics that display on the 27" LCD monitor, during the game's attract mode. See page 54 for additional information.

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 GnR 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 GnR games being operated in a pay-per-play setup, on location. **Free Play** settings are intended for GnR 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.



# TESTS



Tests menu tree.

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. **GI Only Test** - allows you to test the color-producing capability of LEDs used for GI purposes. **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 (**Ball Trough, Gobstopper Hole, Wonkavator, Ramp Diverter, Camera**) 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		Active switch		Inactive switch (n/o)		Inactive opto (n/o)		Inactive reflective (n/o)		Unused position																								
		Green	Red	Light Tan	Dark Tan	Light Blue	Navy Blue	Gray	Brown																									
Return	Driver	WHT	GRN	BLK	BRN	GRN	RED	SPN	CRN	GRN	YEL	GRN	GRY	BLU	GRN	VIO	GRY	BLK	GRY	BRN	GRY	RED	GRY	ORN	GRY	YEL	GRY	GRN	GRY	BLU	GRY	VIO		
Return 1 J206-1	6-Ball Trough #5	91	99	17	25	33	41	49	57	65	73	81	89	97	105	113	121																	
Return 2 J206-2	6-Ball Trough #4	92	10	18	26	34	42	50	58	66	74	82	90	98	106	114	122																	
Return 3 J206-3	6-Ball Trough #3	93	11	19	27	35	43	51	59	67	75	83	91	99	107	115	123																	
Return 4 J206-4	6-Ball Trough #2	94	12	20	28	36	44	52	60	68	76	84	92	100	108	116	124																	
Return 5 J206-5	6-Ball Trough #1 (right)	95	13	21	29	37	45	53	61	69	77	85	93	101	109	117	125																	
Return 6 J206-6	6-Ball Trough Jam	96	14	22	30	38	46	54	62	70	78	86	94	102	110	118	126																	
Return 7 J206-7	6-Ball Trough #6 (left)	97	15	23	31	39	47	55	63	71	79	87	95	103	111	119	127																	
Return 8 J206-8	not used	98	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128																	

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	Return	Switch	State
J602-1	J601-1	Left Flipper EOS	BLK BLK
J602-2	J601-2	Right Flipper EOS	BLK GRN
J602-3	J601-3	Upper Right Flipper EOS	BLK BRN
J602-4	J601-4	Upper Playfield Flipper EOS	BLK RED
J602-5	J601-5	not used	BLK ORN
J602-6	J601-6	not used	BLK YEL
J602-7	J601-7	not used	BLK GRN
J602-8	J601-8	not used	BLK BLU
J602-9	J601-9	not used	BLK VIO
J603-1	J603-1	Left Flipper Switch Lower	YEL BLK
J603-2	J603-2	Left Flipper Switch Upper	YEL BRN
J603-3	J603-3	Right Flipper Switch Lower	YEL RED
J603-4	J603-4	Right Flipper Switch Upper	YEL ORN
J603-5	J603-5	Enter / Menu Button	YEL GRN
J603-6	J603-6	Up / Volume + Button	YEL GRN
J603-7	J603-7	Down / Volume - Button	YEL BLU
J603-8	J603-8	Escape / Service Credit Button	YEL VIO
J603-9	J603-9	not used	BLU BLK
J603-10	J603-10	Left Coin Switch	BLU BLK
J603-11	J603-11	Right Coin Switch	BLU BRN
J603-12	J603-12	Center Dollar Bill Acceptor	BLU RED
J603-13	J603-13	4th Coin Slot Switch	BLU ORN
J603-14	J603-14	5th Coin Slot Switch	BLU YEL
J603-15	J603-15	Ticket Mech Motor Switch	BLU GRN
J603-16	J603-16	not used	BLU GRY
J604-1	J604-1	Start Button	VIO BLK
J604-2	J604-2	Coin Door Open	VIO BRN
J604-3	J604-3	Plumb Bob Tilt	VIO RED
J604-4	J604-4	Bluetooth	VIO ORN
J604-5	J604-5	Action Button	VIO YEL
J604-6	J604-6	Headphone Panel Volume Down	VIO GRN
J604-7	J604-7	Headphone Panel Volume Up	VIO BLU
J604-8	J604-8	Headphone Panel Jack Sense	VIO GRY

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

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Guns N' Roses - Version 00.01P-?

Dedicated Switch Test screen.



# SINGLE SWITCH TEST

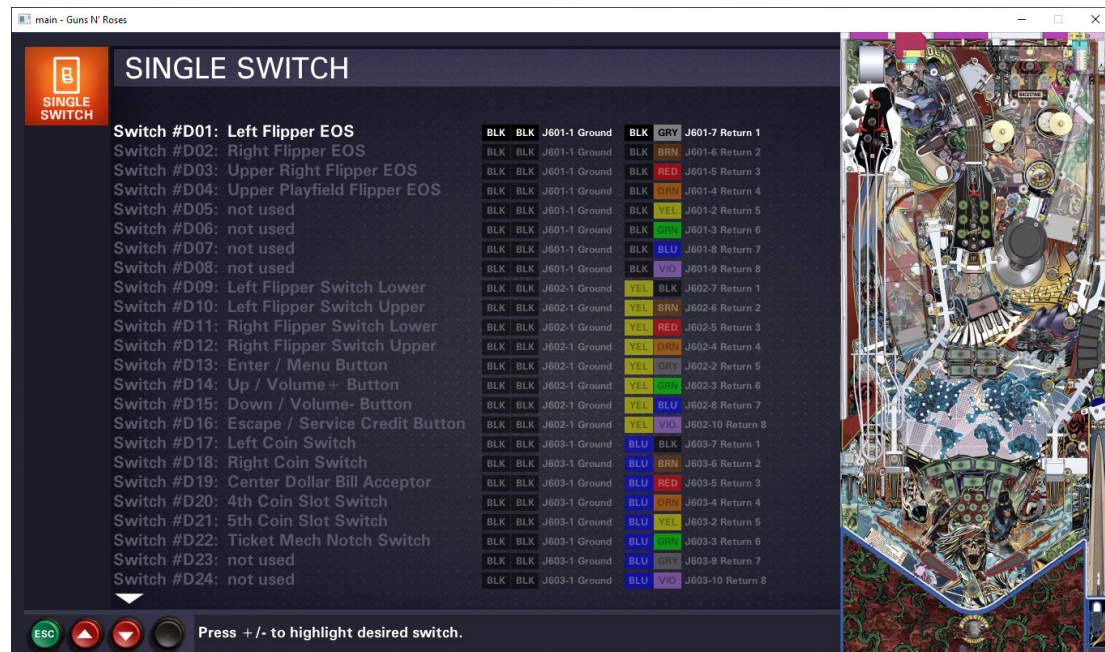
When you enter the **Single Switch Test**, the LCD monitor will display the screen shown. The entire list of dedicated and matrixed switches is shown alongside a window highlighting the location/state of the currently selected switch on the game's playfield. The switch is displayed as a small, blinking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



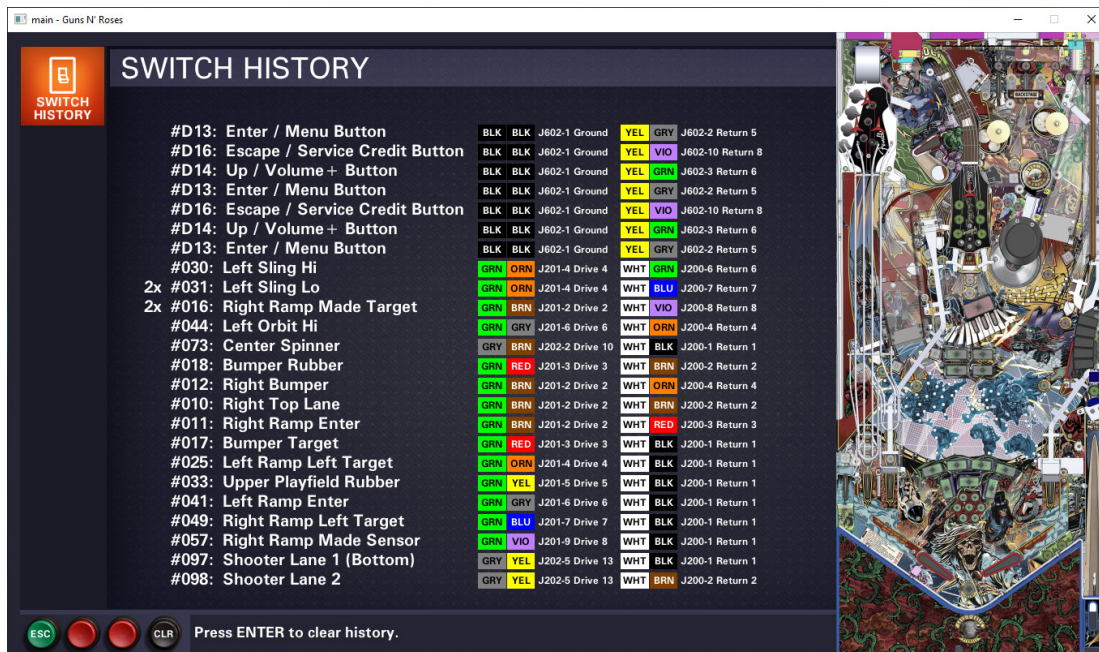
# SWITCH HISTORY TEST

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.



Switch History Test screen.





# 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	MANUAL	REPEAT	RUNNING
Coil #001: not used			BRN BLK J104-9 Q308 70V J104-1 F701 F704
Coil #002: Center Scoop VUK			BRN GRN J104-8 Q307 70V J104-1 F701 F704
Coil #003: not used			BRN RED J104-7 Q306 70V J104-1 F701 F704
Coil #004: not used			BRN GRN J104-6 Q305 70V J104-1 F701 F704
Coil #005: not used			BRN YEL J104-5 Q304 70V J104-1 F701 F704
Coil #006: not used			BRN GRN J104-4 Q303 70V J104-1 F701 F704
Coil #007: Knocker			BRN BLU J104-3 Q302 70V J104-1 F701 F704
Coil #008: not used			BRN PUR J104-2 Q301 70V J104-1 F701 F704
Coil #009: Left Flipper Power			RED BLK J105-10 Q318 70V J105-1 F701 F705
Coil #010: Left Flipper Hold			RED BRN J105-8 Q317 70V J105-1 F701 F705
Coil #011: Right Flipper Power			RED GRN J105-7 Q316 70V J105-1 F701 F705
Coil #012: Right Flipper Hold			RED GRN J105-6 Q315 70V J105-1 F701 F705
Coil #013: Trough VUK			RED YEL J105-5 Q314 70V J105-1 F701 F705
Coil #014: Auto Launch			RED GRN J105-4 Q313 70V J105-1 F701 F705
Coil #015: Coma Lock Up Down Post			RED BLU J105-3 Q312 70V J105-1 F701 F705
Coil #016: not used			RED PUR J105-2 Q311 70V J105-1 F701 F705
Coil #017: Loop Magnet			GRN BLK J106-10 Q328 70V J106-1 F701 F706
Coil #018: Upper Right Flipper Power			GRN BRN J106-9 Q327 70V J106-1 F701 F706
Coil #019: Upper Right Flipper Hold			GRN RED J106-7 Q326 70V J106-1 F701 F706
Coil #020: not used			GRN GRN J106-6 Q325 70V J106-1 F701 F706
Coil #021: not used			GRN YEL J106-5 Q324 70V J106-1 F701 F706
Coil #022: not used			GRN GRN J106-4 Q323 70V J106-1 F701 F706
Coil #023: not used			GRN BLU J106-3 Q322 70V J106-1 F701 F706
Coil #024: Right Ramp Diverter			GRN PUR J106-2 Q321 70V J106-1 F701 F706

Coils Test screen.



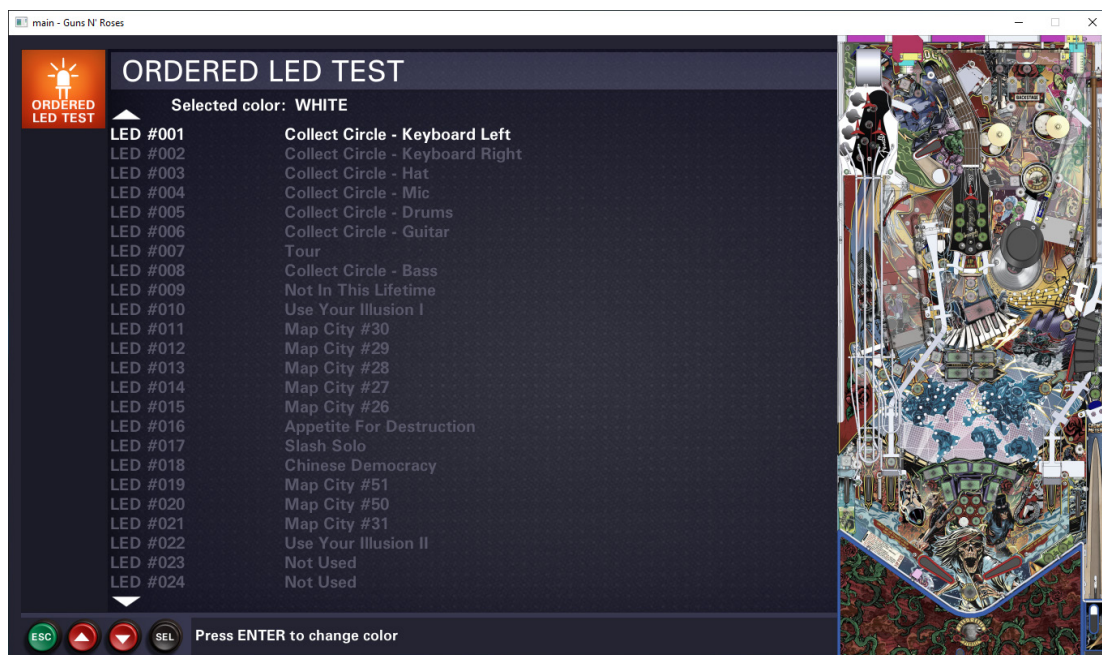
## ORDERED LED TEST

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 GnR 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.



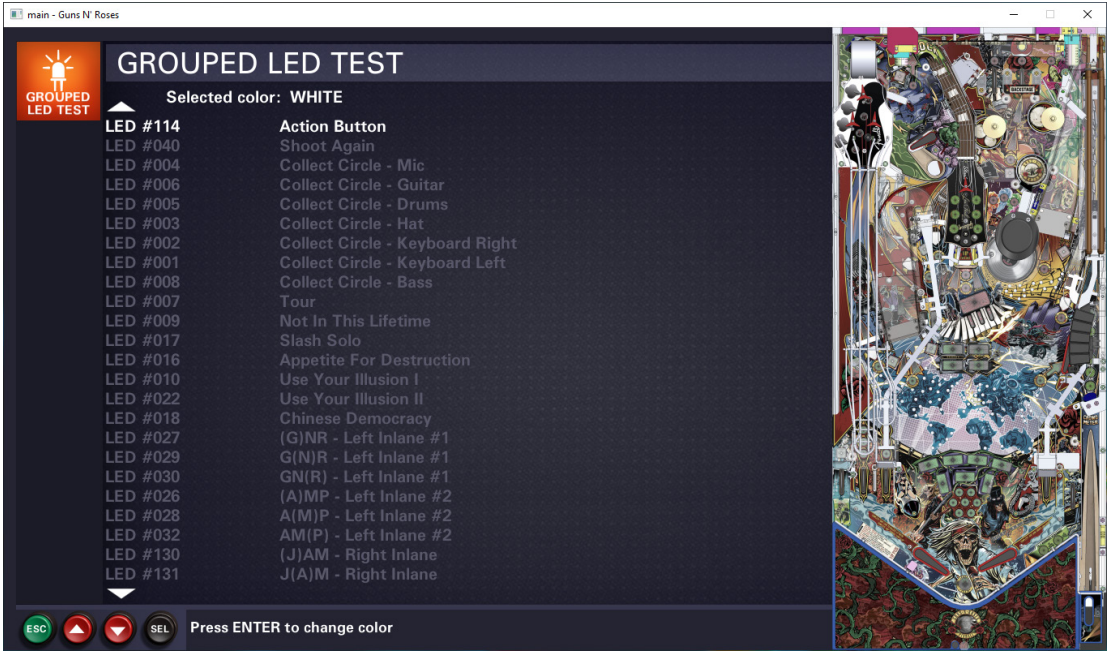
# GROUPED LED TEST

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.

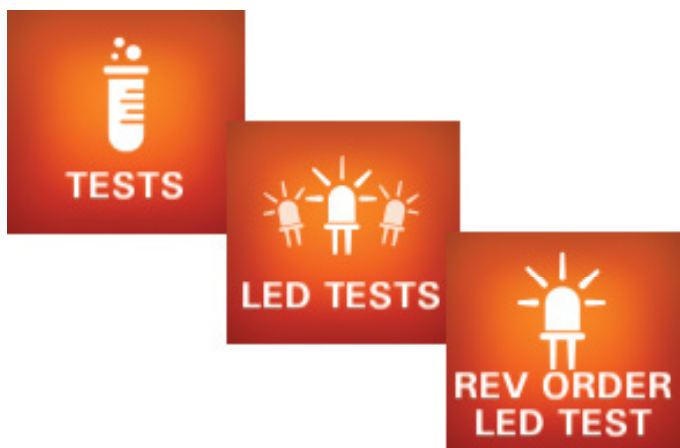
Initially, the selected LED flashes the color white. You can change the color to red, green, blue and back to white by repeatedly pressing the **Enter** button. The current color will be displayed at the top of the screen. You can scroll through the list of LEDs using the **Up/+** and **Down/-** buttons.

For this test, the RGB LEDs are listed in logical/grouped order. The GnR 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.



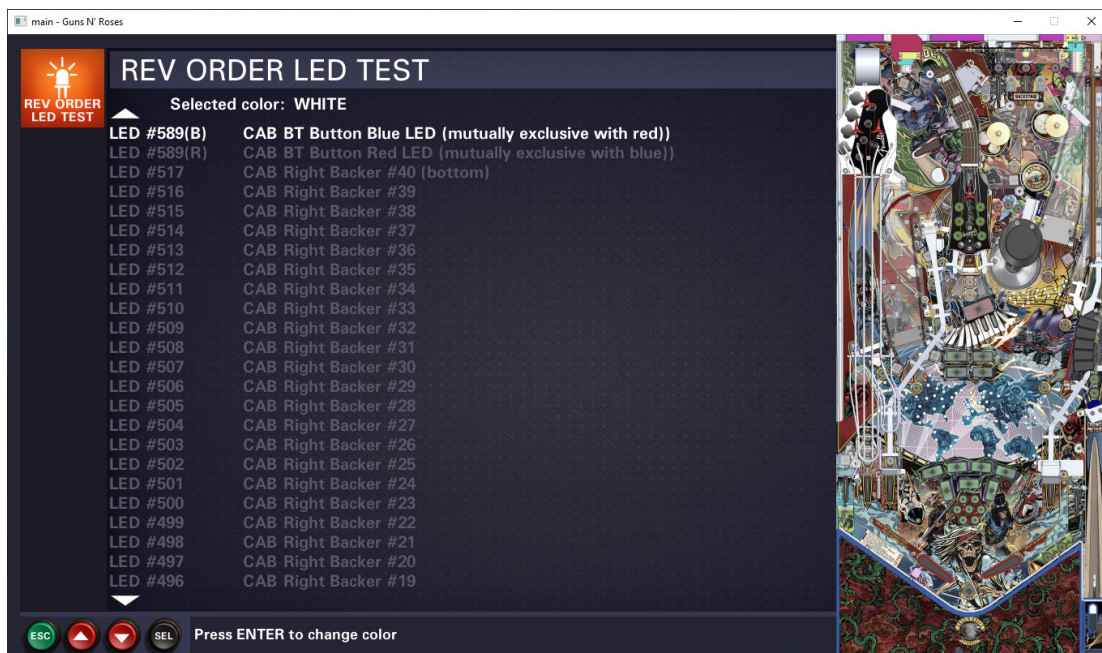
## REVERSE ORDER LED TEST

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.

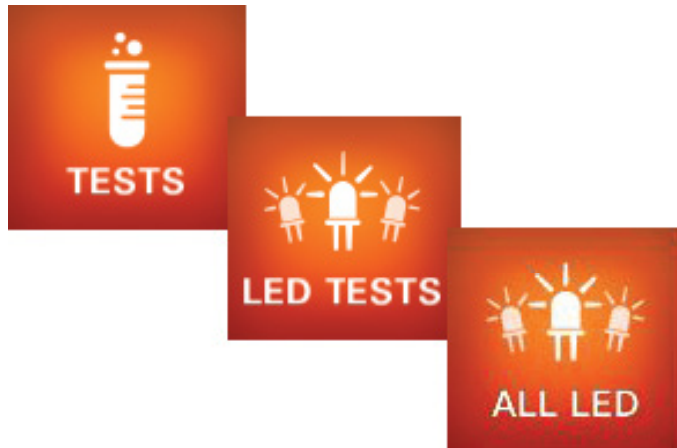
Initially, the selected LED flashes the color white. You can change the color to red, green, blue and back to white by repeatedly pressing the **Enter** button. The current color will be displayed at the top of the screen. You can scroll through the list of LEDs using the **Up/+** and **Down/-** buttons.

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.



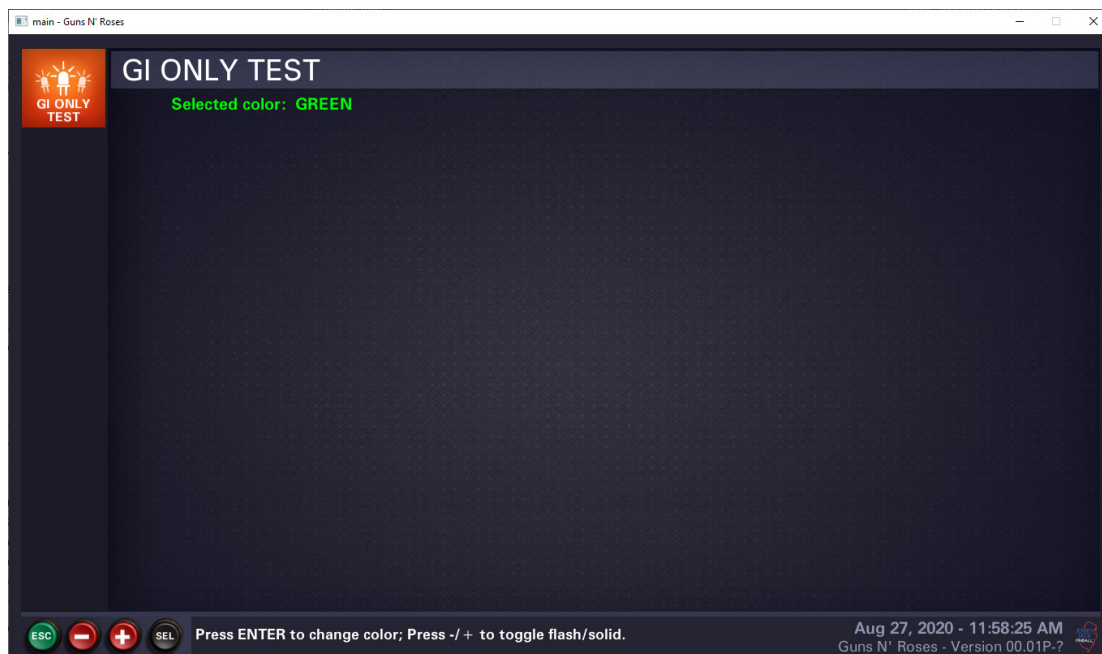
All LED Test screen.



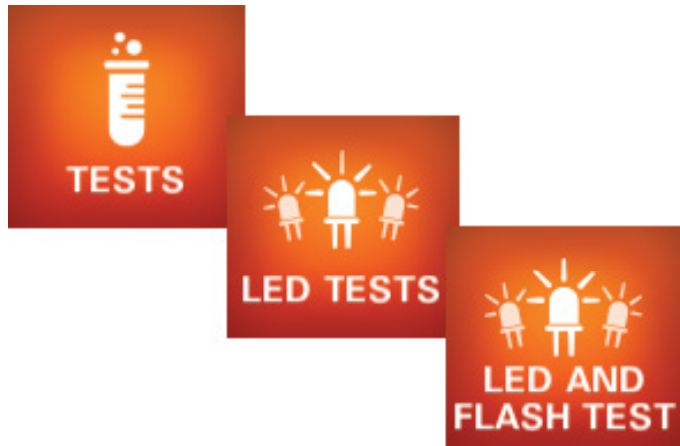
## GI ONLY TEST

When you enter the **GI Only Test**, the LCD monitor will display the screen shown. All LEDs used for general illumination are lit at once. Initially, the LEDs are white and not flashing. You can change the GI 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 GI LEDs between flashing and constant-on.

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



GI Only 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.

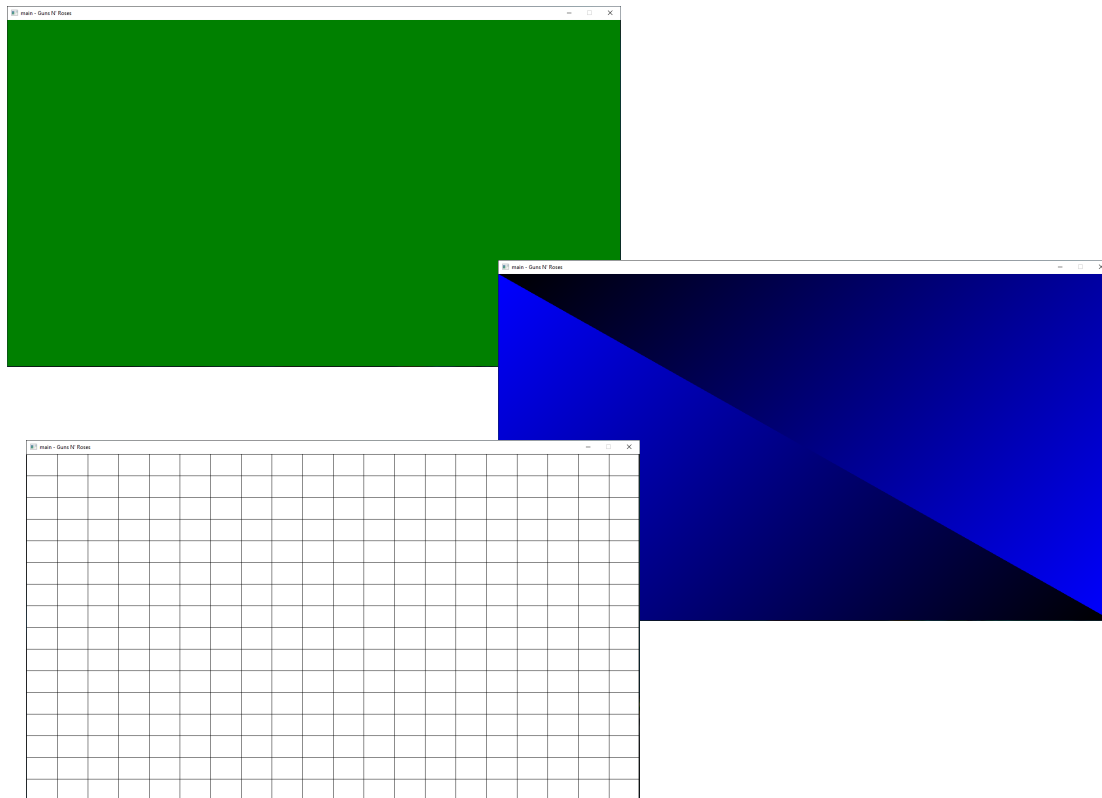


## DISPLAY TEST

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.

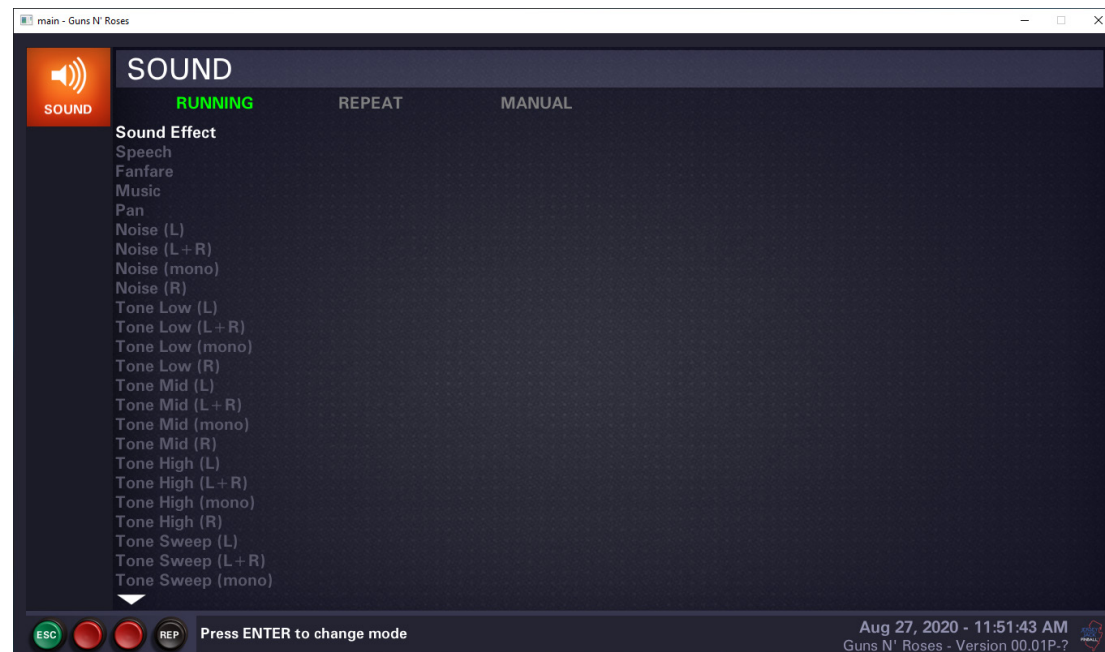


Display Test screens.





# SOUND TEST



Sound Test screen.

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.



# BALL TROUGH TEST

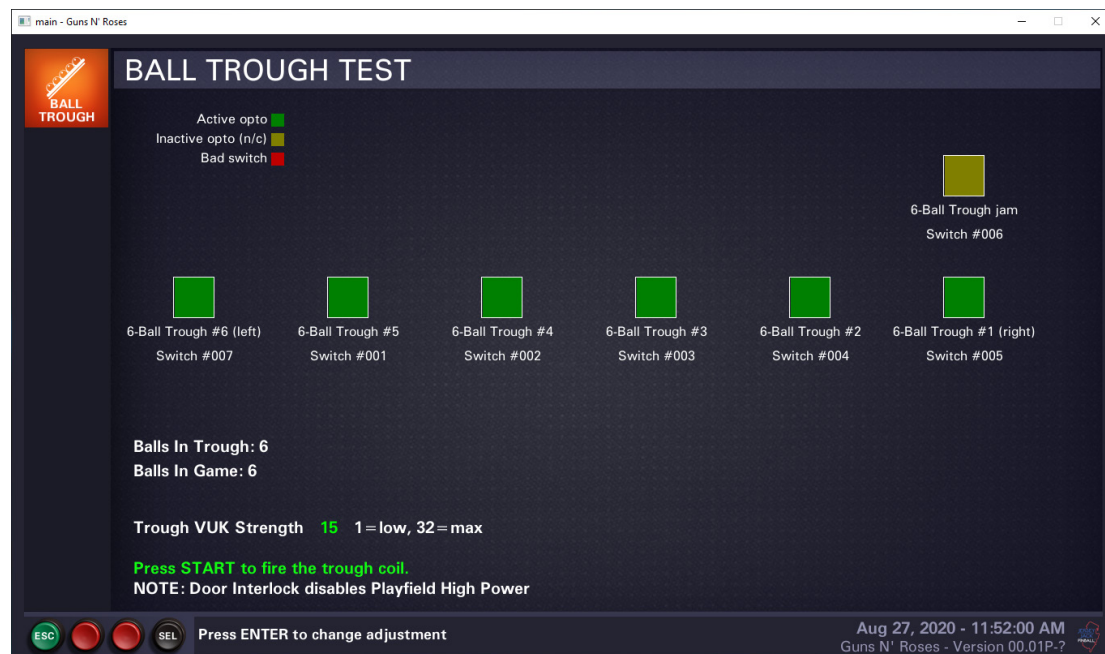
When you enter the **Ball Trough Test**, the LCD monitor will display the screen shown. The squares on the screen represent the current states of the seven opto switch transmitter/receiver pairs in the ball trough mechanism, under the lower part of the playfield. There are six opto switches in the bottom 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.

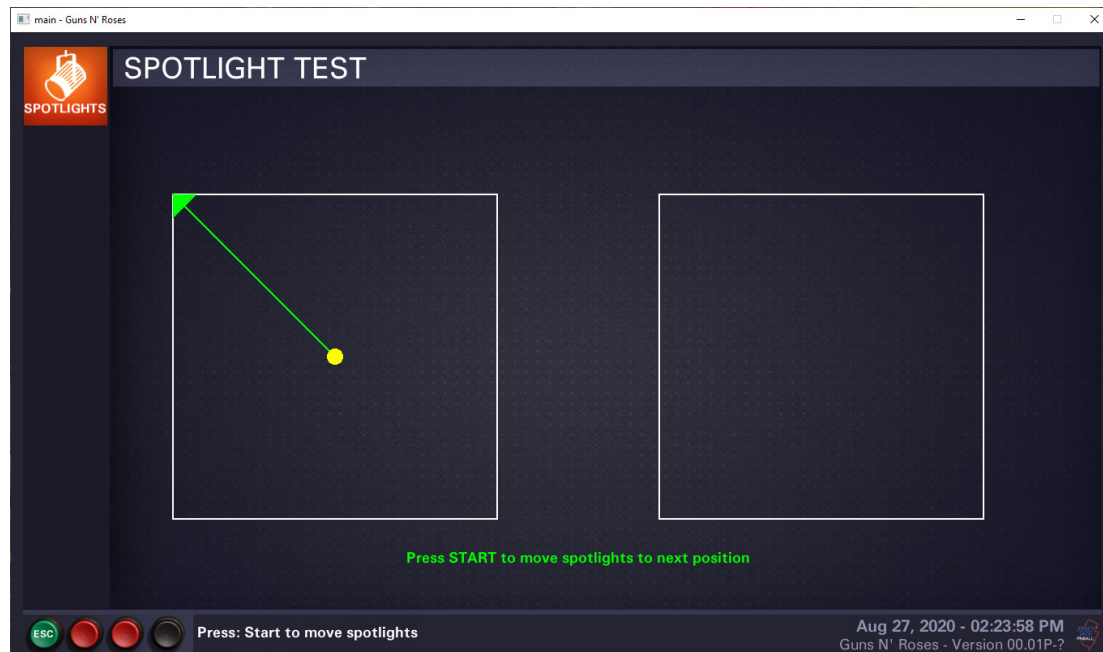


## SPOT LIGHT TEST

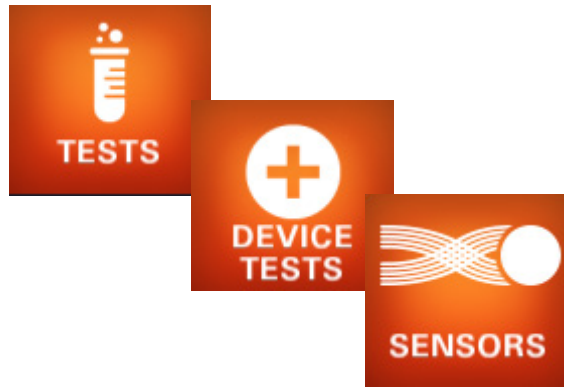
When you enter the **Spot Light Test**, the LCD monitor will display the screen shown. The two squares on the screen represent the two spot lights on the playfield and their current position

Pressing the start button will move the left spot light to the next position indicated by the green arrow. Pressing the start button again will move the spot light to the next position and so on, once the left spot light moves to all the positions then the right spotlight will start being tested. Pressing the start button again will move the right spot light to its next position. Once the right spot light has visited all of its positions, the left spot light will be tested again. This will continue until you exit the test.

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



Spot Light Test screen.



# SENSOR TEST & CALIBRATION

When you enter the **Sensors Test**, the LCD monitor will display the screen shown. The three groups represent the Guitar Ball Lock (Left Group), The Keyboard (Middle Group) and the Shooter Skill Shot (Right Group). 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.

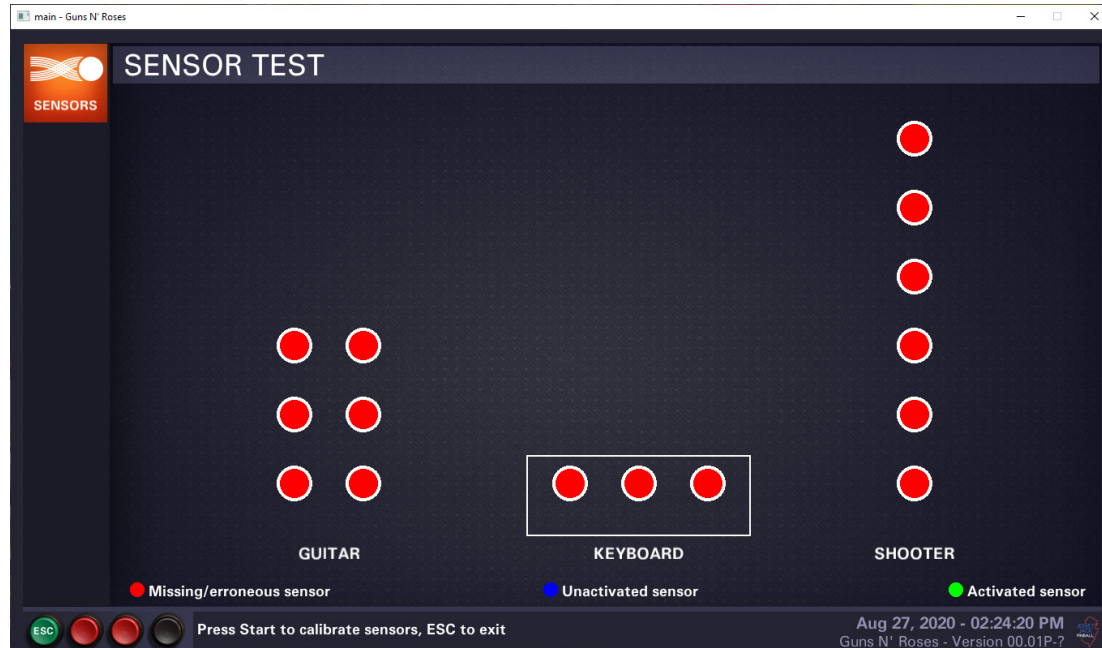
**Sensor Calibration:** If any of the sensors are red or not detecting the balls correctly, a re-calibration of the sensors will need to be performed.

Remove all the balls from all the sensor areas.

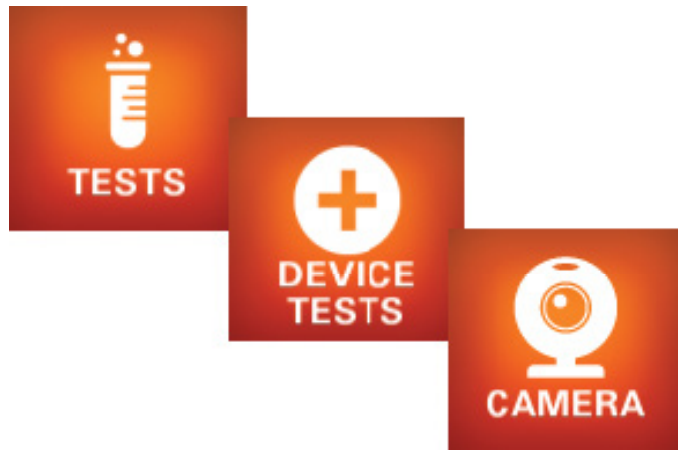
While still in the Sensor Test, press the START button. The sensor values should change and even fluctuate.

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.



Spot Light Test screen.

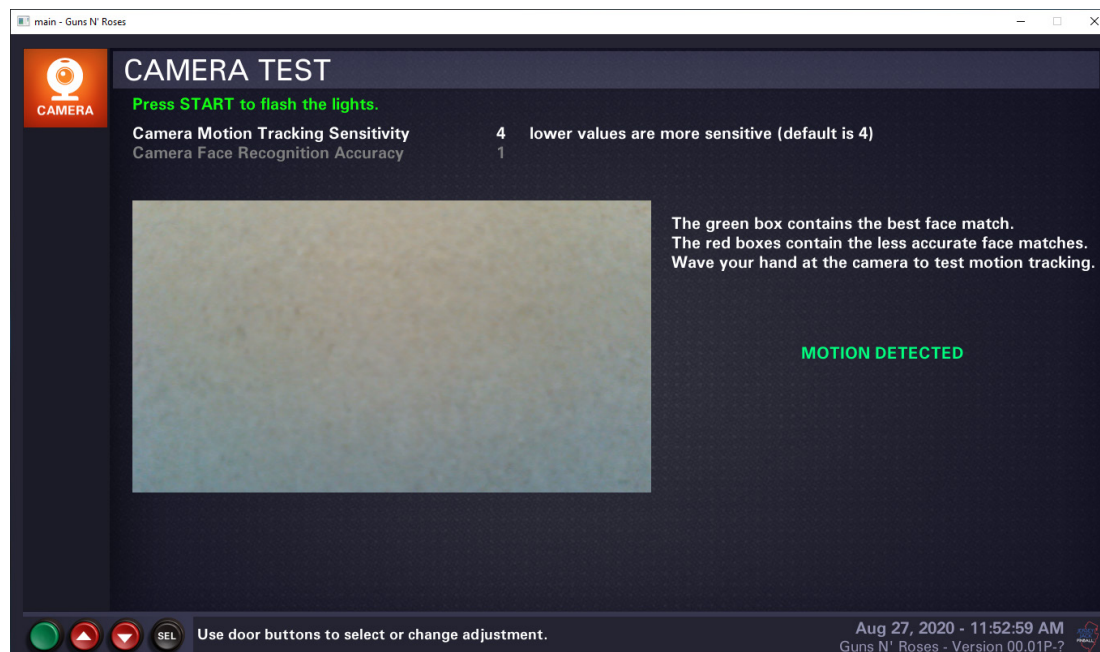


# CAMERA TEST

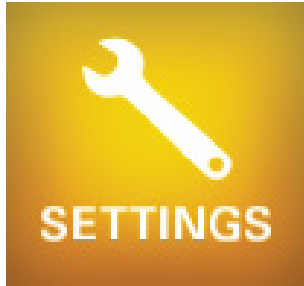
When you enter the **Camera Test**, the LCD monitor will display a screen similar to that shown. A large window on the left side of the screen will show what the game's camera (in the lower, center area of the backbox) currently "sees". Within that window, a green box will be placed around (what the 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.

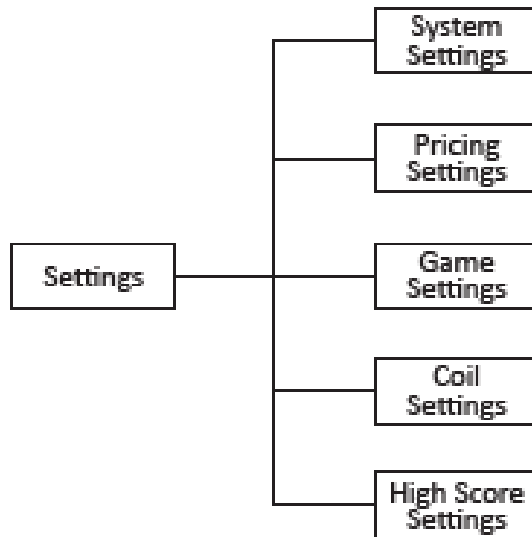
To exit the **Camera Test** at any time, press the **Back/Escape** button.



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.



# 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 GnR 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 PLAY

*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

**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

**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

**Match Percentage:** specify the desired percentage of games, on average, that will be awarded a match at the end.

*OFF:* no match feature Default: 5%

*1-20:* 1-20%

**Special Award:** specify the award for scoring a Special during a game.

*FREE GAME:* a free game Default: FREE GAME

*EXTRA BALL:* an extra ball

*POINTS:* a predefined number of points



## TEST REPORT

**Display Error Dot:** specify whether to display an error dot on the LCD screen when the game detects a potential problem or not.

*YES:* display an error dot Default: NO  
*NO:* do not display an error dot

**Test Report at Power On:** specify whether or not to display a Test Report Message on the LCD screen, at power on, when the game detects a potential problem.

*YES:* display a Test Report Message Default: YES  
*NO:* do not display a Test Report Message

## STATUS REPORT

**Status Report Start Time:** specify how long the player has to hold a flipper down before a game Status Report is displayed.

*6-10:* 6-10 seconds Default: 6 seconds

**Status Report Display Time:** specify how long each page of the Status Report is displayed.

*6-20:* 6-20 seconds Default: 6 seconds

## KNOCKER

**Knocker Strength:** specify the knocker's kick strength.

*NORMAL:* normal kick strength Default: NORMAL  
*LOW:* low kick strength

**Knocker Control:** specify whether to allow the knocker to kick or not.

*ON:* always use the knocker Default: ON  
*OFF:* disable the knocker  
*SOMETIMES:* occasionally use the knocker

## EXTRA BALLS

**Game Extra Ball Limit:** specify the maximum number of extra balls that can be won in any game.

*1-9:* 1-9 extra balls Default: Unlimited  
Unlimited: unlimited extra balls  
No Extra Balls: no extra balls

**Stacked Extra Ball Limit:** specify the maximum number of extra balls that can be stacked by a player at any time during a game.

*1-9:* 1-9 extra balls Default: Unlimited  
Unlimited: unlimited extra balls  
No Extra Balls: no extra balls

## TILT

**Tilt Warning Type:** specify whether tilt warnings accumulate per ball or per game.

*PER BALL:* accumulate per ball Default: PER GAME  
*PER GAME:* accumulate per game

**Tilt Warnings:** specify the number of warnings issued before the game tilts.

*0-10:* 0-10 warnings Default: 2 warnings

## SOUND

**Master Volume:** specify the overall volume level for the game.

*0-50:* 0-50 level Default: 26 level

**Front Panel Headphone Volume:** specify the headphone volume level for the game.

*0-50:* 0-50 level Default: 26 level

**Front Panel Volume Control:** specify whether the cabinet front controls will change the master volume level or not.

*ON:* controls change master volume Default: W/FREE PLAY  
*OFF:* controls do not change master volume  
*W/FREE PLAY:* controls only change master volume in free play

**Volume Effect Intensity:** specify the intensity of volume effects (multiplies volume units).

*1-5:* 1-5 Default: 1

**Maximum Volume Effect:** specify how extra-loud the game can get, in volume units.

*1-20:* 0-50 level Default: 5 units  
OFF: not used

**Music Mix:** Specify the gain for the music in the game.

0-125: 0-125

Default: 75

**Speech Mix:** Specify the gain for the speech sounds in the game.

0-125: 0-125

Default: 75

**Fanfare Mix:** Specify the gain for the fanfares in the game.

0-125: 0-125

Default: 75

**FX Mix:** Specify the gain for the sound effects (FX) in the game.

0-125: 0-125

Default: 75

**Attract Mode Sounds:** Specify whether the game will play sounds during attract mode or not.

ON: Play sounds

Default: ON

OFF: Do not play sounds

**Attract Mode Music:** specify whether the game will play music during attract mode or not.

ON: Play music

Default: OFF

OFF: Do not play music

**Attract Mode Jukebox** (Only available in Free Play Mode)

OFF: Jukebox Disabled

Default: OFF

JUKEBOX MANUAL: Jukebox starts when the "Action Button" is pressed

JUKEBOX AUTO: Jukebox starts automatically when in attract mode

**Jukebox Mode**

ORDERED: Songs play in order, by album

Default: Ordered

SHUFFLE: Songs play in a random order

**Jukebox Features:** Sets what game features are enabled for Jukebox

MUSIC ONLY: Songs played in order, by album

MUSIC + VIDEO: Plays the music and shows the song video on the main screen

MUSIC+VIDEO+LIGHTS: Plays the music, video and the lamp show for the song

**Attract Mode Motion Sounds:** Specify whether the game will play attract mode sounds when motion is detected by the camera or not.

ON: play attract mode sounds

Default: ON

OFF: do not play attract mode sounds

**REPLAY AWARDS**

**Replay:** Specify whether the game will use the automatic replay award system or not.

AUTO: use automatic replay award system

Default: OFF

OFF: no replay awards

**Replay Percent:** specify the desired replay percentage (Replay: AUTO only).

1-30: 1-30%

Default: 10%

**Replay Levels:** specify the number of scoring levels for replay awards (Replay: AUTO only). These Replay Scores will be set by the game. If configured, Replay Scores 2, 3 & 4 will be set at 2X, 3X & 4X the first Replay Score.

1-4: 1-4 levels

Default: 1 level

**Replay Award:** specify the award for achieving any replay level (Replay: AUTO only).

FREE GAME: a free game

Default: FREE GAME

EXTRA BALL: an extra ball

LIGHT SPECIAL: light the Special shot on the playfield

AUDIT: no award, just record in Audits

**Replay Boost:** specify whether to temporarily boost replay levels (when achieved) or not (Replay: AUTO only).

ON: use replay boost

Default: ON

OFF: no replay boost

**Replay Score:** displays the current replay score, which is adjusted automatically by the game.

**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).

100000-1000000: 100,000-1,00,000 points

Default: 500,000 points

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

1000000-2000000: 1,000,000-2,000,000 points

Default: 1,500,000 points

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

2000000-4000000: 2,000,000-4,000,000 points

Default: 2,500,000 points

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

4000000-8000000: 4,000,000-8,000,000 points

Default: 5,000,000 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).

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

**Bluetooth Enable:** Enable or disable the bluetooth menu

**Camera Enable:** Enable or disable the camera

**Competition Enable:** Enable or disable the competition menu

# PRICING SETTINGS



Pricing Settings screen.

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

**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.

## GENERAL

**Allow Adult Content:** Allow vulgar language and suggestive images.  
ON or OFF Default: OFF

**Game Number:** shown in attract mode (for LE and CE games only).

**Floating Scores:** Show scores earned floating up the display

**Protips:** Whether tips are shown during bonus or not

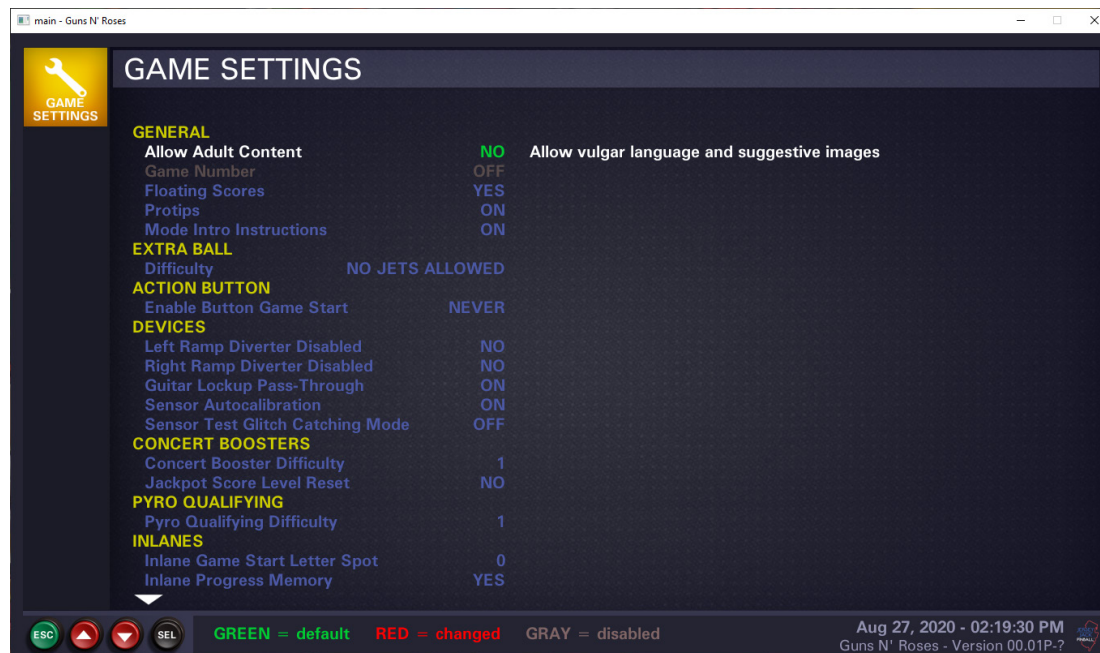
**Mode Intro Instructions:** Whether mode intro instructions are shown or not

## EXTRA BALL

**Difficulty:** Default: NO JETS ALLOWED  
NO JETS ALLOWER  
NO JETS OR LOOPS ALLOWER  
LIT ALWAYS

## ACTION BUTTON

**Enable Button Game Start:** Action button can start a game  
Never / Freeplay Default: NEVER



Game Settings screen.

## Devices

This Game Settings section allows you to disable any broken or otherwise non-functional devices. Below are the possible options & default for each setting:

**Disable Left Ramp Diverter:** Stops game from using diverter.

*YES:* device disabled Default: NO  
*NO:* device enabled

**Disable Right Ramp Diverter:** Stops game from using diverter.

*YES:* device disabled Default: NO  
*NO:* device enabled

**Guitar Lockup Pass-Through:** Allow balls not being locked to pass through.

*ON; Enabled* Default: ON  
*OFF: Disabled*

**Sensor Autocalibration:** Enables autocalibration of ball sensors.

*ON; Enabled* Default: ON  
*OFF: Disabled*

**Sensor Test Glitch Catching Mode:** Enables glitch - catching mode sensor tests.

*ON; Enabled* Default: OFF  
*OFF: Disabled*

## Concert Boosters

**Concert Booster Difficulty:** Specify the Concert Booster Difficulty level

*1 (Easy) - 10(Hard)* Default: 1

**Jackpot Score Level Reset:** Do Jackpots earned reset after each song for score level.

*YES - NO* Default: NO

## Pyro Qualifying

**Pyro Qualifying Difficulty:**

*1 (Easy) - 4 (Hard)* Default: 1

## Inlanes

**Inlane Game Start Letter Spot:** Determines how many letters are spotted at the start of the game.

*0 - 6 Letters:* Default: 0

**Inlane Progress Memory:** Keep inlane progress from ball to ball.

*YES - NO* Default: YES

## Lights Qualifying

**Light Qualifying Difficulty:** Sets the difficulty for Light Qualifying.

*1 (Very Easy) - 6 (Very hard)* Default: 2

## Coma Qualifying

**Stage Difficulty:** Sets the difficulty for Stage.

*1 (Very Easy) - 6 (Very Hard)* Default: 1

**Shot Difficulty:** Number of hits to light Coma.

*2 - 10* Default: 3

**Shot Timmer Difficulty:** Amount of time for Coma target to be hit.

*3 - 10* Default: 5

**Progress Memory:** Keeps Progress of Coma target hits in memory.

*YES - NO* Default YES

**One Combo Completion:** Coma qualifying By a left loop to Coma Combo.

*YES - NO* Default YES

### Coma Mode

**Timer Difficulty:** Is the Coma Mode timed.

*YES - NO*

Default YES

**Frenzy Stage Difficulty:** Switch hits required to complete Frenzy stage.

*Easy - Medium - Hard*

Default: EASY

**Timer Difficulty:** Timer allowed for completion of mode.

*Easy - Medium - Hard*

Default: MEDIUM

**Max Time Added:** Max seconds that can be added to the timer.

*5 - 30*

Default: 15

**Shot Stage Difficulty:** Number of shots lit to start on final stage.

*1 - 5*

Default: 2

**Time Added After Frenzy:** Time added for completing the frenzy stage.

*0 - 20*

Default: 5

**Jet Hits Difficulty:** Number of jets to count as one switch hit.

*1 - 10*

Default: 3

### Coma Multiball

**Super Jackpot Combe Difficulty:** Number of seconds between each shot.

*1 - 15*

Default: 3

**Super Jackpot Difficulty Minimum:** Minimum spinner hits to light super jackpot.

*10 - 50*

Default: 10

**Super Jackpot Difficulty Maximum:** Maximum spinner hits to light super jackpot

*50 - 100*

Default: 60

**Super Jackpot Difficulty Increase:** Increment spinner hits after super jackpoy.

*5 - 15*

Default: 5

### Skill Shot

**Light Make Some Nose Difficulty Minimum:** Miniimum advaces to light Make Some Noise.

*1 - 6*

Default: 2

**Light Make Some Nose Difficulty Maximum:** Maximum advances to light Make Some Noise.

*6 - 20*

Default: 6

**Light Make Some Noise Difficulty Increment:** Increment advances after Make Some Noise.

*1 - 3*

Default: 1

### Throw The Lights Multiball

**Combo Timer Difficulty:** Sets the timer difficulty of Coma.

*1 (Easy) - 3 (Hard)*

Default: 2

**Jackpot Roving Difficulty:** Sets the Jackpot difficulty.

*1 (Easy) - 5 (Hard)*

Default: 3

**Jackpot Roving Timer Difficulty:** Sets theTimer Difficulty:

*1 (Easy) - 3 (Hard)*

Default: 2

**Minimum Jackpot Ramps Difficulty:** Minimum number of ramps made to light subsequent jackpots.

*5 - 20*

Default: 6

**Subsequent Jackpot Ramps Made Difficulty:** Maximum number of ramps made to light subsequent jackpots.

*20 - 50*

Default: 20

**Subsequent Jackpot Ramps Made Difficulty:** Number of ramps made to increment for next jackpot.

*1 - 10*

Default: 1



### Ignite The Flames Multiball

**Minimum Jackpot Switch Difficulty:** Number of switches to light subsequent lackpots.  
1 - 500 Default: 300

**Subsequent Jackpot Switch Difficulty:** Number of maximum switches to light subsequent lackpots.  
500 - 1500 Default: 600

**Subsequent Jackpot Switch Difficulty:** Number of switches to increment for next jackpot.  
10 - 100 Default: 25

### Turn It Up Multiball

**Subsequent Jackpot Minimum Difficulty:** Minimum number of hurrups made to light subsequent jackpots.  
3 - 10 Default: 3

**Subsequent Jackpot Maximum Difficulty:** Maximum number of hurry ups made to light subsequent jackpots.  
10 - 50 Default: 12

**Subsequent Jackpot Increment Difficulty:** Number of hurry ups made to increment for subsequent jackpots.  
1 - 10 Default: 1

### Make Some Noise Multiball

**Minimum Shots Made Difficulty:** Minimum number of shots made to light subsequent jackpots.  
2 - 10 Default: 2

**Subsequent Shot Made Difficulty:** Minimum number of shots made to light subsequent jackpots.  
5 - 15 Default: 5

**Subsequent Shots Made Difficulty:** Number of shots made to increment for next jackpot.  
1 - 2 Default: 1

### JAM

**Last Song Number With Easy Advance:** JAM target always lit for this number of songs.  
0 - 20 Default: 1

**First Song With No Advance Available:** JAM never lit starting this song number  
0 - 50 Default: 10

**Jam Promotional Timer Length:** Seconds JAM spot band member promotion is available.  
3 - 15 Default: 6

### GNR Mystery

**Spellout Difficulty Level:** How hard is it to spell out GUNS N ROSES.  
1 = Lit - 29 = very very hard Default: 5

**Extra Ball Memory:** Extra Ball carries over across balls.  
ON / OFF Default: ON

**Allow Tilt Warning Award:** Allow the game to add tilt warnings to a player.  
ON / OFF Default: ON

### SONG

**Song Difficulty:**  
1 = Easy - 10 = Hard Default: 3

**Song Qualifing Spotting Difficulty**  
1 = Easy - 10 = Hard Default: 5

**Drums Qualifing Dificulty**  
1 = Easy - 5 HARD Default: 3

**Bass Qualifing Difficulty**  
1 = Easy - 5 = Hard Default: 3

**Keybord Qualifing Difficulty**  
1 = Easy - 5 = Hard Default: 2

**Keyboard 2 Qualifing Difficulty**  
1 = Easy - 5 = Hard Default: 2

**Slash Qualifing Difficulty**  
1 = Easy - 5 = Hard Default: 3

**Guitar Qualifing Difficulty**  
1 = Easy - 5 = Hard Default: 3

**AXL Qualifing Difficulty**  
1 = Very Easy - 8 = Extreamly Hard Default: 2

**Rose Rule Difficulty**  
1 = Very Easy - 8 = Extreamly Hard Default: 3

## SONG CONTINUED

### Rock Meter Encore Threshold

10000 - 1100000 Default: 1000000

### Rock Meter Booed Threshold

10000 - 250000 Default: 50000

### Rock Meter Flipper Penalty Start: How much meter goes down while holding flippers

0 - 500 Default: 350

### Rock Meter Flipper Penalty Increase: Increase of penalty each song played

0 - 100 Default: 25

### Boo Time

50 - 1000 Default: 500

### Time Needed To Qualify Album: Seconds

30 - 360 Default: 180

### Continue Add Ball: Enable / Disable Add - A - Ball on song continue

ON / OFF Default: ON

### Super Jackpot Add Ball: Enable / Disable Add - A - Ball on Song Super Jackpot

ON / OFF Default: ON

### Skip Song Intro: Hit both flippers to end song introductions.

YES / NO Default: NO

### Change Song: Allow the player to change the song before starting.

ON / OFF Default: ON

### Time Allowed to Choose A Song: Seconds.

15 - 180 Default: 60

### Change Song Left Flipper

Move Back / Next Album Default: NEXT ALBUM

### Collect Balls: Setting when balls are collected at end of song.

OFF / ALWAYS / MULTIBALL Default: MULTIBALL

### Applause Time: Seconds.

0 - 45 Default: 15

### Band Frenzy Timer Difficulty: Number of seconds for band frenzy to run.

10 - 40 Default: 20

### Extra Ball Memory: Extra Ball lit carries over across balls.

ON / OFF Default: ON

### Song Is Lit Reminder: Does song is lit graphic shows at ball start.

ON / OFF Default: ON

## Song Multiball

### Lit Locks At Game Start: # of Lit Locks are Awarded at Game Start.

0 - 6 Default: 0

### Base Song Ball Save Time: Ball Save Time

0 - 25 Default: 5

### Song Ball Save Boost Seconds: Ball Save Boost Time.

0 - 5 Default: 1

### Member Max Song Ball Save Time: Ball Save Time Member.

10 - 30 Default: 15

### Maximum Song Ball Save Time: Ball Save Time Max.

10 - 90 Default: 60

### Superlock Timeout: How Long the Super Locks Last. (Zero for Disable)

0 - 25 Default: 15

## Bottom Lane Bonus

### Bottom Lane Bonus Difficulty: Light Song Collect Bonus Extra Ball.

1 = Trivial - 6 = Very Hard Default: 3

## Song Modes

### Better Mode Difficulty:

1 - 8 Default: 1

### Civil War Mode Difficulty:

1 - 8 Default: 1

### Civil War Background Shaker: Background Shaker On or Off During Mode.

ON - OFF Default: ON

### Don't Cry Mode Difficulty:

1 - 8 Default: 1

### Double Talkin' Jive Mode Difficulty:

1 - 8 Default: 1

### Its So Easy Mode Difficulty:

1 - 8 Default: 1

### Live And Let Die Mode Difficulty:

1 - 8 Default: 1

### My Michelle Mode Difficulty:

1 - 8 Default: 1

### My Machee Lamp Intensity:

1 - 3 Default: 2

### Nighttrain Mode Difficulty:

1 - 8 Default: 1

## Song Modes Continued

<b>Paradise City Mode Difficulty:</b> 1 - 8	Default: 1
<b>Paradise City Jet Difficulty Min</b> 1 - 5	Default: 3
<b>Paradise City Jet Difficulty Increment:</b> 0 - 5	Default: 0
<b>Paradise City Jet Difficulty Max:</b> 5 - 10	Default: 5
<b>You could Be Mine Mode Difficulty:</b> 1 - 8	Default: 1
<b>This I Love Mode Difficulty:</b> 1 - 8	Default: 1
<b>This I Love Lamp Difficulty:</b> 1 - 3	Default: 2
<b>Nighttrain Mode Difficulty:</b> 1 - 8	Default: 1
<b>Coma Mode Difficulty:</b> 1 - 8	Default: 1
<b>Estranged Mode Difficulty:</b> 1 - 8	Default: 1
<b>November Rain Mode Difficulty:</b> 1 - 8	Default: 1
<b>Rocket Queen Mode Difficulty:</b> 1 - 8	Default: 1
<b>Welcome To The Jungle Mode Difficulty:</b> 1 - 8	Default: 1
<b>Mr. Brownstone Mode Difficulty:</b> 1 - 8	Default: 1
<b>Sweet Child O' Mine Mode Difficulty:</b> 1 - 8	Default: 1
<b>Chinese Democracy Difficulty:</b> 1 - 8	Default: 1
<b>Patience Mode Difficulty:</b> 1 - 8	Default: 1

## Patches

<b>Extra Ball:</b> Number of GNR Lane Completions Until Extra Ball is Available. 0 - 10	Default: 0
<b>Extra Ball Memory:</b> Extra Ball Carries Over Across Balls. ON - OFF	Default: ON
<b>Special:</b> Number of GNR Lans Completions Until Special is Available. 1 - 10	Default: 3
<b>Firecracher:</b> Number of Seconds Added to Ignite the Flames Timer. 5 - 30	Default: 15
<b>Horn Hands:</b> Number of Failed Plunges Added to Allowable Amount. 1 - 3	Default: 1
<b>Spotlight:</b> Number of Seconds Added to Throw the Lights Combo Timer. 1 - 3	Default: 2
<b>Speaker:</b> Number of Seconds Added to Turn It Up Hurry Up Timer. 1 - 3	Default: 2
<b>IV Bag:</b> Number of Seconds Added to Coma Timer. 5 - 30	Default: 15
<b>Concert Poster:</b> Number of Seconds Added to On the Road Modes. 5 - 30	Default: 30
<b>Crash Cart:</b> Number of Seconds Added to Coma MB Ball Saver. 5 - 15	Default: 10
<b>IV Bag &amp; Crash Cart:</b> Percent Score Increase of Coma MB. 5 - 100	Default: 75
<b>Bra:</b> Percent Score Increase of Skill Shot. 5 - 100	Default: 50
<b>Bandana:</b> Number of Seconds Added to JAM Hury Up Timer. 2 - 10	Default: 5
<b>Marshall:</b> Percent of Shots Removed From Slash Solo to Light Stage Completion. 5 - 75	Default: 25
<b>Patience:</b> Number of GNR Lane Completions Until Patience is Available. 0 - 10	Default: 0
<b>Sunglasses:</b> Number of Tour Cities to Spot. 1 - 5	Default: 5
<b>Album Sales</b>	
<b>Album Sales Memory:</b> Do Album Sales Reset at Ball Start. YES - NO	Default: NO

### Slash Solo Qualifing

**Minimum Spins Difficulty:** Miinimum Number of Spins to Light Slash Solo.

100 - 2500 Default: 2000

**Maximum Spins Difficulty:** Maximum Number of Spins to Light Slash Solo.

2500 - 5000 Default: 2500

**Subsuquent Spins Needed Difficulty:** Number of Spins to Increment for Next Slash Solo.

100 - 500 Default: 100

### Thirst For Carnage

**Difficulty:**

1 = Easy - 9 = Hard Default: 5

**Mode Time: Time Limit for Mode.**

1 = Easy - 9 = Hard Default: 5

### Desert Demolition:

**Difficulty:**

1 = Easy - 9 = Hard Default: 5

**Mode Time:** Time Limit for Mode.

30 - 120 Default: 60

### Tear Down The Wall

**Aim First:** Does the Mode Require Aim First Before a Sot is Lit.

YES - NO Default: NO

**Max Multiplier Per Shot:** Max X Pe rShot Prior to Clearin g Poster First Time.

6 - 200 Default: 100

**Ammo Allowed:** Total Ammo Allowed Before Mode Ends.

6 - 24 Default: 10

**Shot Multiplier:** Multiplier Increase by X for Each Shot.

1 - 5 Default: 3

### Shall We Play A Game

**Timer Difficulty:** Max Time Allowed for Mode.

15 - 60 Default: 60

**Shot Difficulty:** Number of Shots Required to Win Mode.

5 - 15 Default: 10

### Slash Solo

**Stage 1 Difficulty:** Number of Slash Spinner Switches Needed.

25 - 200 Default: 75

**Stage 2 Difficulty:** Number of Pick Spinner Spins Needed

25 - 200 Default: 75

### Tour Multiball

**Super Jackpot Minimum Difficulty:** Minimum Number of Jackpots Made to Light Super Jackpots.

3 - 6 Default: 3

**Super Jackpot Increment Difficult:** Number of Jackpots to Increment for Subsequent Super Jackpots.

1 - 10 Default: 1

**Super Jackpot Maximum Difficulty:** Maximum Number of Jackpots Made to Light Super Jackpots.

6 - 12 Default: 9

**Super Jackpot Roving Time Difficulty:**

1 = Easy - 3 = Hard Default: 2

**Add-A-Ball Earned Maximumm:** Max Number of Add-A-Balls Allowed to be Earned.

1 - 4 Default: 4

### Camera

**Disable Camera:**

YES - NO Default: NO

**Disable High Score Photos:** Turn Off Photos Taken for High Scores.

YES - NO Default NO

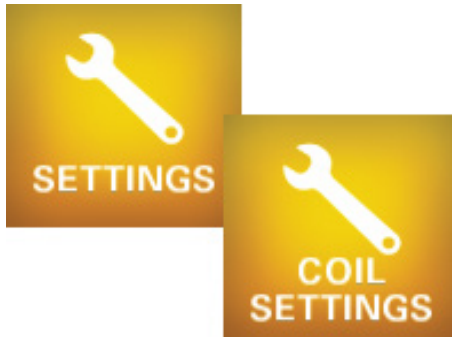
**Show Attract Mode Camera Message:** Show Camera Message is Attract Mode.

YES - NO Default: YES

### Camera

**Disable High Score Photo Decorations:** Turn Off Adding Decorations to Photos Taken for High Score.

YES - NO Default: NO



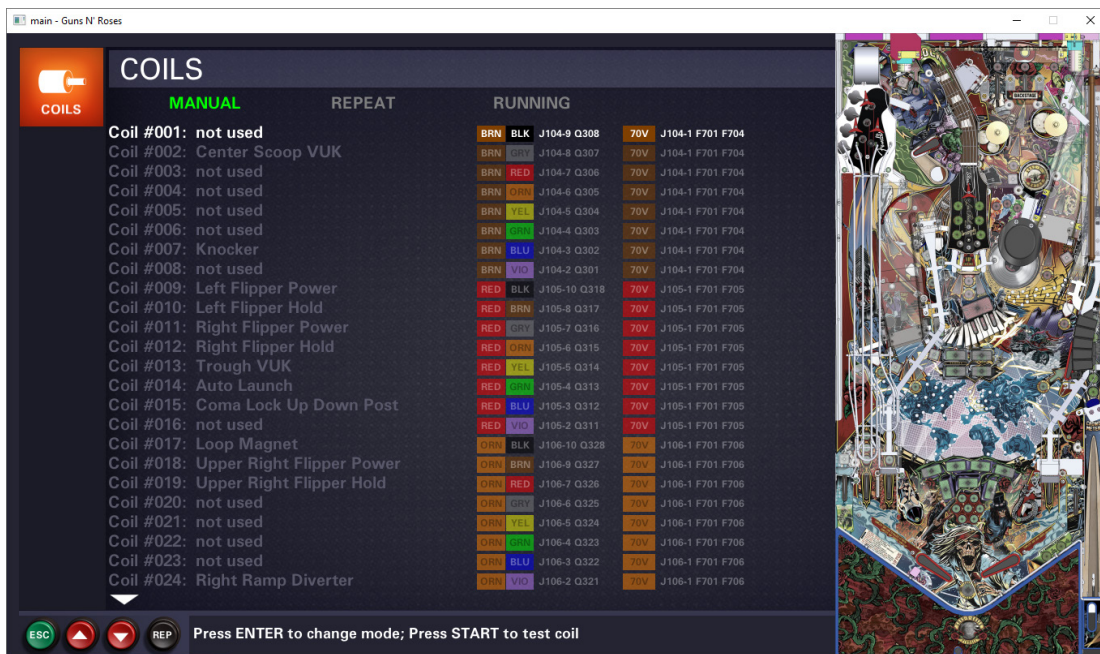
# COIL SETTINGS

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.



Coil Settings screen.

## TROUGH

**Trough VUK Strength:** specify the firing strength for the trough VUK coil.

1-32: 1-32 firing strength Default: 15

**Auto-Launch Strength:** specify the firing strength for the ball Auto-Launch coil.

1-32: 1-32 firing strength Default: 10

**Trough: Restrict Kickout on Error:** specify whether or not to restrict ball kickout and game start functions when a trough error is encountered.

YES - NO Default: YES

## GENERAL

**Kickouts:** Restrict Kickout on Error YES / NO Default: YES

**Maximum Shaker Strength:** Adjust to Extreme at Your Own Risk.

OFF - EXTREME Default: MEDIUM

## FLIPPERS

**Left Flipper Strength:** Specify the firing strength for the left flipper power coil.

1 - 32 Default: 22

**Right Flipper Strength:** Specify the firing strength for the right flipper power coil.

1 - 32 Default: 25

**Upper Right Flipper Strength:** Specify the firing strength for the upper right flipper power coil.

1 - 32 Default: 18

**Upper PF Flipper Strength:** Specify the firing strength for the upper left flipper power coil.

1 - 32 Default: 10

## BUMPERS

**Left Bumper Strength:** Specify the firing time.

20 - 36 Default: 24

**Right Bumper Strength:** Specify the firing time.

20 - 36 Default: 24

**Top Bumper Strength:** Specify the firing time.

20 - 36 Default: 24

## SLINGSHOTS

**Left Slingshot Strength:** Specify the firing time.

14 - 64 Default: 32

**Right Slingshot Strength:** Specify the firing time.

14 - 64 Default: 32

## VERTICLE UP KICKERS

**Upper Playfield VUK Strength:** Specify the firing time.

Factory Set Default: 10

**Center Scoop VUK Strength:** Specify the firing time.

1 - 32 Default: 13

**Left Guitar Release Fire Time:** Specify the firing time.

Factory Set Default: 3

**Right Guitar Release Fire Time:** Specify the firing time.

Factory Set Default: 3

**Coma Release Fire Time:**

1 - 5 Default: 3

## DIVERTERS

**Left Ramp Diverter Fire Strength:** Specify the firing strength.

50 - 1000 Default: 250

**Right Ramp Diverter Fire Strength:** Specify the firing strength.

50 - 1000 Default: 250

**Right Ramp Diverter Hold Strength:** Specify the hold strength.

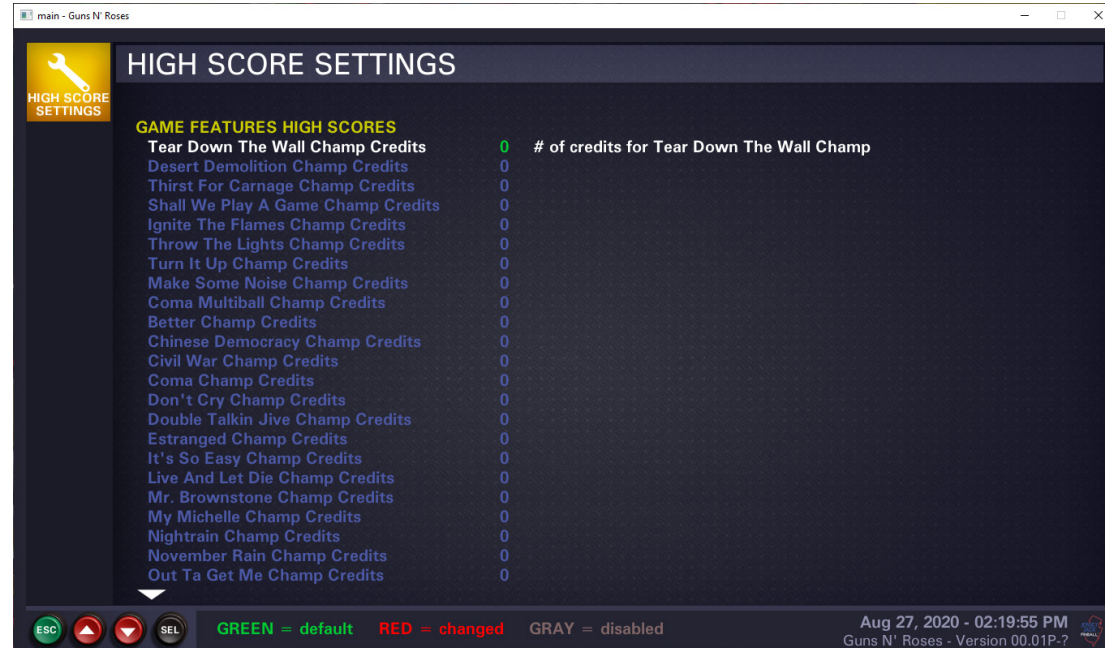
1 - 32 Default: 6



# 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.

## GAME FEATURE HIGH SCORES

**Tear Down The Wall Champ Credits:** Specify the number of credits awarded.

0-10: 0-10 credits Default: 0 credits

**Desert Demolition Champ Credits:** Specify the number of credits awarded.

0-10: 0-10 credits Default: 0 credits

**Thirst For Carnage Champ Credits:** Specify the number of credits awarded.

0-10: 0-10 credits Default: 0 credits

**Shall We Play A Game Champ Credits:** Specify the number of credits awarded.

0-10: 0-10 credits Default: 0 credits

**Ignite The Flames Champ Credits:** Specify the number of credits awarded.

0-10: 0-10 credits Default: 0 credits

**Throw The Lights Champ Credits:** Specify the number of credits awarded.

0-10: 0-10 credits Default: 0 credits

**Turn It Up Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Make Some Noise Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Coma Multiball Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Better Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Chinese Democracy Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Civil War Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Coma Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Don't Cry Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Double Talkin Jive Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Estranged Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**It's So Easy Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Live And Let Die Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Mr. Brownstone Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**My Michelle Champ Credit:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Nightrain Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**November Rain Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Out Ta Get Me Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**H.S.T.D. 3 Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**H.S.T.D. 4 Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Paradise City Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Patience Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Rocket Queen Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Sweet Child O' Mine Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**This I Love Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**Welcome To The Jungle Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits

**You Could Be Mine Champ Credits:** Specify the number of credits awarded.  
*0-10: 0-10 credits* Default: 0 credits



**Slash Solo Champ Credits:** Specify the number of credits awarded.  
0-10: 0-10 credits Default: 0 credits

**Tour Multiball Champ Credits:** Specify the number of credits awarded.  
0-10: 0-10 credits Default: 0 credits

**No Sympathy For The Devil Champ Credits:** Specify the number of credits awarded.  
0-10: 0-10 credits Default: 0 credits

#### REGULAR HIGH SCORES

**Keep High Scores:** ON / OFF. Defaults: ON

**High Score Award:** AUDIT / FREE GAME Default: FREE GAME

**High Score Name Length:** 3 - 11 Default: 11

**H.S.T.D. Rest Every:** 200 - OFF Default: OFF

**Champion Credits:** 0 - 10 Default: 1

**H.S.T.D. 1 Credits:** 0 - 10 Default: 1

**H.S.T.D. 2 Credits:** 0 - 10 Default: 1

**H.S.T.D. 3 Credits:** 0 - 10 Default: 1

**H.S.T.D. 4 Credits:** 0 - 10 Default: 1

**H.S.T.D. 5 Credits:** 0 - 10 Default: 1

**H.S.T.D. 6 Credits:** 0 - 10 Default: 1

**H.S.T.D. 7 Credits:** 0 - 10 Default: 1

**H.S.T.D. 8 Credits:** 0 - 10 Default: 1

**Default Grand Champion:** 500000 - 1000000 Default: 500,000 points

**Default H.S.T.D. 1:** 400000 - 900000 Default: 400,000 points

**Default H.S.T.D. 2:** 300000 - 800000 Default: 300,000 points

**Default H.S.T.D. 3:** 250000 - 700000 Default: 250,000 points

**Default H.S.T.D. 4:** 200000 - 600000 Default: 200,000 points

**Default H.S.T.D. 5:** 150000 - 500000 Default: 150,000 points

**Default H.S.T.D. 6:** 125000 - 400000 Default: 125,000 points

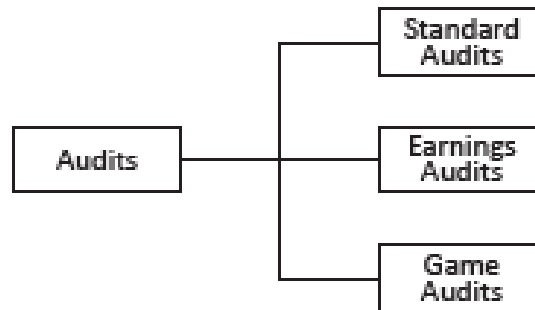
**Default H.S.T.D. 7:** 100000 - 250000 Default: 100,000 points

**Default H.S.T.D. 8:** 75000 - 200000 Default: 75,000 points

#### DAILY HIGH SCORES

**Keep Daily High Scores:** ON / OFF Default: ON

**Minimum Daily High Score:** Minimum Score to Qualify for the Daily High Scores Table.  
10000-100000 Default: 20,000



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).

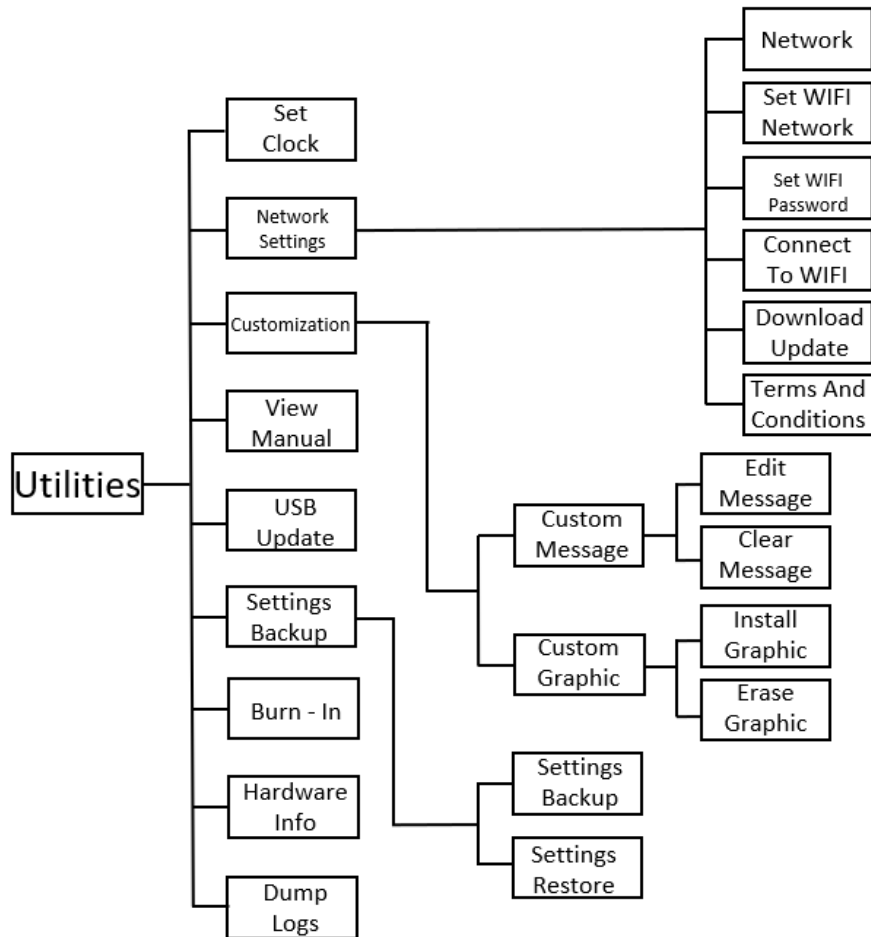
**Standard Audits** - view game-related totals such as free plays, 1-, 2-, 3- & 4-player games started, extra balls, replays, matches, etc.

**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.



# UTILITIES



Utilities menu tree.

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, dump data logs and view this manual and/or game hardware information.

**Set Clock** - adjust the system date and time.

**Network Settings** - Manage Your games Wireless Network Connection and check for software updates.

**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.

**View Manual** - display/navigate the PDF version of the GnR manual on the game's LCD screen.

**USB Update** - update the game's software via a USB memory stick. Note: The update must be downloaded from the JJP® support website (<https://www.jerseyjackpinball.com/support/>), using a separate computer.

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

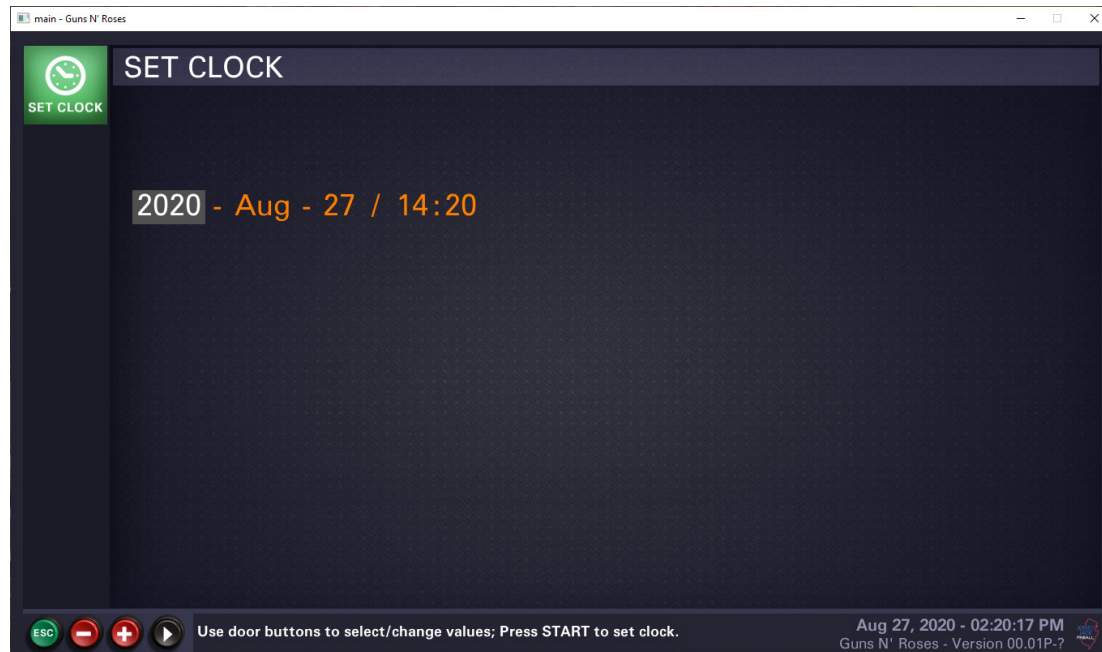
**Burn-In** - run a preset routine to exercise all of the critical devices in the game, repeatedly, to test for reliable, long-term system operation.

**Hardware Info** - view game hardware characteristics such as game serial number, firmware revision levels, motherboard type, display Information, available RAM, processor speed & solid state disk size.

**Dump Logs** - dump diagnostics software logs from the game to allow off-line analysis and troubleshooting of game issues.



# SET CLOCK



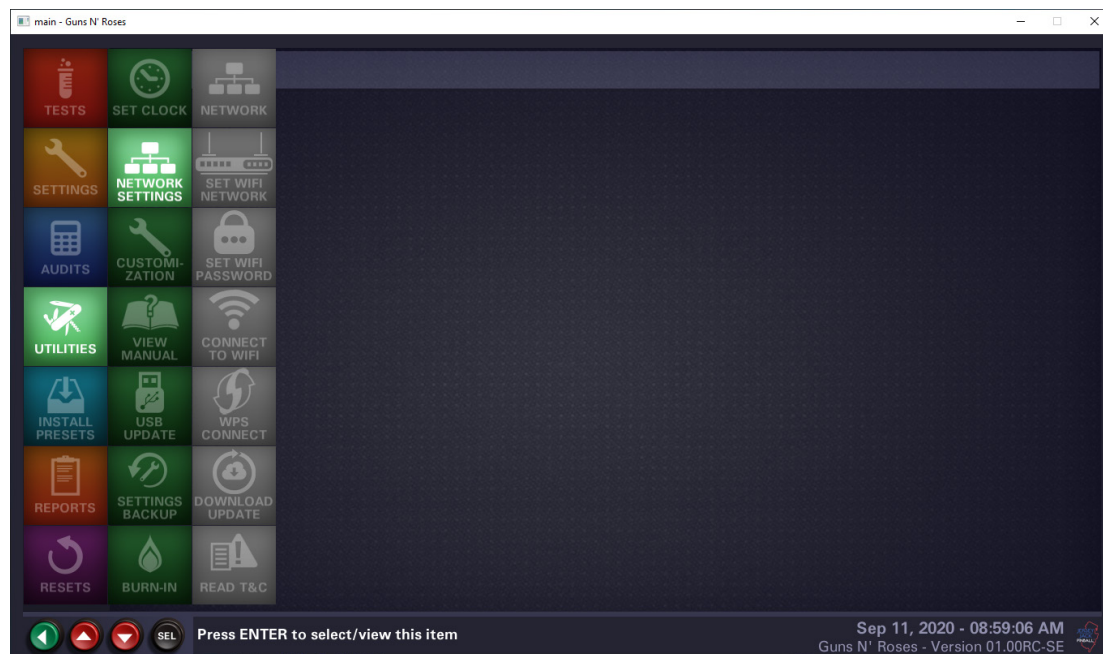
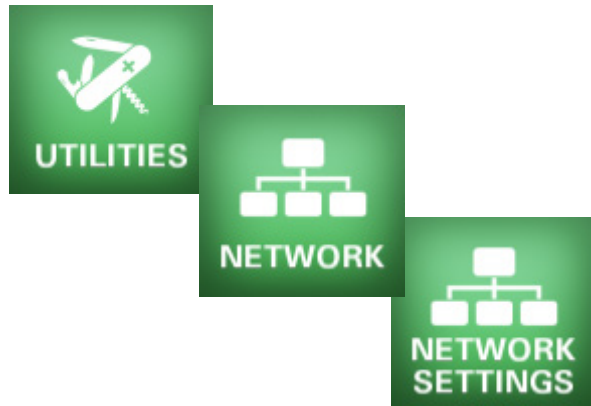
Set Clock utility screen.

When you enter the **Set Clock** 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.

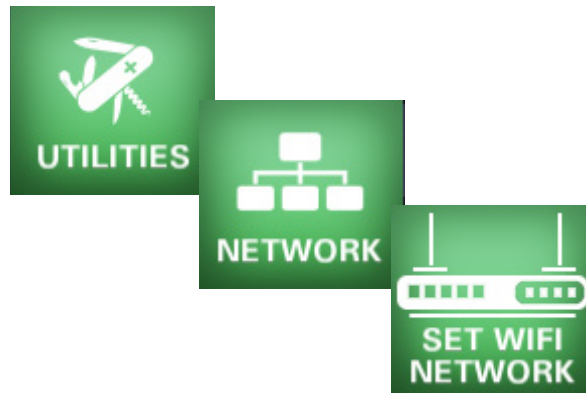
To exit the **Set Clock** utility, move the cursor to the position shown, then press the **Back/Escape** button. Note: The **Start** button moves the cursor to this position after saving the time/date.

# NETWORK SETTINGS

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



NetWork utility screen.

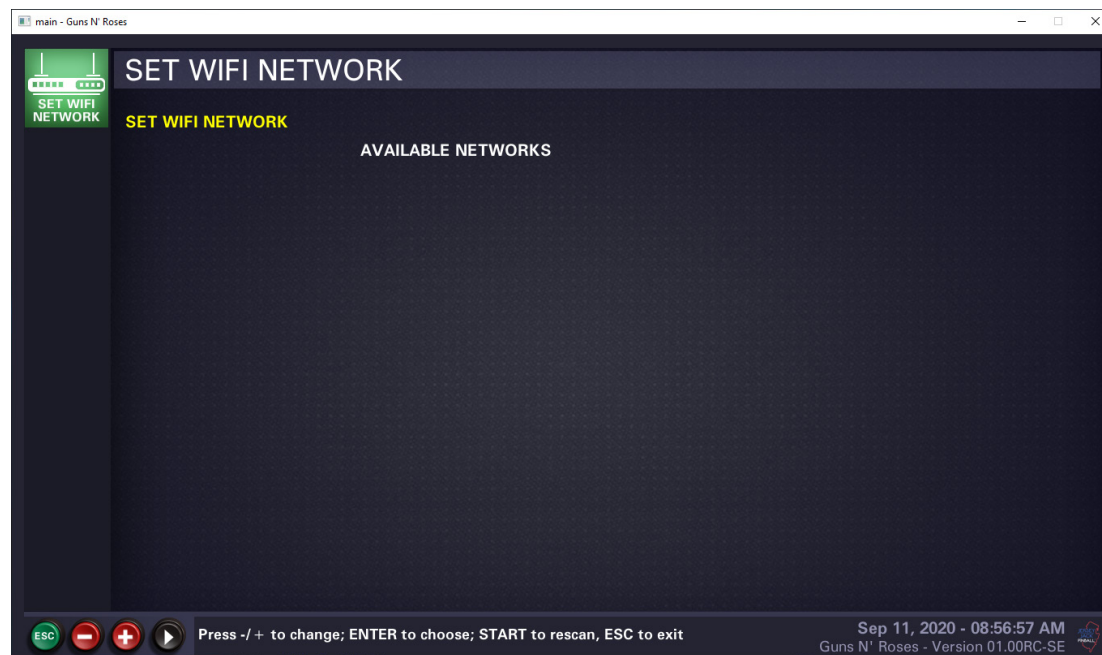


# SET WIFI NETWORK SETTINGS

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 SETTINGS

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.

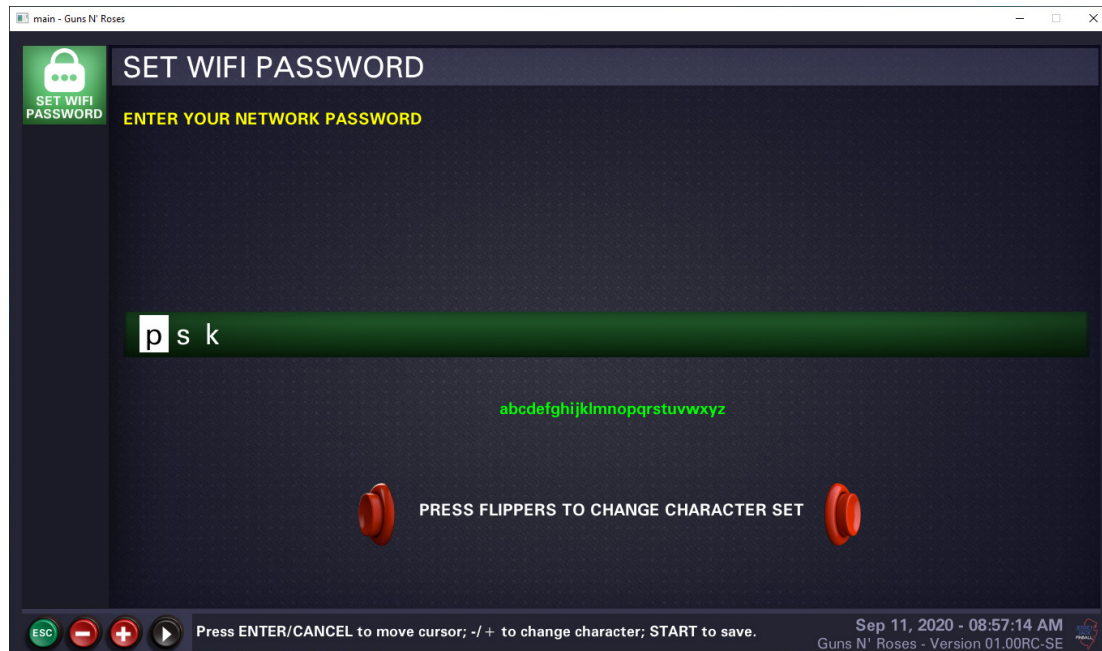
Use black **Enter** button and green **Back/Escape** button to move cursor between characters.

Use red **Up/+** and **Down/-** buttons to change characters within a character set. Press "Start Button" to save password once you're finished.

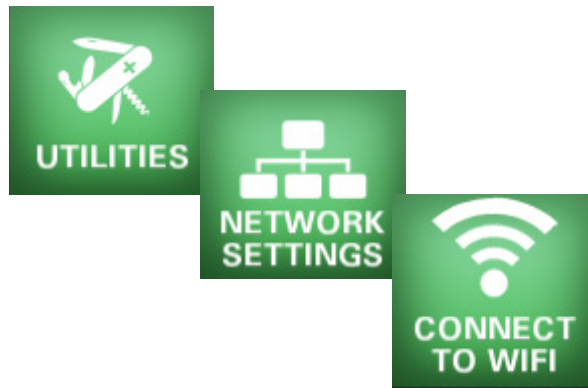
Press the black **Enter** button to scan for available networks.

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.

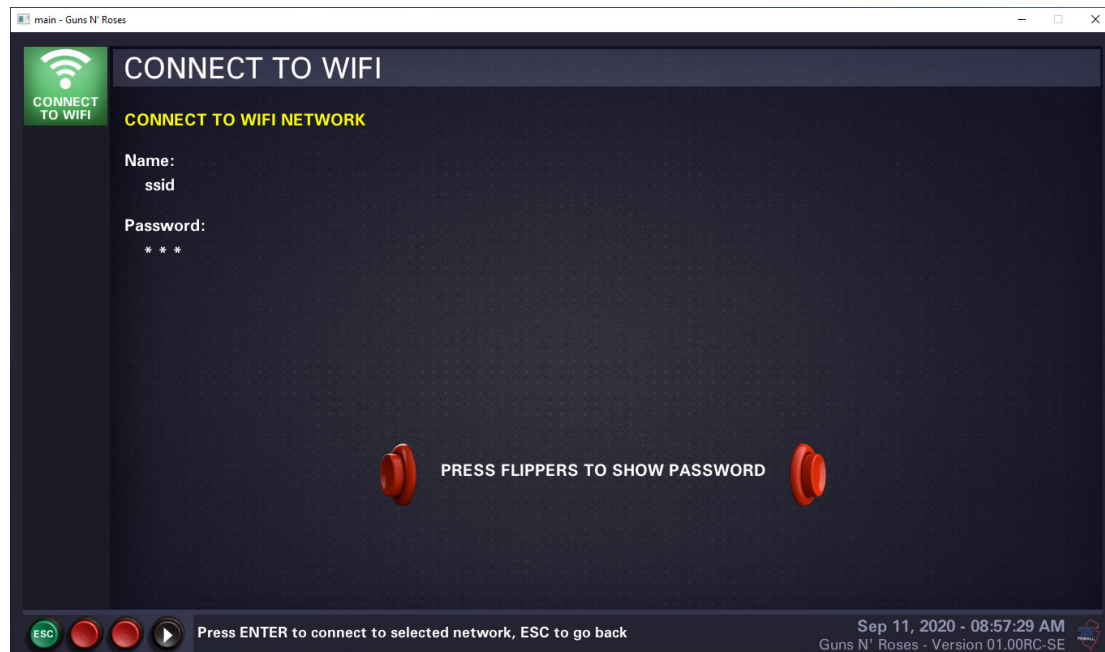


# CONNECT TO WIFI SETTINGS

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.

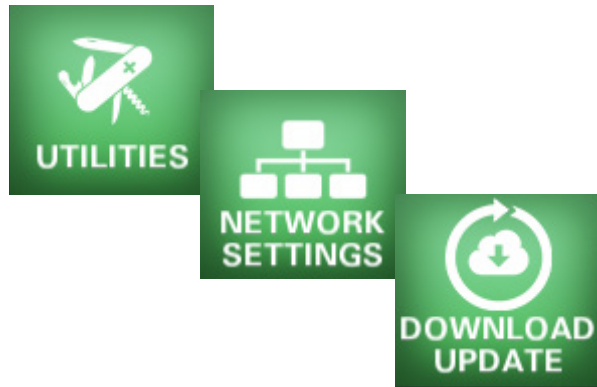
Use black **Enter** button to connect to the WiFi Network.  
 Connected to Network “xxx” will be shown once connected to the network.

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



Connect to WIFI utility screen.





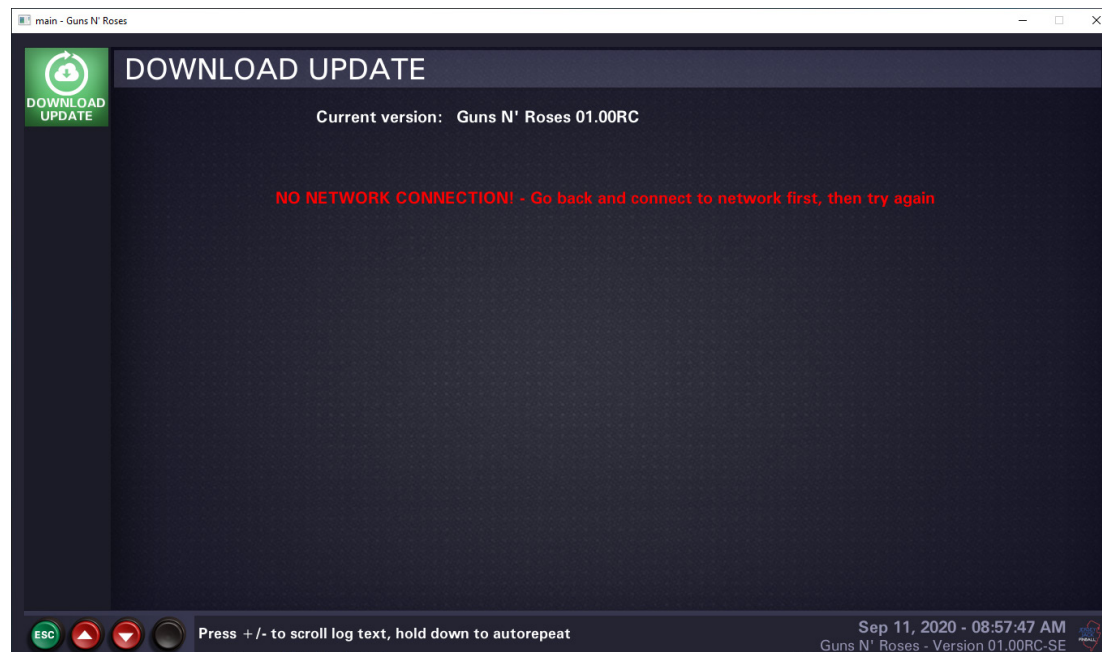
# DOWNLOAD UPDATE SETTINGS

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 screen.

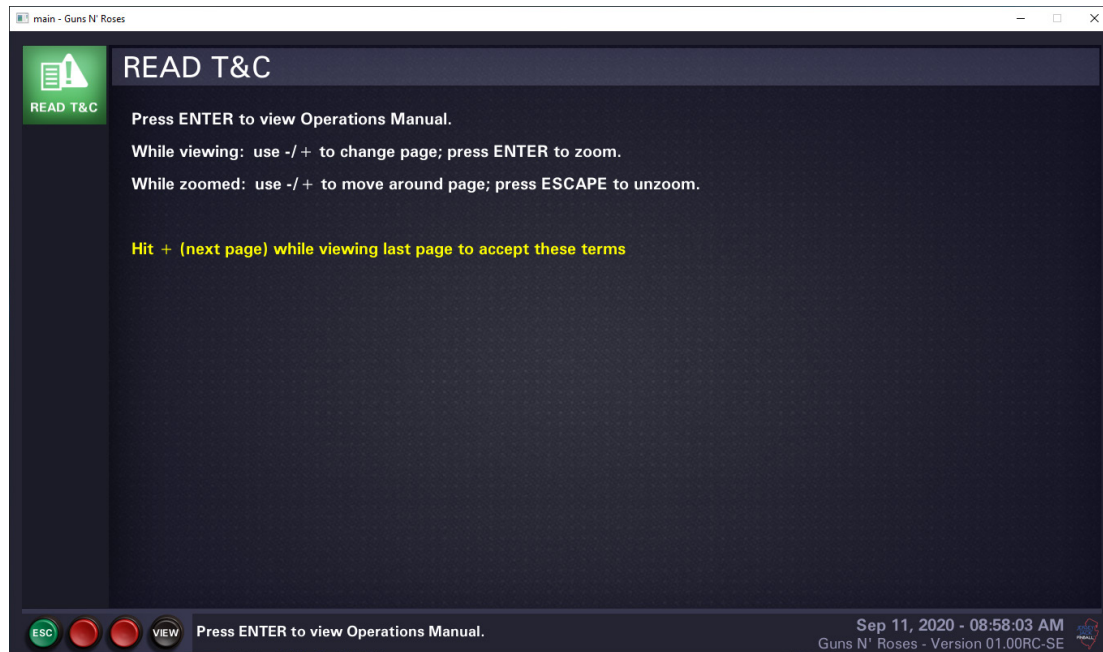


# TERMS AND CONDITIONS SCREEN

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.

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



Terms and Conditions Utility Screen.



# 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.

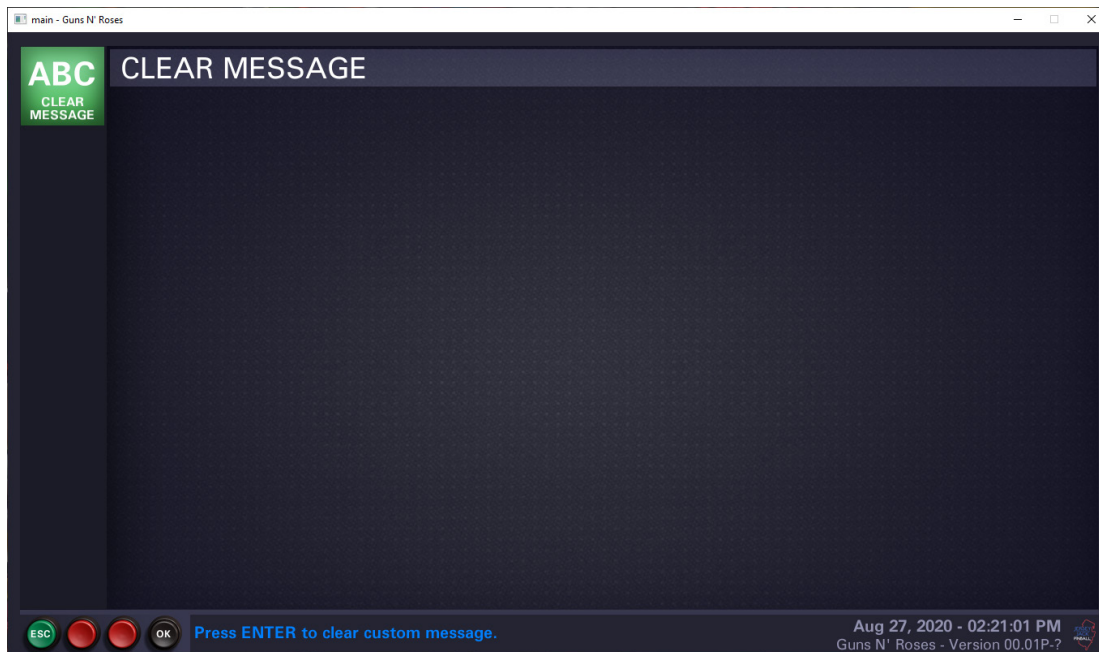


## CLEAR MESSAGE

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.



Clear Message utility screen.



# INSTALL GRAPHIC

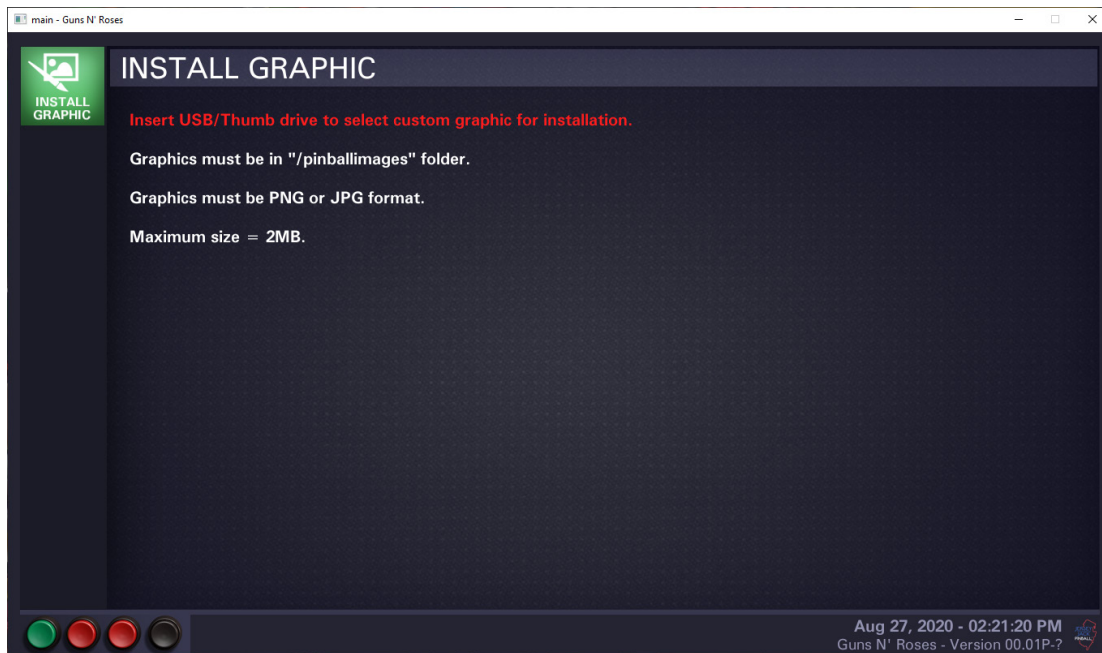
Use the **Custom Graphic** utility to install an image that will be displayed on the LCD monitor, periodically, during the game's attract mode. The custom image is uploaded or changed using the **Install Graphic** utility.

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.

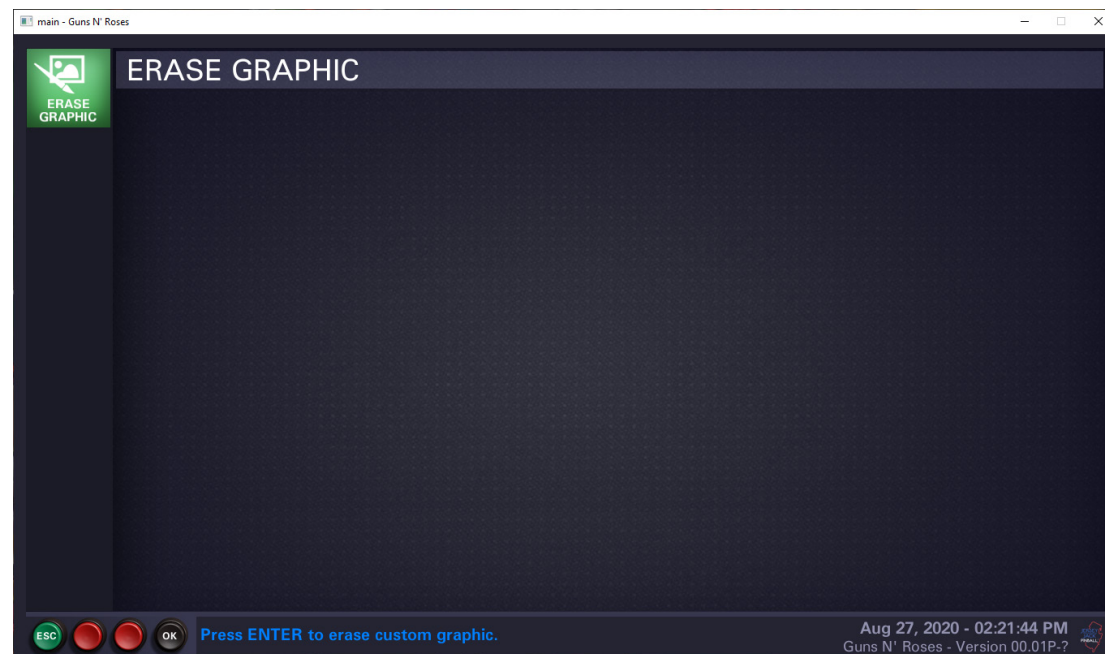


## ERASE GRAPHIC

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.



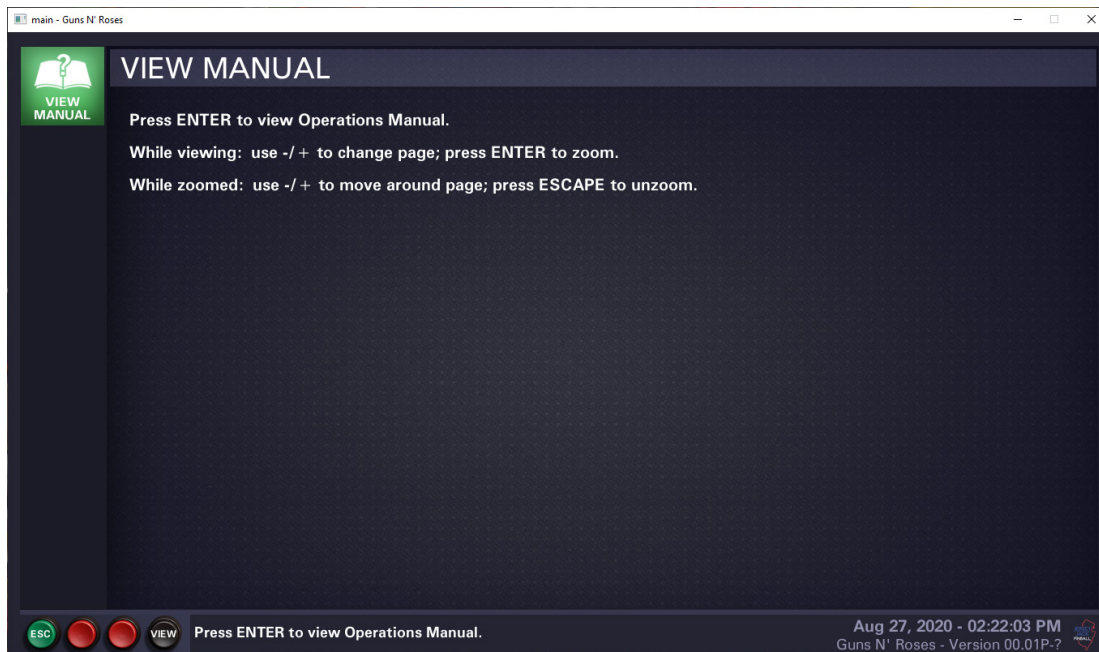
Erase Graphic utility screen.



## VIEW MANUAL

When you enter the **View Manual** utility, the LCD monitor will display the screen shown. To view the GnR 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.



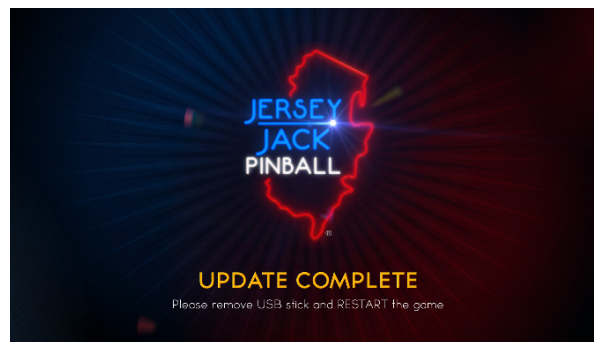
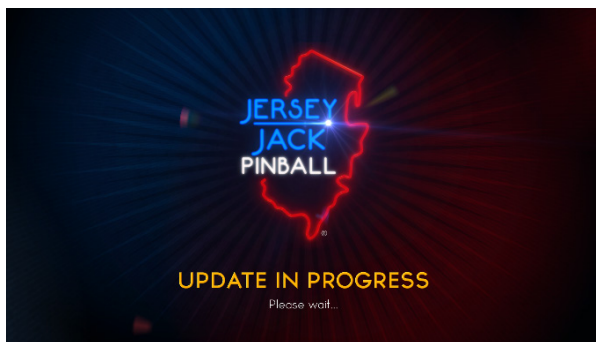
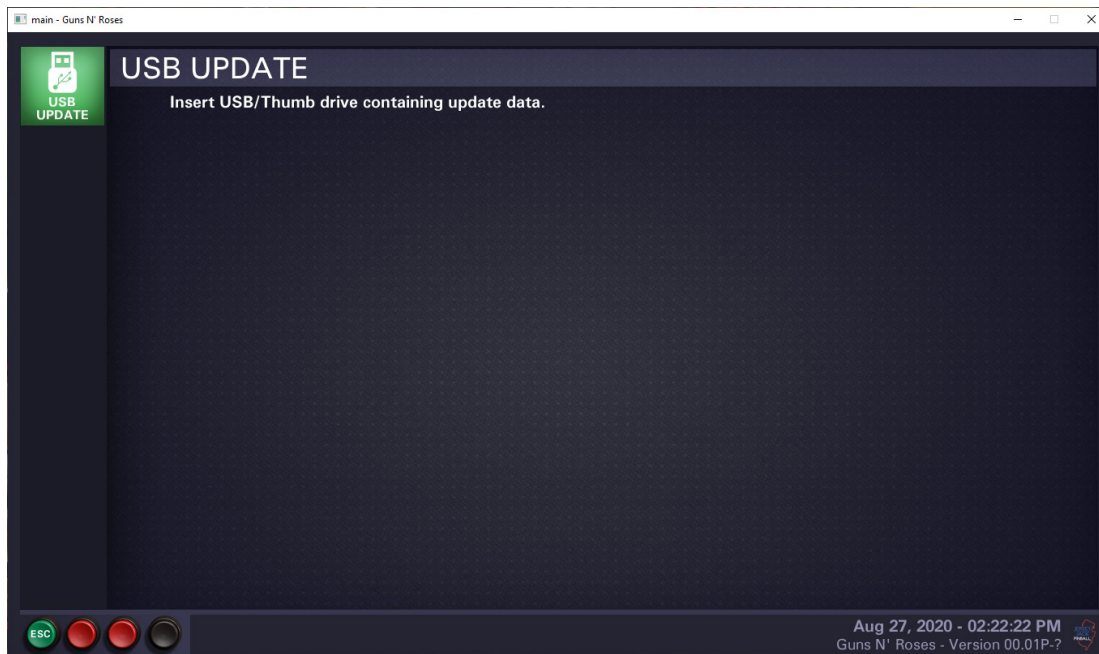
# USB UPDATE

Use the **USB Update** utility to apply a GnR delta software update to your game. Note: The update must be downloaded from the JJP® support website (<https://www.jerseyjackpinball.com/support/>), using a separate computer. Copy the “wonka\_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.

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).

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 end of the USB cable, then power the game back up again. Once the game has rebooted, verify that the delta update installed successfully by re-entering the GnR 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.



USB Update utility screens.





## SETTINGS BACKUP

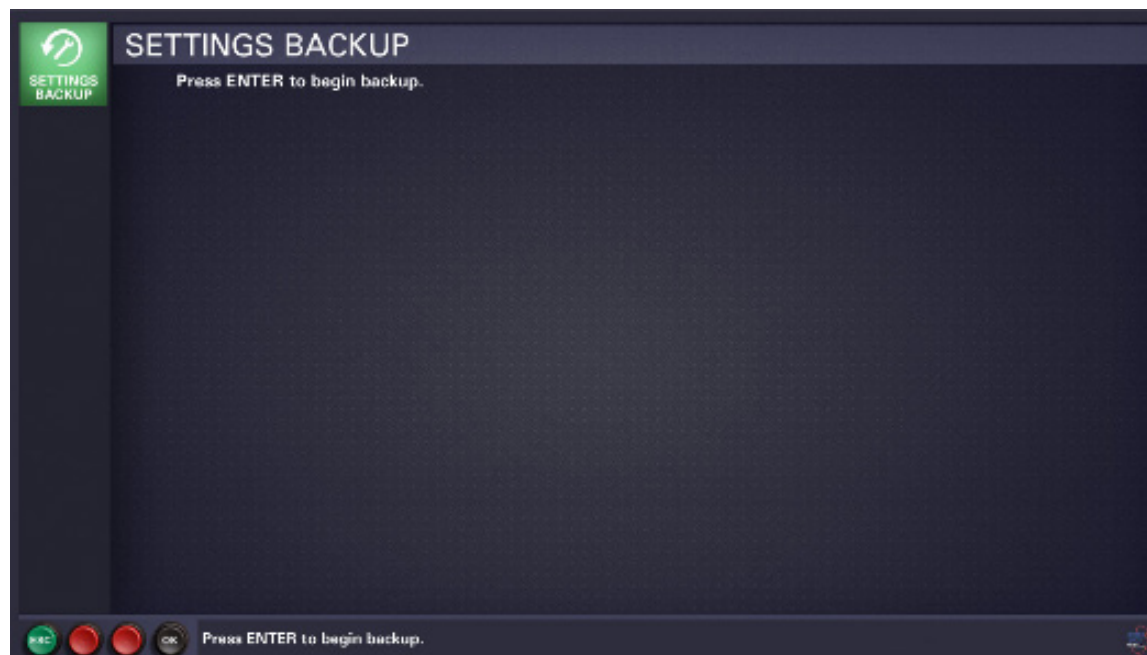
The **Settings Backup** & **Settings Restore** utilities allow you to quickly and easily backup & restore your game's settings, audits, reports, replay information and custom message. Your settings will be stored on a USB memory stick.

When you enter the **Settings Backup** utility, the LCD monitor will display the screen shown in figure B39. 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 in figure B40. 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.



## BURN IN

The **Burn In** utility allows you to repeatedly exercise/test virtually all of the critical devices in the GnR game. When you enter the utility, the game will cycle through a preset routine to simultaneously fire coils, activate magnets, run motors, flash colors on the LCD screen, play sounds, etc. - indefinitely.

To exit the **Burn In** utility at any time, press the *Back/Escape* button.



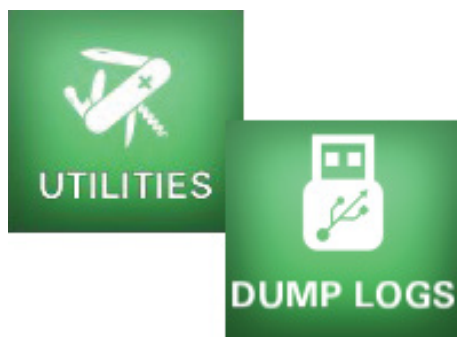
# HARDWARE INFO



Hardware Info utility screen.

Use the **Hardware Info** utility 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.

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



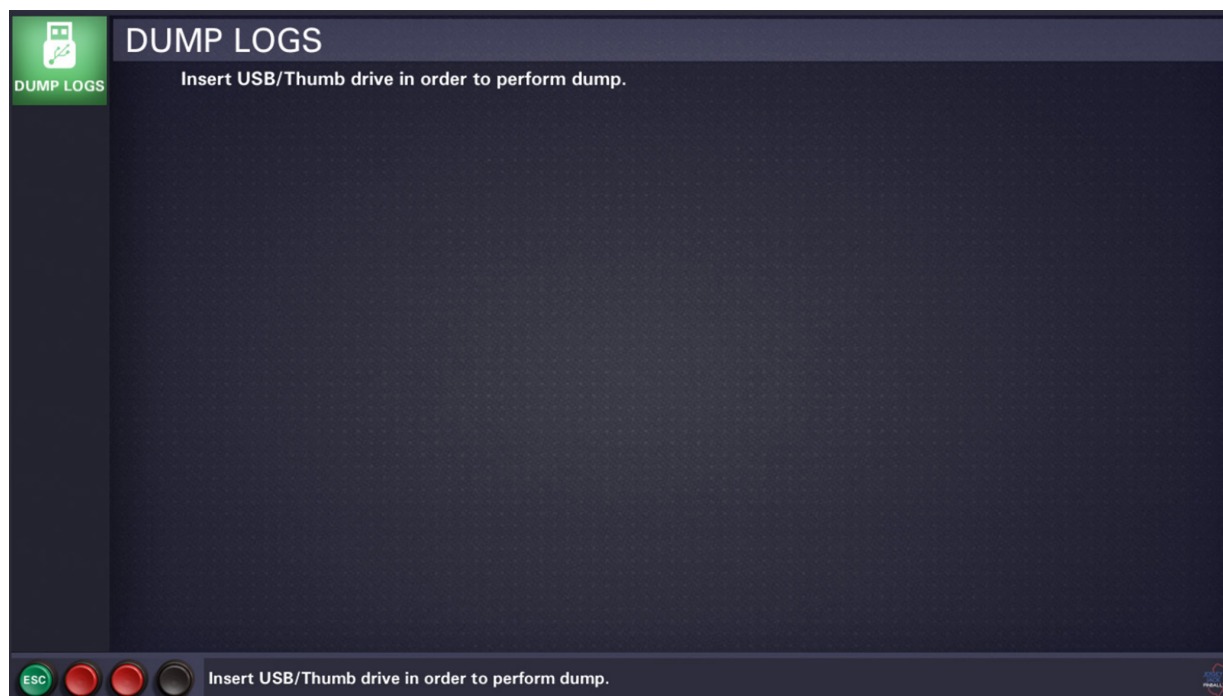
## DUMP LOGS

The **Dump Logs** utility allows you to dump your game's diagnostics software logs to a USB stick. These logs can then be analyzed, off-line, as an aid for troubleshooting difficult game issues.

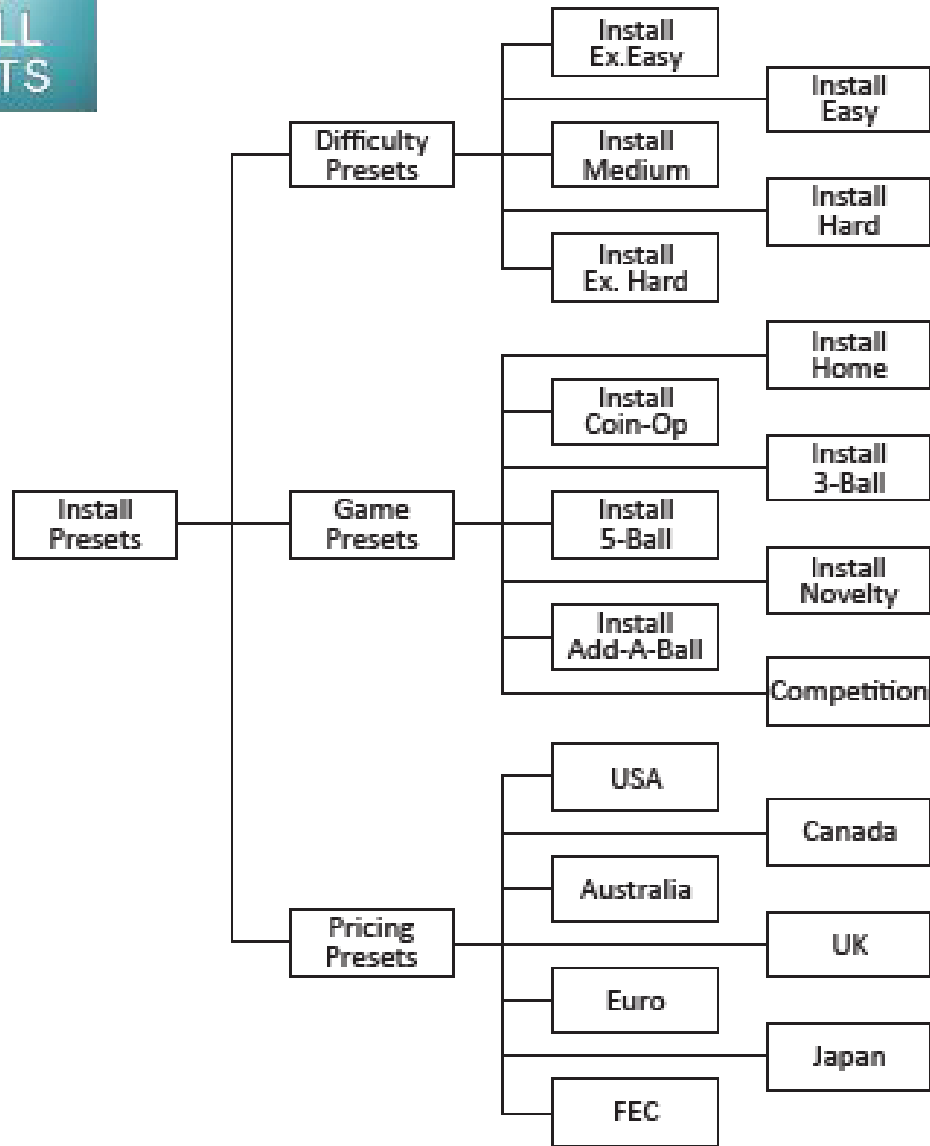
When you enter the **Dump Logs** utility, the LCD monitor will display the screen shown. Locate the end of the USB extension cable, just inside the open coin door. Fully insert a USB stick into the connector at the end of the cable (if your USB stick is equipped with an "in-use" light, it will illuminate).

Press the **Enter** button to perform the data dump. The game will create a new file folder in the root folder of the USB stick, then write all of the pertinent log data to it. When the write function is complete, the game will reboot and enter attract mode. You can then remove the USB stick and share the game logs data with Tech Support or other game owners, via email or any other form of messaging.

To exit the **Dump Logs** utility, press the **Back/Escape** button.



Dump Logs 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).

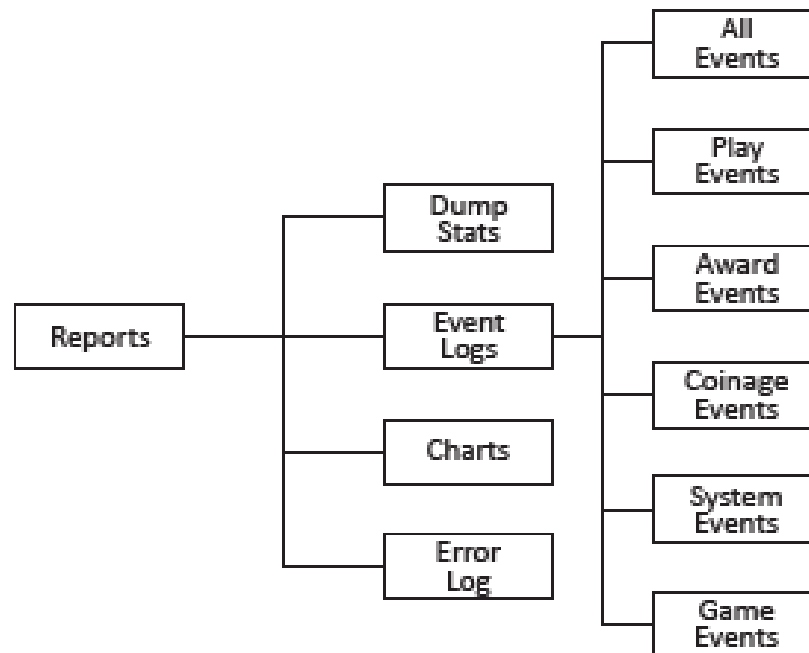
**Difficulty Presets** - change a predefined group of game/system settings to quickly make the game easier or more difficult to play. The difficulty level options are listed.

**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



Reports menu tree.

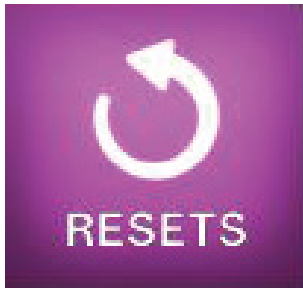
The **Reports** menu allows the user to view logs and graphs of events of interest in the game including bad switch alerts, device errors, game power-ups, service credits, game statistics, awards, etc.

**Dump Stats** - dump 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.

**Charts** - view charts of statistics such as games played per day, game times, game scores, etc.

**Error Log** - view the contents of the game's error log.



# 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.

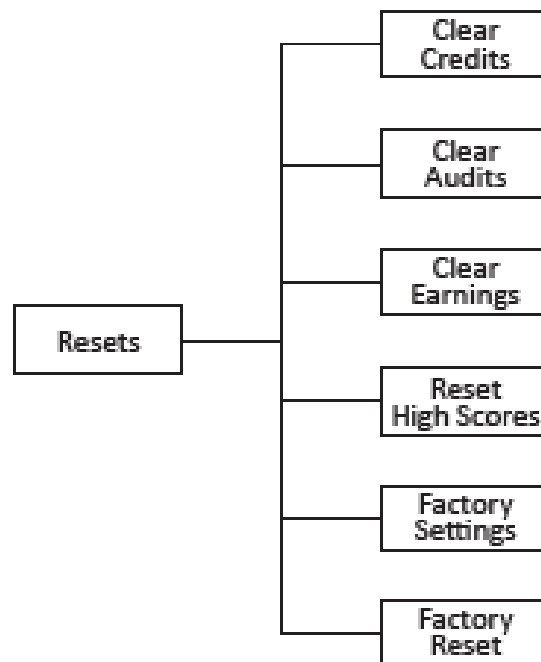
**Clear Audits** - reset audits data.

**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.



Resets menu tree.



# GUNS N ROSES

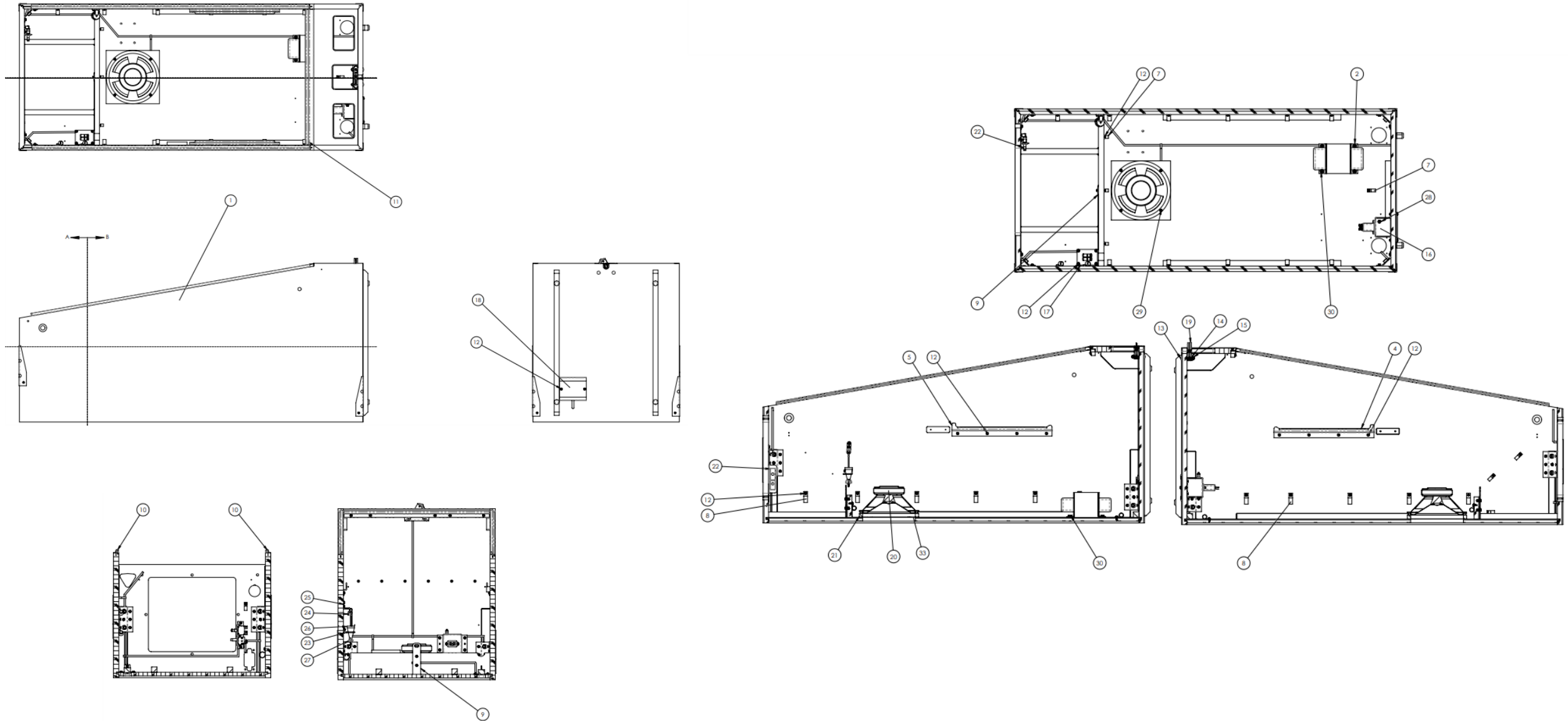


**NOT IN THIS LIFETIME**

## GAME PARTS INFORMATION



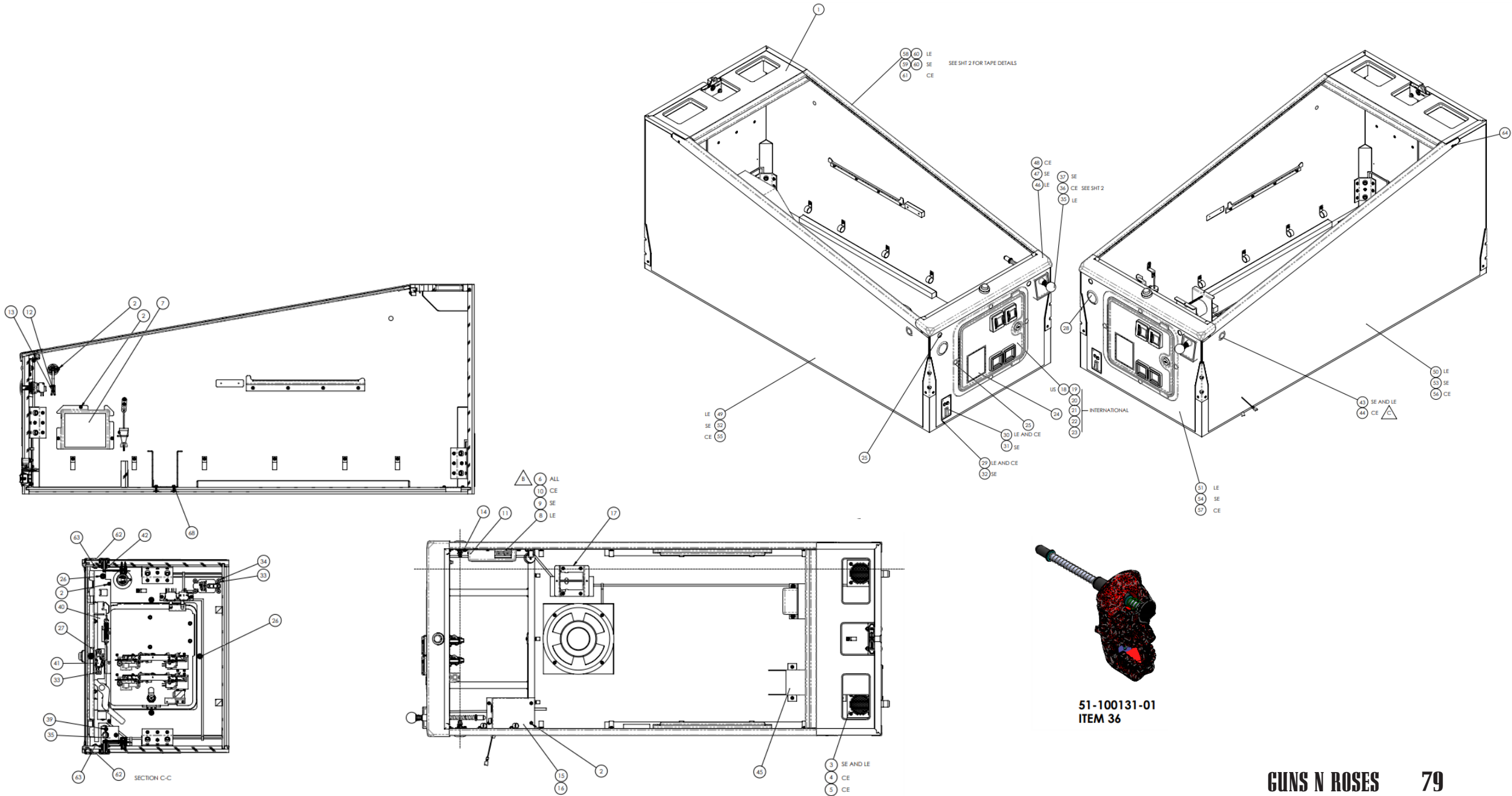
# LOWER CABINET BASE ASSEMBLY



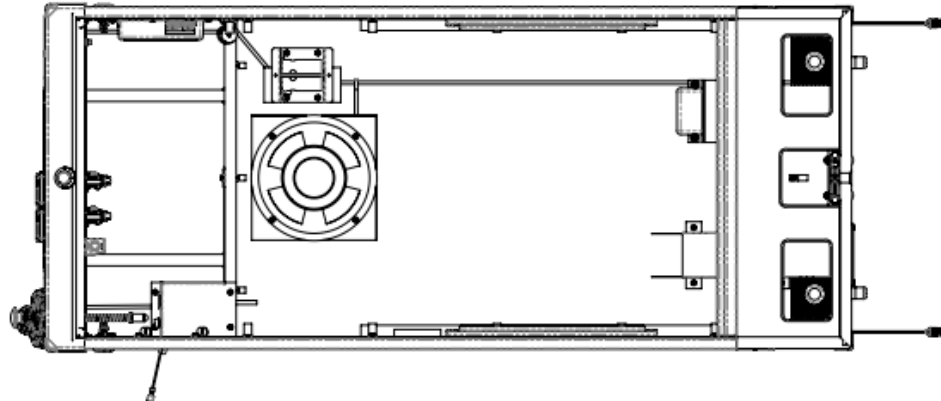
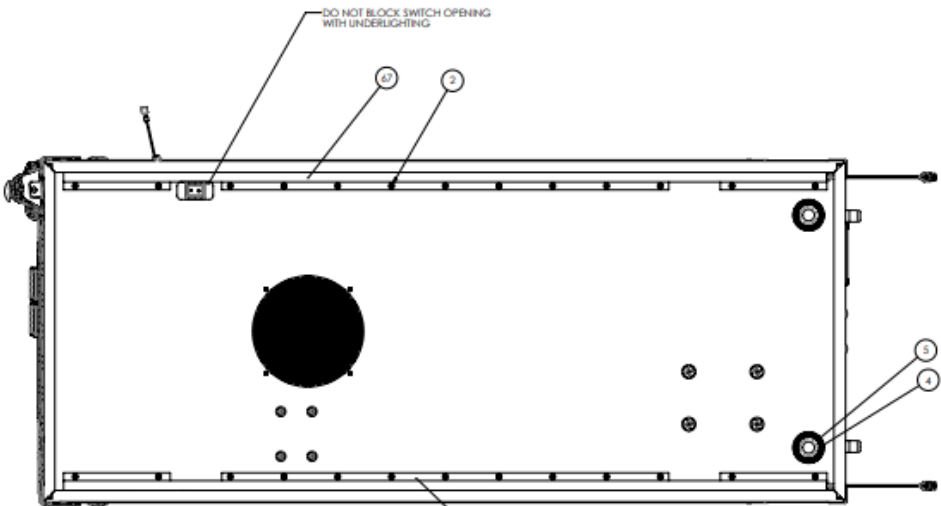
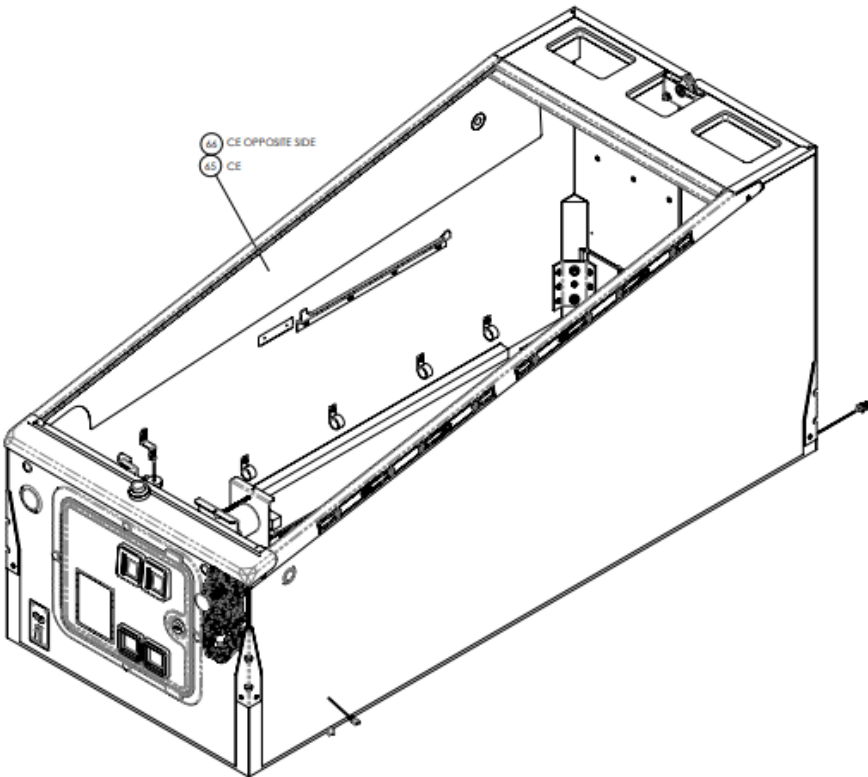
# LOWER CABINET BASE ASSEMBLY

Item	Part Number	Description	Qty	Pg.	Item	Part Number	Description	Qty	Pg.
1	05-000005-00	Cabinet Base Assembly	1	-	18	10-000010-01	Line Cord Cover Plate	1	-
2	16-005000-02	Main Transformer	1	-	19	42-005001-00	ROTO - LOCK LATCH	1	-
3	10-000002-00	Speaker Grill 8"	1	-	20	51-006004-00	Subwoofer Speaker Assembly	1	-
4	10-000033-00	Right Side Support Bracket	1	-	21	05-003007-00	Subwoofer Mounting Panel	1	-
5	10-000033-01	Left Side Support Bracket	1	-	22	51-000035-00	Door & Interlock Switch Assembly	1	-
6	30-000118-24	Black Tubing 1-1/2"	1	-	23	13-003008-00	Tilt Wire Form Bracket	1	-
7	30-000049-08	Cable Clamp Open 1/2"	7	-	24	13-003009-00	Tilt Hanger Wire	1	-
8	30-000049-12	Cable Clamp Open 3/4"	11	-	25	10-000086-00	Tilt Hanger Wire Bracket	1	-
9	10-000026-00	Cashbox Lock Bracket	1	-	26	11-000028-00	Plumb Bob	1	-
10	30-008000-00	Side Glass Channel	2	-	27	91-03406-00	#6-32 Wing Nut	1	-
11	30-008001-02	Rear Glass Channel	1	-	28	91-001008-00	#8-32 Keps Nut	3	-
12	82-009008-08	#8 x 1/2" Phillips SMS	49	-	29	80-002008-20	8-32 x 1-1/4" Phillips MS	4	-
13	81-005011-28	#10-24 x 1-3/4" Carriage Bolt, Black	2	-	30	80-002025-08	#1/4 - 20 x 5/8" Phillips MS	4	-
14	92-000010-00	#10 Flat Washer	2	-	31	19-009027-02	Transformer Secondary Cable	1	-
15	91-000011-00	#10-24 Nylon Stop Nut	2	-	32	19-003052-55	Bround Cable 18AWS	1	-
16	51-005023-00	Line Filter Box Assembly	1	-	33	19-009011-00	Ground Braid	206"	-
17	18-007012-00	ON/OFF Switch Assembly	1	-					

# GNR LOWER CABINET ASSEMBLY



# GNR LOWER CABINET ASSEMBLY



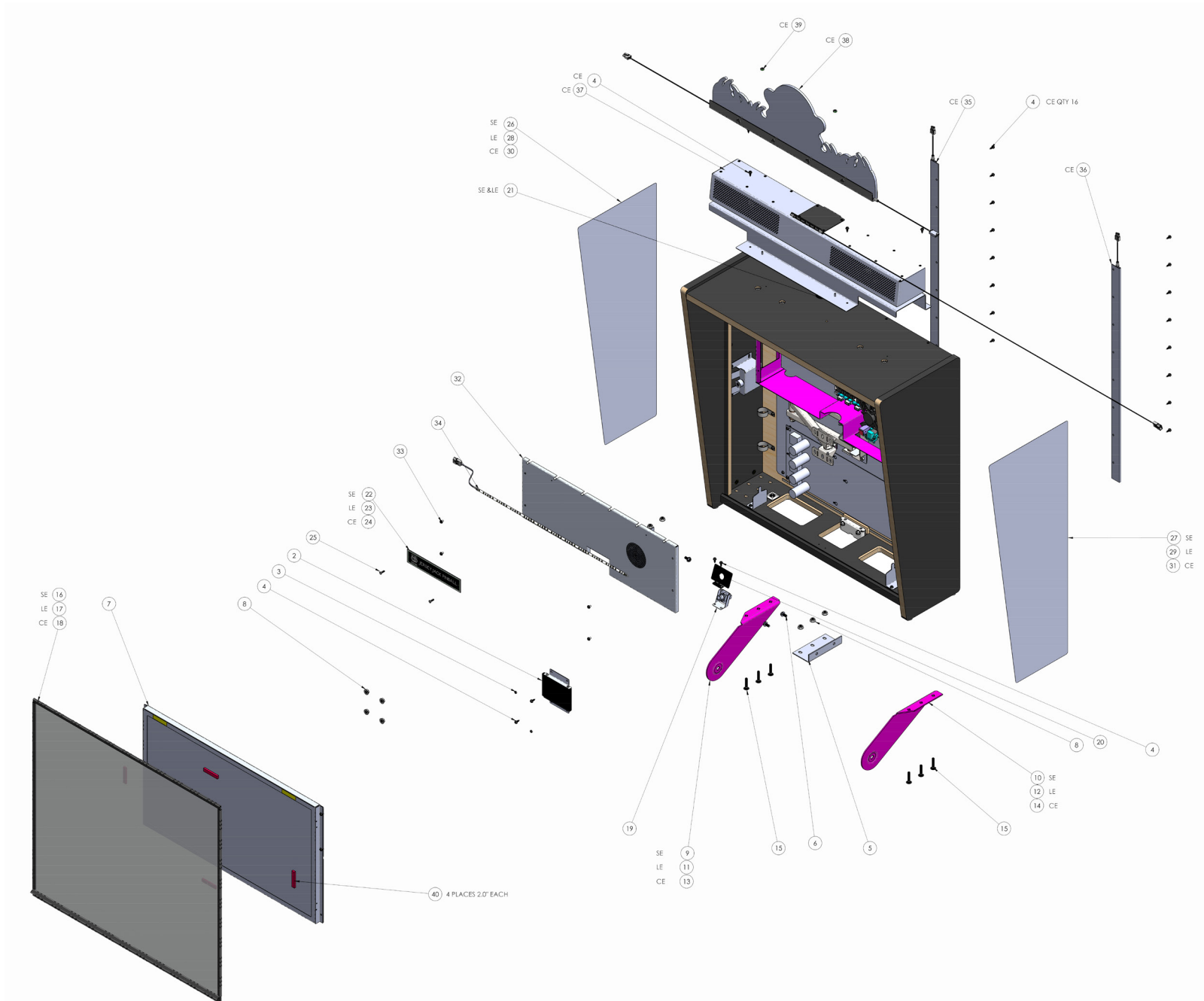
# GNR LOWER CABINET ASSEMBLY

Item	Part Number	Description	Qty	Pg.	Item	Part Number	Description	Qty	Pg.
1	50-005040-02	Lower Cabinet Base Assembly	1	-	35	51-000092-08	LE Ball Shooter Assembly	1	-
2	82-009008-08	#8 x 1/2" Phillips SMS	27	-	36	51-100131-01	CE Ball Shooter Assembly	1	-
3	10-000003-01	LE & SE Cabinet Vent Grill	2	-	37	51-000092-09	SE Ball Shooter Assembly	1	-
4	10-000003-02	CE Vent Grill With Grommet	2	-	38	10-000025-00	Ball Shooter Mounting Plate	1	-
5	25-100008-00	CE Grommet	2	-	39	80-002010-08	#10-32 x 3/8" MS	3	-
6	82-000004-10	LE #4 x 5/8" SMS	4	-	40	10-008001-00	Lockdown Bar Receiver Assembly	1	-
7	62-100025-00	LE Decal Cover	1	-	41	51-000066-10	Lockdown Switch Assembly	1	-
8	15-100020-00	LE Cabinet Controller Board	1	-	42	91-000001-10	Flipper Button PAL Nut	2	-
9	15-100020-01	SE Cabinet Controller Board	1	-	43	30-000009-04	SE & LE Flipper Button, Yellow	2	-
10	15-100020-02	CE Cabinet Controller Board	1	-	44	30-000009-02	CE Flipper Button, Red	2	-
11	30-100066-00	Cabinet Controller Board Cover	1	-	45	30-000125-00	Line Filter Box Cover	1	-
12	10-000002-01	Switch Plate	2	-	46	51-100101-00	LE Lockdown Bar, Cinnamon	1	-
13	82-002006-20	#6 x 1-1/4" SMS	4	-	47	51-100101-01	SE Lockdown Bar, Black	1	-
14	51-006000-00	Flipper Switches & Cable Assembly	1	-	48	51-100134-00	CE Lockdown Bar	1	-
15	51-006001-01	Power Box & Cable Assembly, U.S.	1	-	49	61-100005-03	LE Left Cabinet Decal	1	-
16	51-006001-10	Power Box & Cable Assembly, International	1	-	50	61-100005-04	LE Right Cabinet Decal	1	-
17	51-005027-01	Shaker Motor Assembly	1	-	51	61-100005-05	LE Front Cabinet Decal	1	-
18	40-000006-20	USA Coin Door Assembly 12VDC	1	-	52	61-100009-03	SE Left Cabinet Decal	1	-
19	40-000011-74	European Coin Door Assembly 12VDC	1	-	53	61-100009-04	SE Right Cabinet Decal	1	-
20	19-003011-00	European Coin Door Cable	1	-	54	61-100009-05	SE Front Cabinet Decal	1	-
21	15-000017-00	European Coin Door Board	1	-	55	30-100047-00	CE Left RAD-CAL	1	-
22	83-000006-04	6-32 Type 25 TCS, International Bd	1	-	56	30-100047-02	CE Right RAD-CAL	1	-
23	24-000006-13	555 12V LED, International	1	-	57	30-100047-03	CE Front RAD-CAL	1	-
24	62-100018-21	Decal Coin Door	1	-	58	42-007003-16	LE Side Rail, Cinnamon	2	-
25	81-005125-20	# 1/4 - 20 x 1-1/4" Carriage Bolt, Black	6	-	59	42-007003-09	SE Side Rail, Black	2	-
26	91-002025-00	# 1/4 - 20 Flange Nut	5	-	60	61-009000-00	LE & SE Foam Tape	10	-
27	91-000025-01	# 1/4 - 20 Lock Nut	1	-	61	51-100135-00	CE Side Rail	2	-
28	18-007023-04	Start Button Assembly	1	-	62	81-005108-16	#8-32 x 1" Carriage Bolt, Black	2	-
29	51-100113-00	LE Cab BT & Headphone Jack Assembly	1	-	63	91-001008-00	#8-32 KEPS Nut	2	-
30	62-100018-15	LE Headphone Jack Decal	1	-	64	82-006104-08	# 4 x 1/2" SMS, Black	2	-
31	10-000197-01	SE Cab BT & Headphone Jack Assembly	1	-	65	61-100010-01	CE Left Side Blade	1	-
32	62-100022-15	SE Headphone Jack Decal	1	-	66	61-100010-02	CE Right Side Blade	1	-
33	91-000008-00	8-32 Nylon Stop Nut	6	-	67	51-100145-00	CE LED Strip Assembly	1	-
34	92-000008-00	#8 Flat Washer	4	-	68	80-002008-10	# 8-32 x 5/8" Phillips MS	4	-

**CABLES NOT SHOWN**

Item	Part Number	Description	Qty	Pg.
70	19-003100-10	CE USB 2.0 A to Mini B, M/M	1	-
71	19-003115-02	LE & CE Headphone Board Jumper	1	-

# BACKBOX ASSEMBLY OUTSIDE

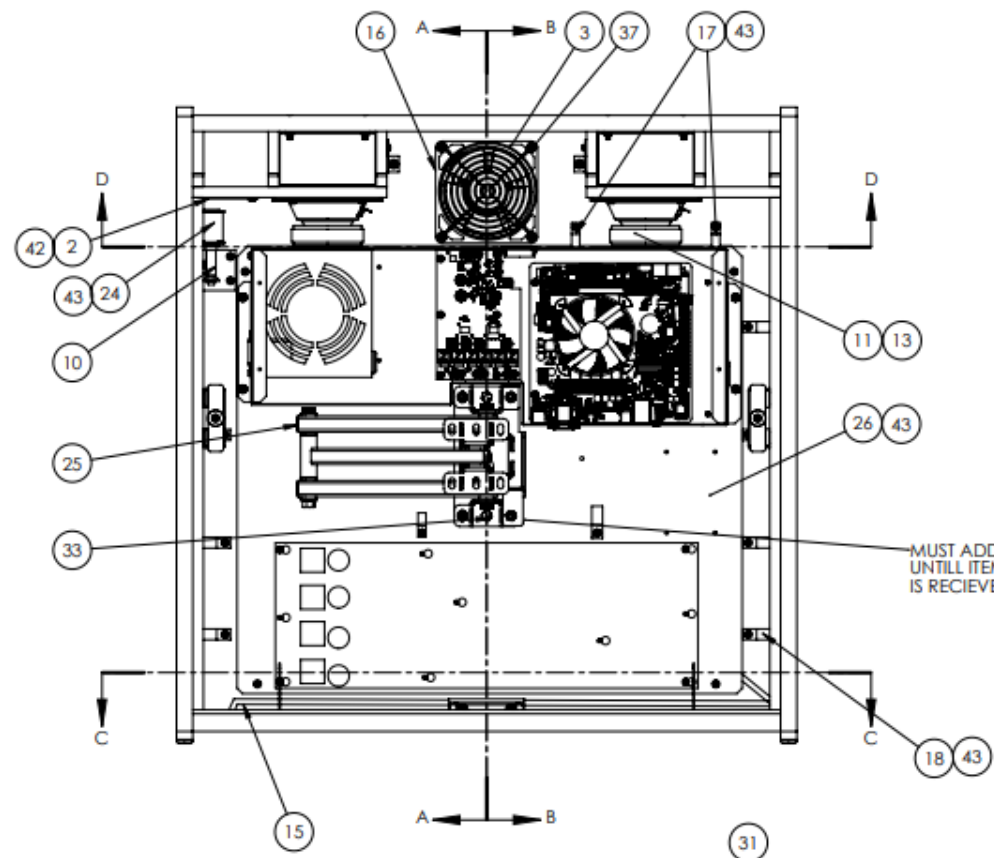
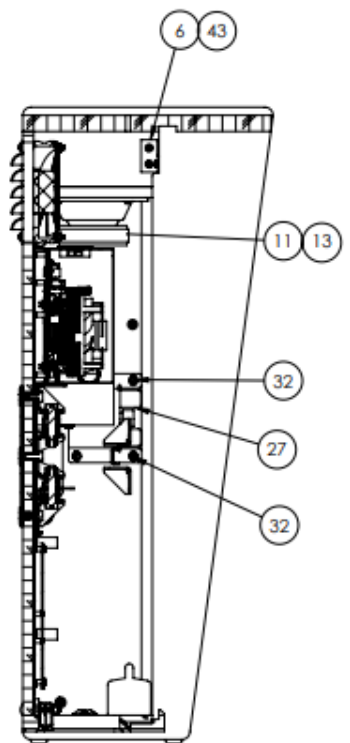
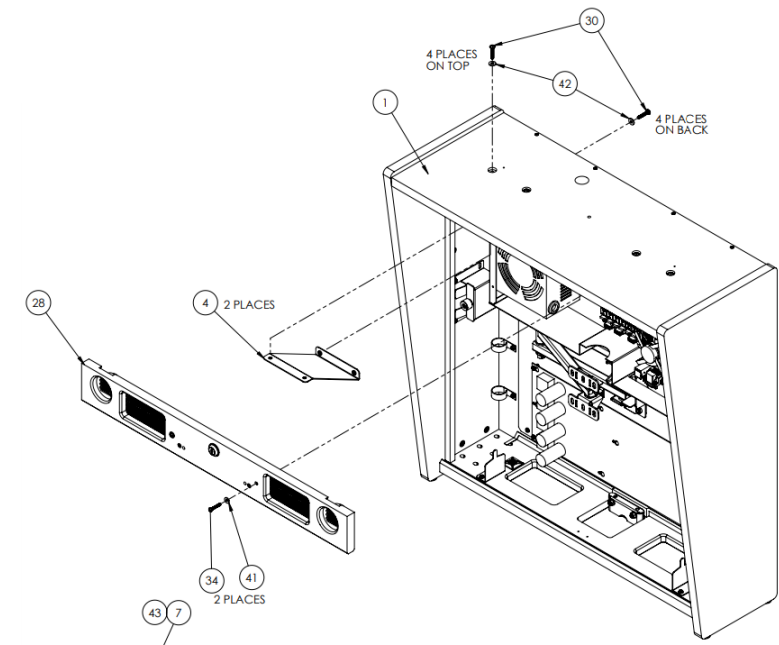
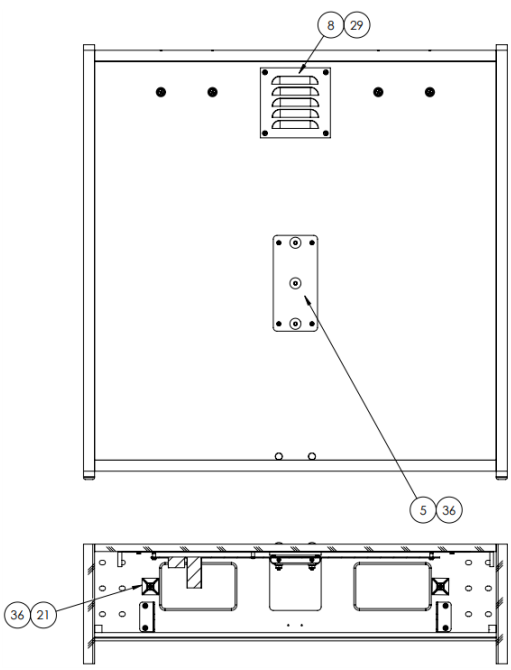


# BACKBOX ASSEMBLY OUTSIDE

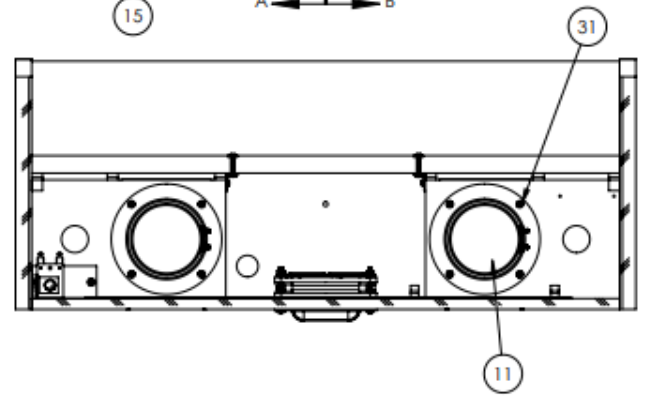
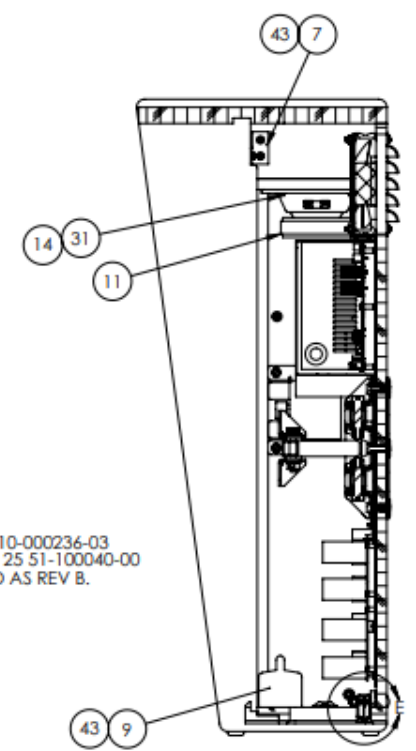
Item	Part Number	Description	Qty	Pg.	Item	Part Number	Description	Qty	Pg.
1	50-100028-00	Backbox Wood Assy	1	-	26	61-100009-01	SE Left Decal	1	-
2	51-005044-03	SSD Assembly	1	129	27	61-100009-02	SE Right Decal	1	-
3	91-001006-00	#6-32 Keps Nut	2	-	28	61-100005-01	LE Left Decal	1	-
4	82-009008-08	#8 x 1/2" Phillips SMS	-	-	29	61-100005-02	LE Right Decal	1	-
5	10-000034-01	Backbox Corner Bracket	2	-	30	30-100047-04	CE Left RAD-CAL	1	-
6	80-002025-08	#1/4 - 20 Philipps MS	4	-	31	30-100047-05	CE Right RAD-CAL	2	-
7	51-100021-00	27" LCD Monitor Assembly	1	130	32	10-100080-00	Backbox PCB EMI Shield	1	-
8	91-002025-00	#1/4 - 20 Flange Nut	10	-	33	80-002008-04	#8-32 x 1/4" Phillips Hex Head Screw	4	-
9	42-007001-18	SE Backbox Left Hinge Black	1	-	34	51-005042-00	Backbox LED Strip Assembly	1	-
10	42-007001-19	SE Backbox Right Hinge Black	1	-	35	51-100143-01	CE LED Strip Left Assembly	1	-
11	42-007001-32	LE Backbox Left Hinge Wild Copper	1	-	36	51-100143-02	CE LED Strip Right Assembly	1	-
12	42-007002-33	LE Backbox Right Hinge Wild Copper	1	-	37	51-100116-00	CE Sound Bar Topper Assembly	1	-
13	42-007001-20	CE Backbox Left Hinge Purple	1	-	38	51-100132-00	CE Slash Acrylic Topper Assembly	1	-
14	42-007001-21	CE Backbox Right Hinge Purple	1	-	39	91-000008-00	8-32 Nylon Stop Nut	2	-
15	81-005125-20	#1/4 - 20 x 1-1/4" Carriage Bolt Black	6	-	40	61-009004-01	Foam Adhesive Tape	8"	-
16	51-100105-00	SE GnR Printed Backglass Assembly	1	-					
17	51-100105-01	LE GnR Printed Backglass Assembly	1	-					
18	51-100105-02	CE GnR Printed Backglass Assembly	1	-					
19	51-005041-00	USB Camera Assembly	1	128					
20	30-000094-00	USB Camera Cover	1	-					
21	30-000093-01	Button Plug, 1.0" Black	1	-					
22	30-100073-00	SE JJP LOGO Name Plate	1	-					
23	10-100088-00	LE JJP LOGO Name Plate	1	-					
24	10-100088-10	CE JJP LOGO Name Plate	1	-					
25	80-000108-00	8-32 x 1/2" MS, Black	2	-					
							<b>Parts not shown</b>		
						16-005001-00	Ground Loop Isolator	1	-
						15-100013-00	GnR Security Dongle	1	-
						19-100102-00	Amplifier Extension Cable	1	-
						19-003043-01	AUX Input Cable	1	-



# BACKBOX ASSEMBLY INSIDE

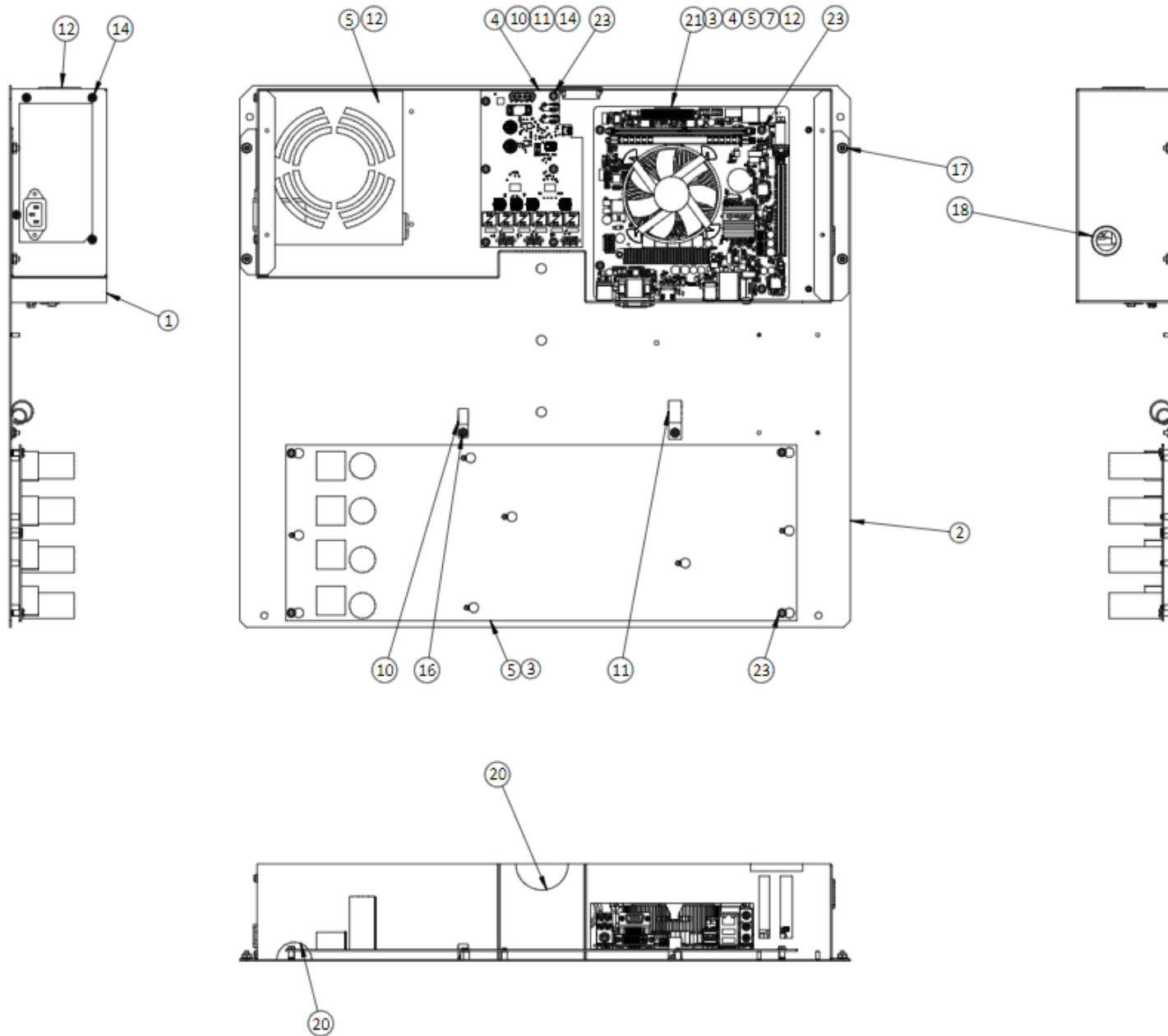


MUST ADD 10-000236-03 UNTILL ITEM 25 51-100040-00 IS RECIEVED AS REV B.



# BACKBOX ASSEMBLY INSIDE

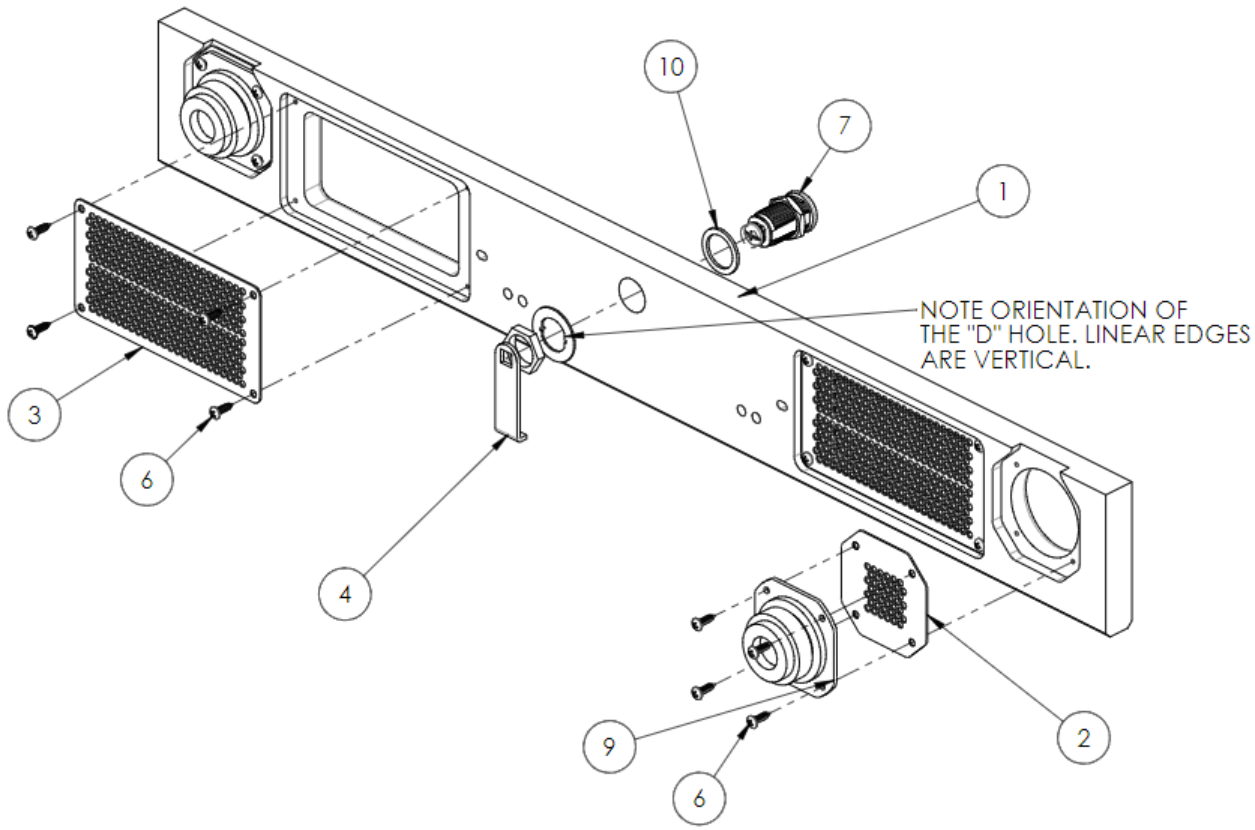
Item	Part Number	Description	Qty	Pg.	Item	Part Number	Description	Qty	Pg.
1	50-100028-00	Backbox Wood Assy	1	-	23	42-005002-00	Roto-Lock Receptacle	1	-
2	10-000016-00	Knocker Plate	1	-	24	51-006014-25	Knocker & Cable Assembly	1	-
3	10-000110-01	Fan Guard	1	-	25	51-100040-00	27" LCD Pivot / Wsing Assembly	1	-
4	10-000201-00	Acoustic Plate	2	-	26	51-100041-01	Backbox Mount PCB Assembly	1	-
5	10-000206-09	27" LCD Panel Face Plate	1	-	27	51-100050-00	Assembly Magnetic Latch	2	-
6	10-000207-01	Speaker Panel Mounting Brkt Right	1	-	28	51-100051-00	Backbox Speaker Bas & Cable Assy.	1	132
7	10-000207-00	Speaker Panel Mounting Brkt Left	1	-	29	80-000108-32	#8-32 x 2" MS, Black	4	-
8	10-000234-00	Vent Hole Cover, Louvered	1	-	30	80-000110-16	10-32 x 1" MS, Black	8	-
9	10-100077-00	Screen Brace	2	-	31	80-002008-08	8-32 x 1/2" Phillips MS	8	-
10	11-000011-00	Knocker Plunger Assembly	1	-	32	80-002010-06	#10-32 3/8" MS	6	-
11	17-006003-00	5.25" Midrange Speaker 8 Ohm	2	-	33	80-002025-12	1/4"-20 x 3/4" MS	3	-
12	19-000030-22	Crimp Pin, Female	2	-	34	80-008108-16	8-32 x 1" T25 TORX MS, Black	2	-
13	19-003116-10	Speaker Bar Cable, Right	1	-	35	81-005011-28	#10-24 x 1-3/4" Carriage Bolt, Black	2	-
14	19-003116-11	Speaker Bar Cable, Left	1	-	36	82-006106-08	#6 x 1/2" SMS, Black	6	-
15	19-009011-00	Ground Braid	47"	-	37	91-000008-00	8-32 Nylon Stop Nut	4	-
16	23-005004-03	Fan 12 VDC 120 x 25mm	1	-	38	91-000011-00	#10-24 Nylon Stop Nut	2	-
17	30-000049-08	Nylon Cable Clamp, Open 1/2"	2	-	39	92-000008-00	#8 Flat Washer	4	-
18	30-000049-16	Nylon Cable Clamp, Open 1"	7	-	40	92-000010-00	#10 Flat Washer	2	-
19	30-000051-04	4" Wire Tie	2	-	41	92-000108-00	#8 Flat Washer, Black	2	-
20	30-000051-08	8" Wire Tie	2	-	42	92-000110-00	#10 Flat Washer, Black	8	-
21	30-000115-06	1.1" Cable Tie Mount #6 Screw	2	-	43	82-009008-08	#8 x 1/2" SMS	26	-
22	30-002105-03	Housing Female, 3 Pin	1	-					



**BACKBOX PCB BASE ASSY**  
**51-100041-01**

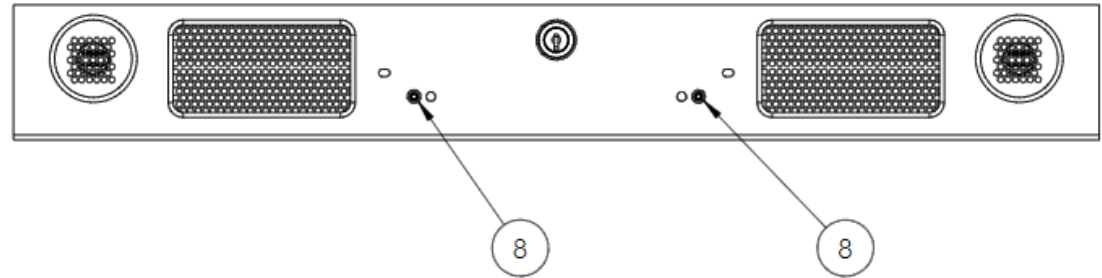
Item	Part Number	Description	Qty
1	10-100079-01	Backbox PCBs EMI Shield	1
2	10-100082-00	Backbox PEM Plate	1
3	15-004001-01	I/O PCB Fully Populated	1
4	15-004002-01	Sound Amplifier PCB	1
5	16-000013-00	ATX Power Supply, 150 Watts	1
6	19-003043-01	AUX Input Cable	1
7	19-003072-03	27" LCD Power Cable	1
8	19-003100-01	USB Cable 2.0 A to Mini - B	1
9	19-009015-02	Sound Amp Power Cable	1
10	30-000049-08	Cable Clamp Open 1/2"	1
11	30-000049-12	Cable Clamp Open 3/4"	1
12	30-000108-02	Locking Grommet 1 1/2"	1
13	30-008005-00	Plastic Edge Trim	7"
14	Part of ATX	6-32 x 1/4" MS	4
23	80-002006-06	#6-32 x 3/8" MS	14
16	91-000006-00	6-32 Nylon Stop Nut	2
17	91-001008-00	#8-32 Keps Nut	4
18	25-009013-00	PCB Chassis Grommet 1"	1
19	19-100002-00	ATX Power Cable	1
20	19-003127-03	DVI-D to HDMI, 3ft	1
21	15-000000-05	CPU H310CM-HDV	1
22	15-000012-03	4GB DDR4-2400 SDRAM 288 Pin	1
23	15-000014-02	Intel Celeron G4900 or G4920	1

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

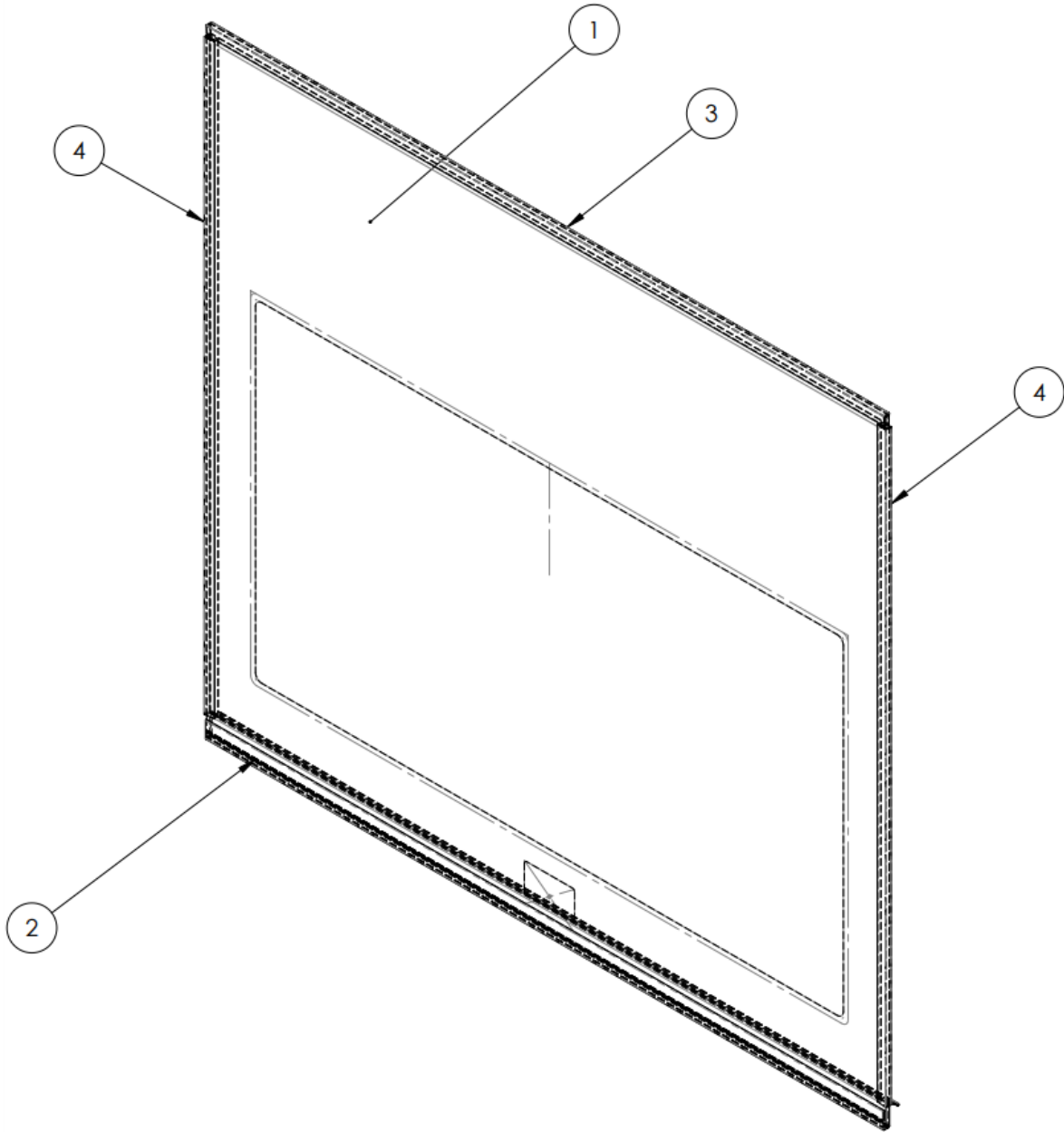


Item	Part Number	Description	Qty
1	05-100014-00	Speaker Bar Front Panel	1
2	10-000002-10	Tweeter Speaker Grill	2
3	10-000002-11	Mid-Range Speaker Grill	2
4	10-000224-00	Cam, Lock	1
5	109-475M-100	Capacitor 4.7MF, 100V, 20%	1
6	82-000106-08	#6 x 1/2" SMS	16
7	51-005012-02	Lock Assy. 1 1/8" 1 1/4" Cam	1
8	91-005008-00	#8-32 Hex Drive	2
9	17-006000-00	Sound Bar 2" Dome Tweeter	2
10	30-100074-00	Washer	1

**FRONT VIEW**



INSERT ITEM 9 FROM FRONT AS SHOWN



## BACKGLASS ASSEMBLY

51-100105-00 SE

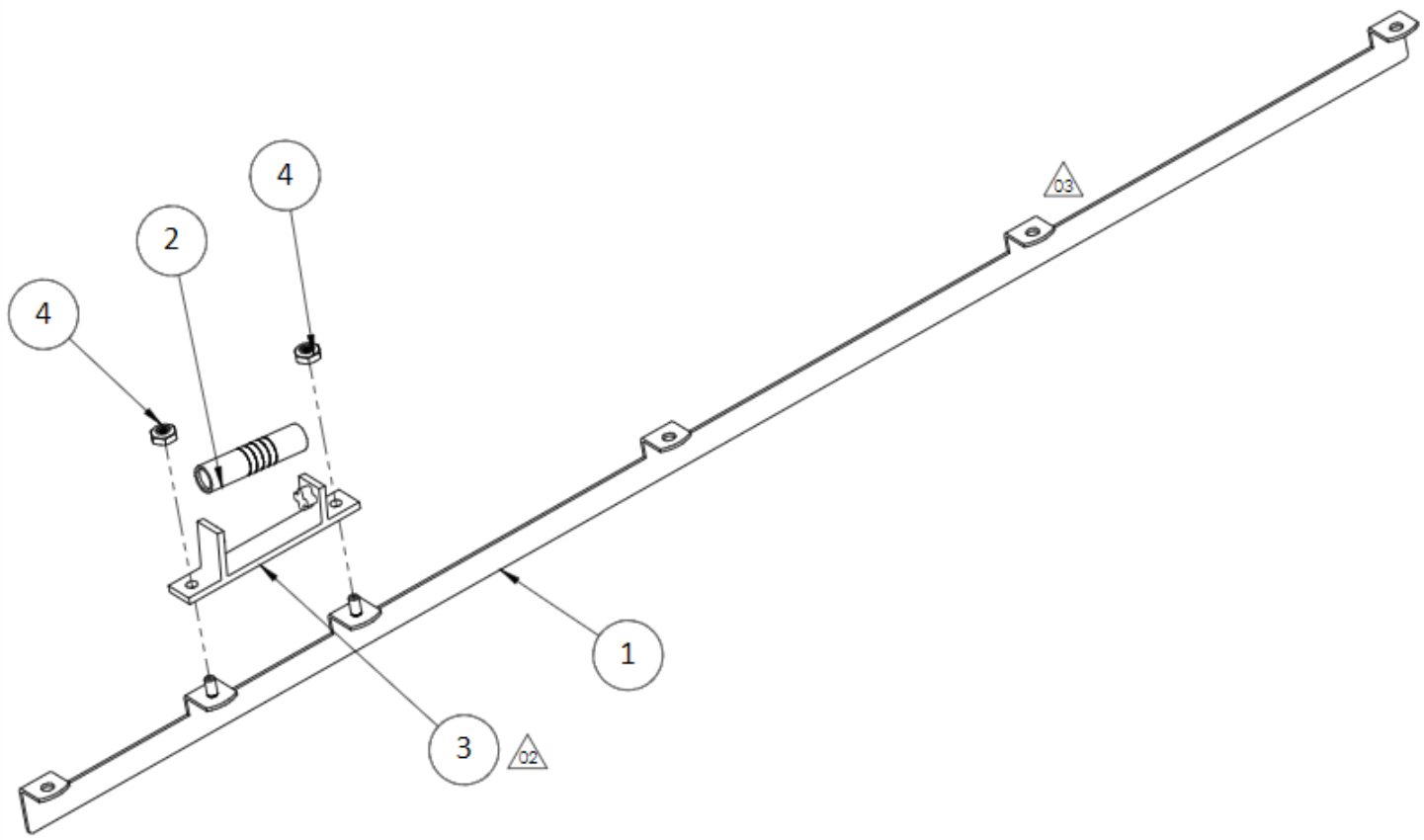
-01 LE -02 CE

Item	Part Number	Description	Qty
1	60-100002-00	SE GNR Printed Back Glass	1
1	60-100002-01	LE GNR Printed Back Glass	1
1	60-100002-02	CE GNR Printed Back Glass	1
2	30-008004-00	Backglass Lift Channel	1
3	30-008002-00	Backglass Top Plastic Channel	1
4	30-008002-01	Backglass Side Plastic Channel	2

# ABOVE - PLAYFIELD ASSEMBLIES

# UNDER - PLAYFIELD ASSEMBLIES

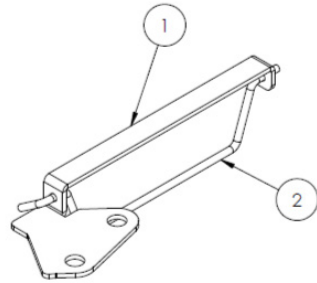
**SHOOTER LANE RAIL ASSY.  
51-100103-00**



Item	Part Number	Description	Qty
1	12-100025-02	Flatrail	1
2	30-000087-01	Buble Level	1
3	30-000087-00	Buble Level Bracket	1
4	91-000006-00	6-32 Nylon Stop Nut	2

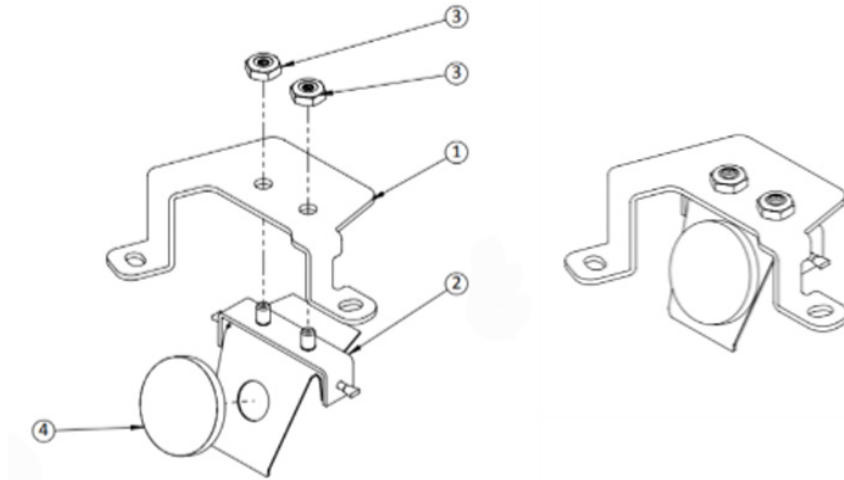


**LOWER BUMPER EXIT GATE ASSY.  
51-100118-00**



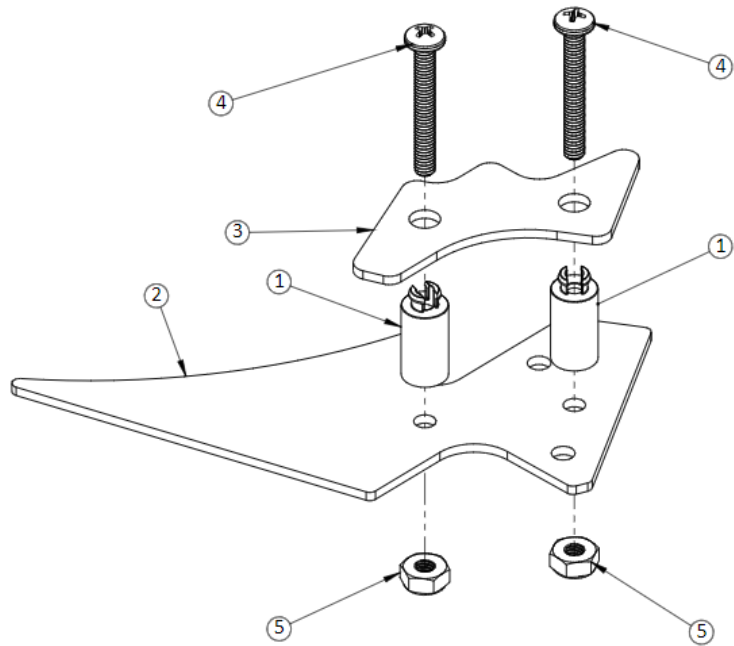
Item	Part Number	Description	Qty
1	10-100178-00	Lower Exit Gate Brkt	1
2	13-100019-00	Wire	2

**SHOOTER LANE GATE ASSY.  
51-100121-00**



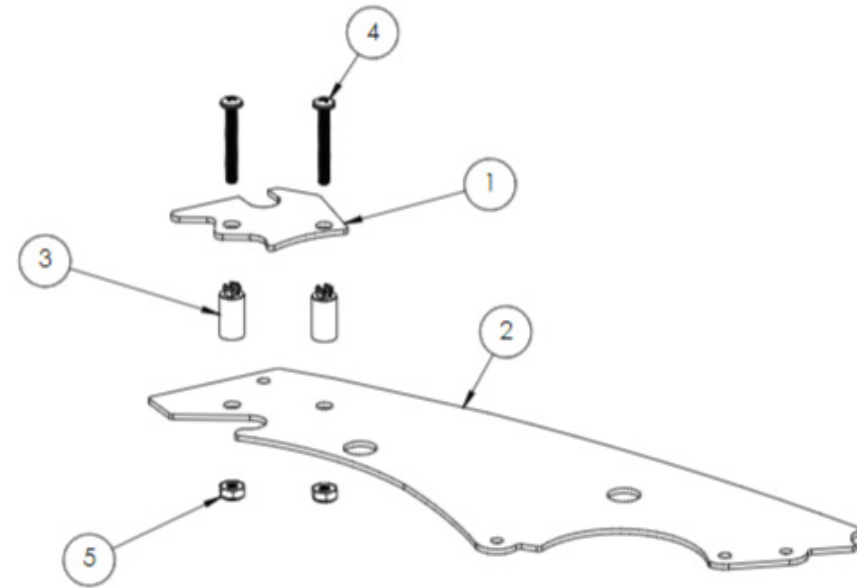
Item	Part Number	Description	Qty
1	10-100180-00	Bracket Shooter Lane	1
2	51-100133-00	Flap Gate Assy.	1
3	91-000006-00	6-32" Nylon Stop Nut	2
4	25-009001-01	Ball Trough Bumper Plug	1

**CENTER SPINNER GUARD ASSY. LE**  
**51-100124-00**



Item	Part Number	Description	Qty
1	30-000083-04	Spacer	2
2	30-100048-08	Center Spinner Left	1
3	30-100048-36	Ball Trap	1
4	80-000008-20	8-32 x 1 1/4" MS	2
5	91-000008-20	8-32 Nylon Stop Nut	2

**CENTER SPINNER GUARD ASSY. SE**  
**51-100124-01**

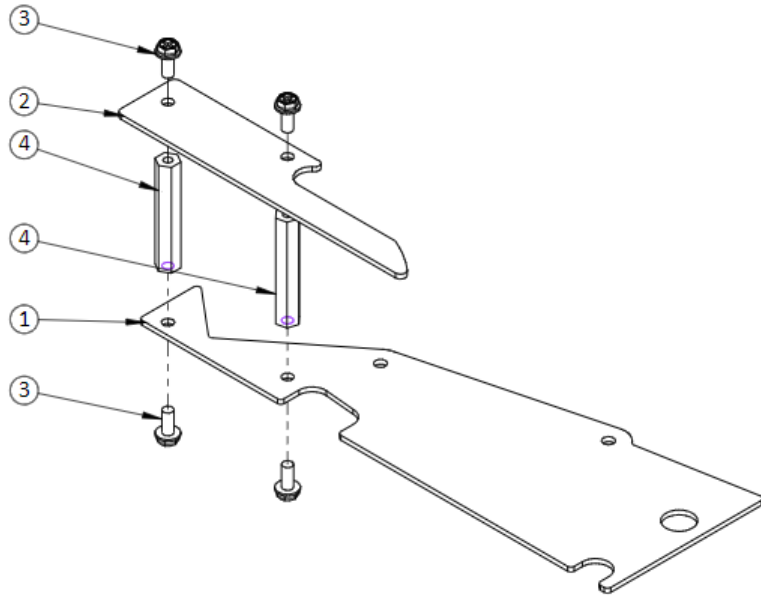


Item	Part Number	Description	Qty
1	30-100060-25	Center Spinner Left Ball Trap	1
2	30-100060-08	Center Spinner Left	1
3	30-000083-04	Nylon Round Spacer	2
4	80-000008-20	8-32" x 1-1/4" Screw	2
5	91-000008-00	8-32" Nylon Stop Nut	2

**UPPER PLAYFIELD BALL TRAP ASSY.**

51-100112-00 LE

51-100112-02 CE

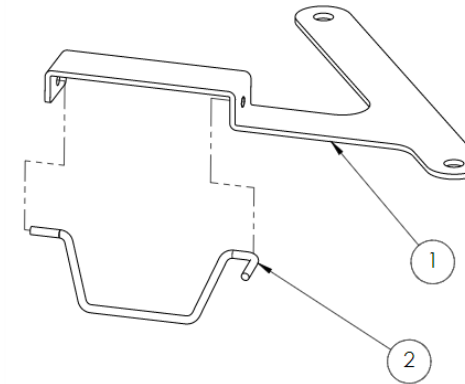


Item	Part Number	Description	Qty
1	See Table	Plastic, Left	1
2	See Table	Ball Trap	1
3	80-002008-06	8-32 x 3/8 MS	4
4	95-001508-28	5/16" x 1 3/4" Hex Spacer 8-32	1

	ITEM # 1	ITEM # 2
LE	30-100048-19	30-100048-25
CE	30-100057-19	30-100057-25

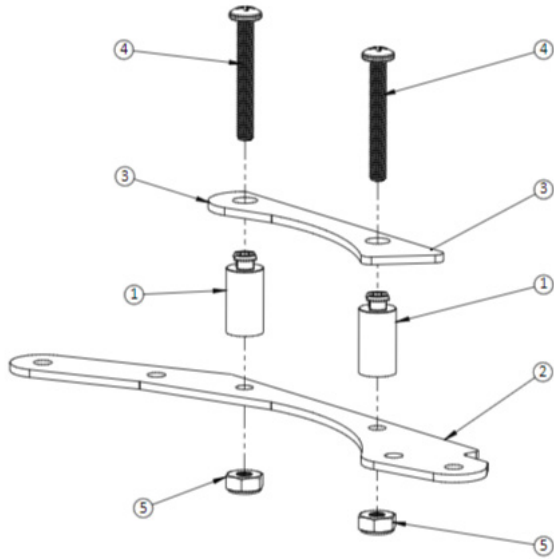
**UPPER PLAYFIELD GATE ASSY, LE & CE**

51-100096-00



Item	Part Number	Description	Qty
1	10-100162-00	Bracket	1
2	13-100016-00	Wire	1

**POP BUMPER PLASTIC GUARD**  
**51-100110-01 SE - 51-100110-00 LE**  
**51-100110-02 CE**



**51-100110-00 LE**

Item	Part Number	Description	Qty
1	30-000083-04	Nylon Spacer	2
2	30-100048-14	Right Orbit High	1
3	30-100048-33	Right Orbit High Ball Trap	1
4	80-000008-20	8-32 x 1-1/4" Screw	2
5	91-000008-00	8-32 Nylon Stop Nut	2

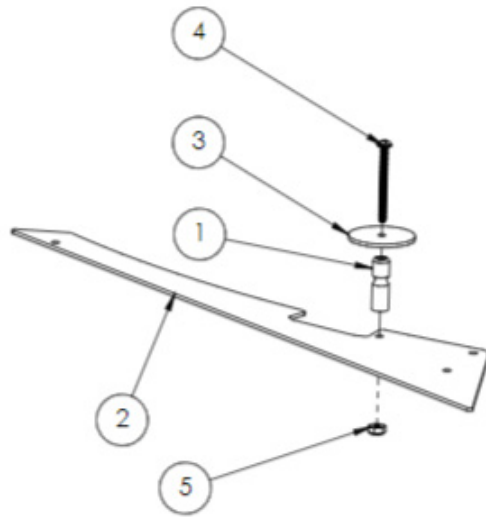
**51-100110-01 SE**

Item	Part Number	Description	Qty
1	30-000083-04	Nylon Spacer	2
2	30-100060-14	Right Orbit High	1
3	30-100060-33	Right Orbit High Ball Trap	1
4	80-000008-20	8-32 x 1-1/4" Screw	2
5	91-000008-00	8-32 Nylon Stop Nut	2

**51-100110-02 CE**

Item	Part Number	Description	Qty
1	30-000083-04	Nylon Spacer	2
2	30-100057-14	Right Orbit High	1
3	30-100057-33	Right Orbit High Ball Trap	1
4	80-000008-20	8-32 x 1-1/4" Screw	2
5	91-000008-00	8-32 Nylon Stop Nut	2

**LEFT ORBIT BALL TRAP ASSY.**  
**51-100125-01 SE - 51-100125-00 LE**  
**51-100125-02 CE**



**51-100125-00 LE**

Item	Part Number	Description	Qty
1	30-009000-12	1.188" Post Clear	1
2	30-100048-06	Left Drain Left Orbit	1
3	30-100048-27	Left Orbit Low Ball Trap	1
4	80-000008-28	8-32 x 1-3/4" Screw	1
5	91-000008-00	8-32 Nylon Stop Nut	1

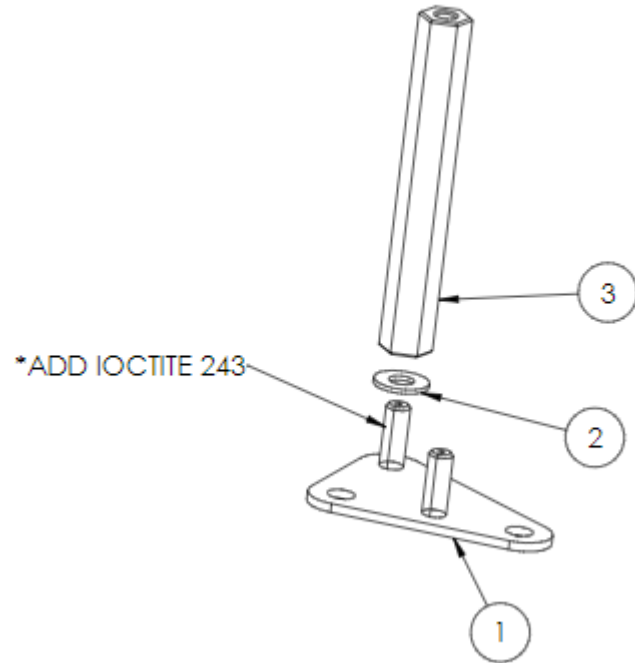
**51-100125-01 SE**

Item	Part Number	Description	Qty
1	30-009000-12	1.188" Post Clear	1
2	30-100060-06	Left Drain Left Orbit	1
3	30-100060-27	Left Orbit Low Ball Trap	1
4	80-000008-28	8-32 x 1-3/4" Screw	1
5	91-000008-00	8-32 Nylon Stop Nut	1

**51-100125-02 CE**

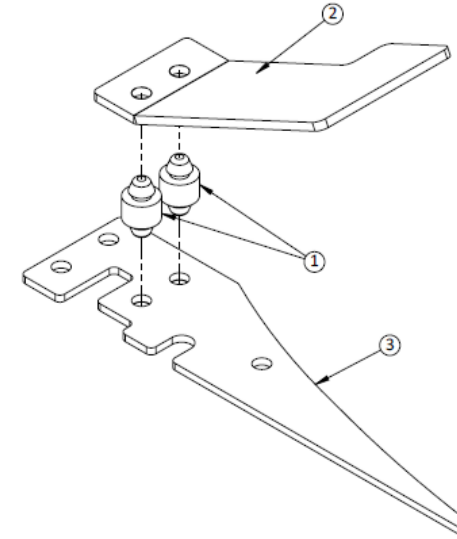
Item	Part Number	Description	Qty
1	30-009000-12	1.188" Post Clear	1
2	30-100057-06	Left Drain Left Orbit	1
3	30-100057-27	Left Orbit Low Ball Trap	1
4	80-000008-28	8-32 x 1-3/4" Screw	1
5	91-000008-00	8-32 Nylon Stop Nut	1

**SLASH RIGHT RAMP MOUNT BRACKET**  
51-100081-00



Item	Part Number	Description	Qty
1	10-100142-00	Slash Right Ramp Mount Brkt	1
2	92-000008-00	#8 Flat Washer	1
3	95-001508-38	.313 Hex Spacer 38-32	1

**UPPER RIGHT PLASTIC GUARD**  
51-100111-01 SE - 51-100111-00 LE  
51-100111-02 CE



**51-100111-01 SE**

Item	Part Number	Description	Qty
1	25-009005-04	1/4" DN Rubber Posyt	2
2	30-100060-15	Monitor Loop Deflector	1
3	30-100060-31	Rear Right Corner	1

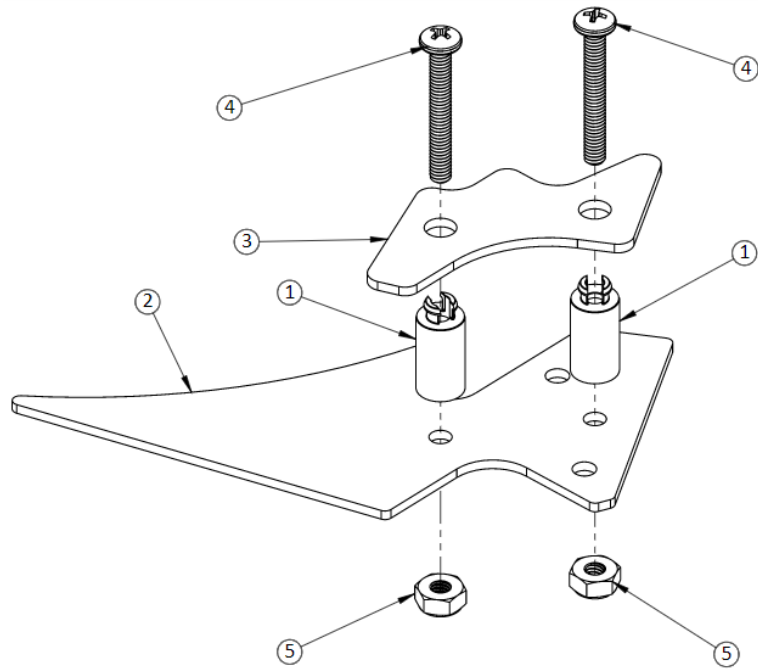
**51-100111-00 LE**

Item	Part Number	Description	Qty
1	25-009005-04	1/4" DN Rubber Posyt	2
2	30-100048-15	Monitor Loop Deflector	1
3	30-100048-31	Rear Right Corner	1

**51-100111-02 CE**

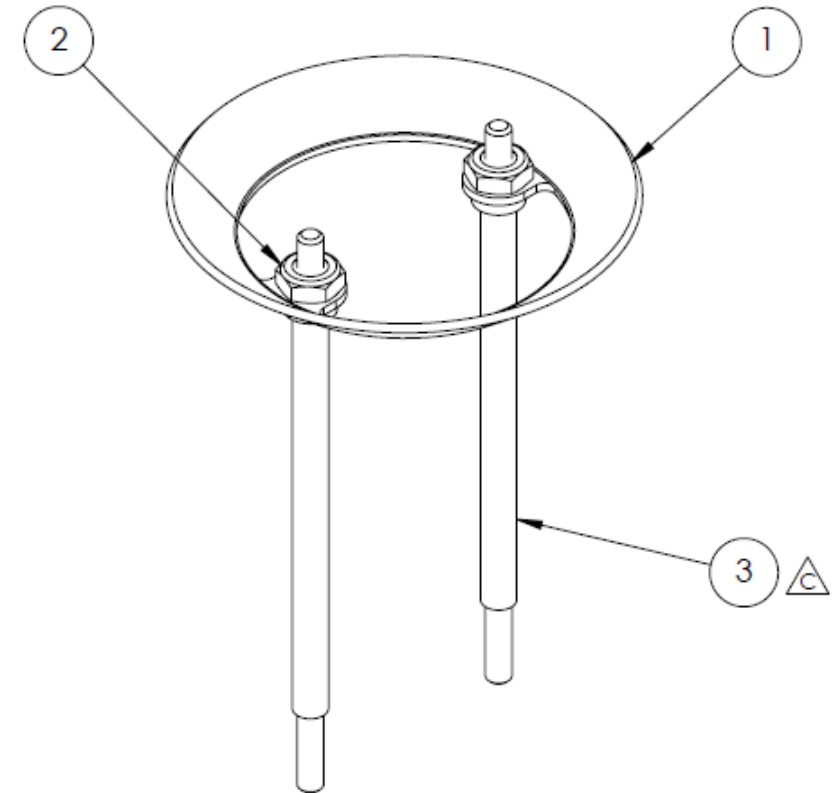
Item	Part Number	Description	Qty
1	25-009005-04	1/4" DN Rubber Posyt	2
2	30-100057-15	Monitor Loop Deflector	1
3	30-100057-31	Rear Right Corner	1

**CENTER SPINNER GUARD ASSY. CE**  
51-100124-02



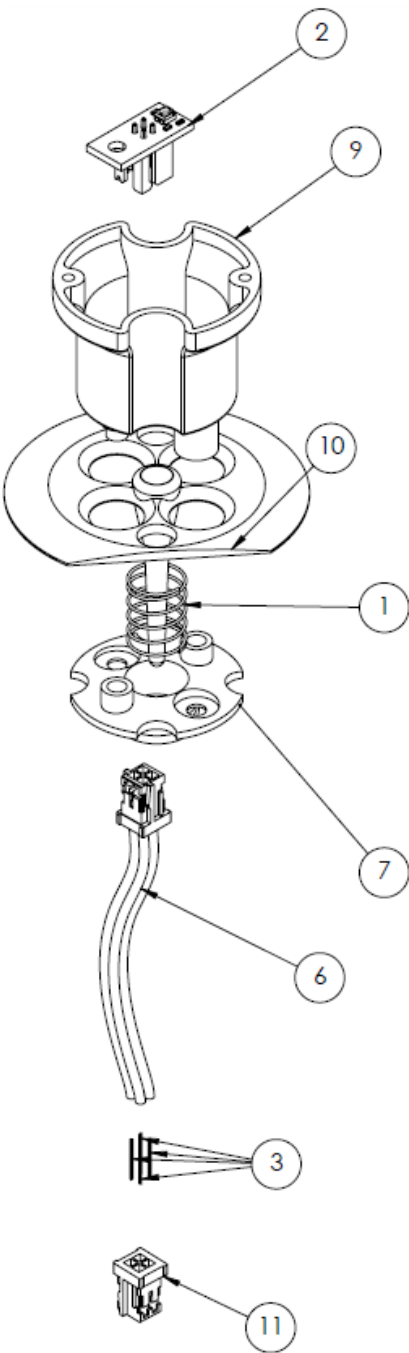
Item	Part Number	Description	Qty
1	30-000083-04	Spacer	2
2	30-100057-08	Center Spinner Left	1
3	30-100057-36	Ball Trap	1
4	80-000008-20	8-32 x 1 1/4" MS	2
5	91-000008-00	8-32 Nylon Stop Nut	2

**POP BUMPER RING ASSY.**  
11-005004-01

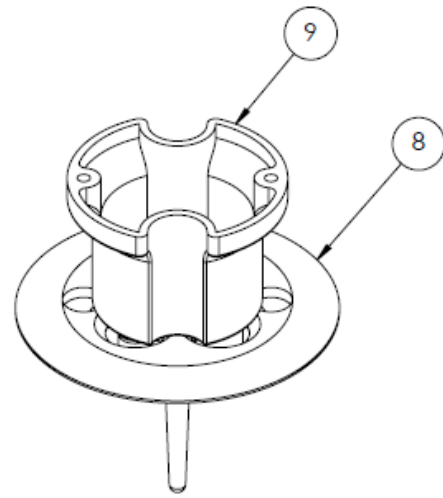


Item	Part Number	Description	Qty
1	11-000005-00	Pop Bumper Ring	1
2	91-000006-00	6-32 Nylon Stop Nut	2
3	11-100000-00	Bumper Rod	2

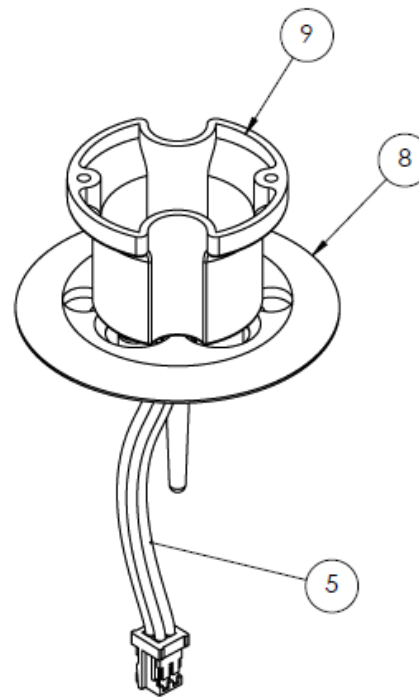
**POP BUMPER TOP ASSY.  
51-100162-XXX**



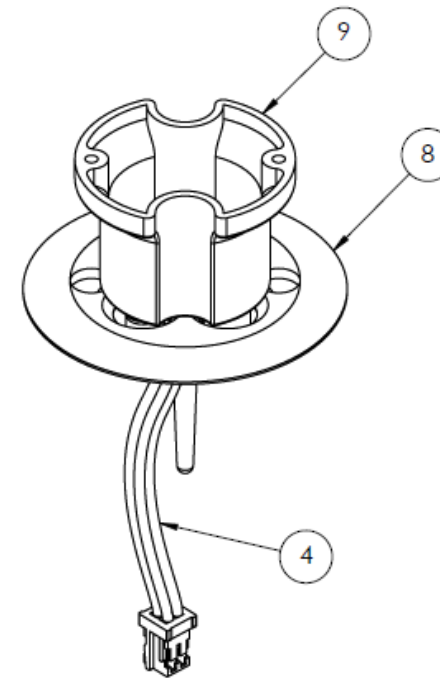
**51-100162-00**



**51-100162-01**



**51-100162-02**

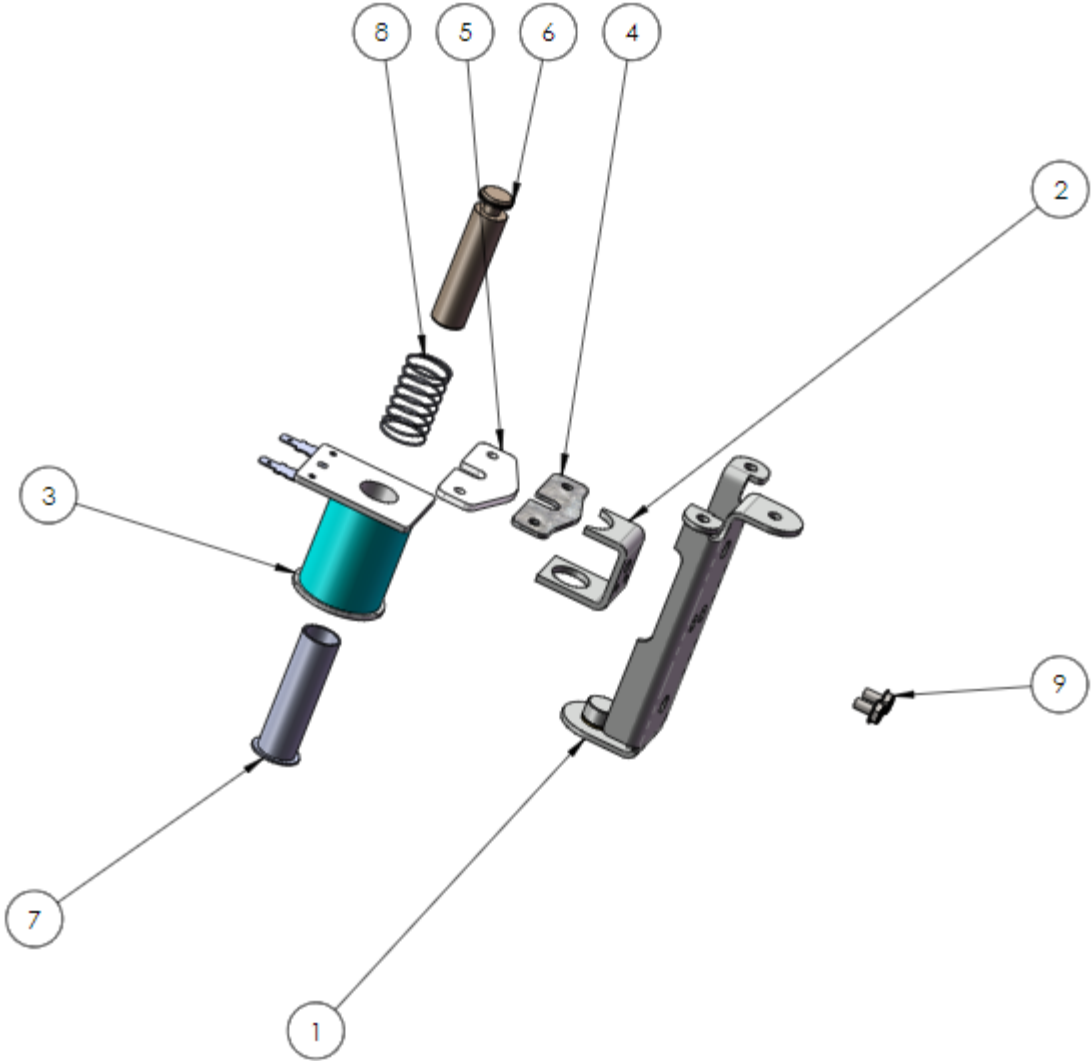


**51-100162-03**

ITEM NO.	PART NUMBER	DESCRIPTION	51-100162-00/QTY.	51-100162-01/QTY.	51-100162-02/QTY.	51-100162-03/QTY.
1	13-007003-00	POP BUMPER SKIRT SPRING	1	1	1	1
2	15-004251-05	RGB GI PCB ASSY, T LED FP, 5V	1	-	1	1
3	19-000020-24S	CRIMP PIN, FEMALE, 24-28AWG	4	-	4	4
4	19-100078-00	GNR LOWER POP BUMPER LED EXTENSION CABLE	-	-	-	1
5	19-100079-00	GNR LOWER POP BUMPER LED EXTENSION CABLE	-	-	1	-
6	19-100080-00	GNR LOWER POP BUMPER LED EXTENSION CABLE	1	-	-	-
7	30-000003-09	POP BUMPER BASE, WHITE	1	1	1	1
8	30-000004-09	POP BUMPER SKIRT WHITE	-	1	1	1
9	30-000005-09	POP BUMPER BODY, WHITE	1	1	1	1
10	30-100059-09	POP BUMPER SKIRT, WHITE	1	-	-	-
11	DF1B-4DS-2.5RC	4 PIN RECTANGULAR CONNECTOR WHITE 0.098"	1	-	1	1

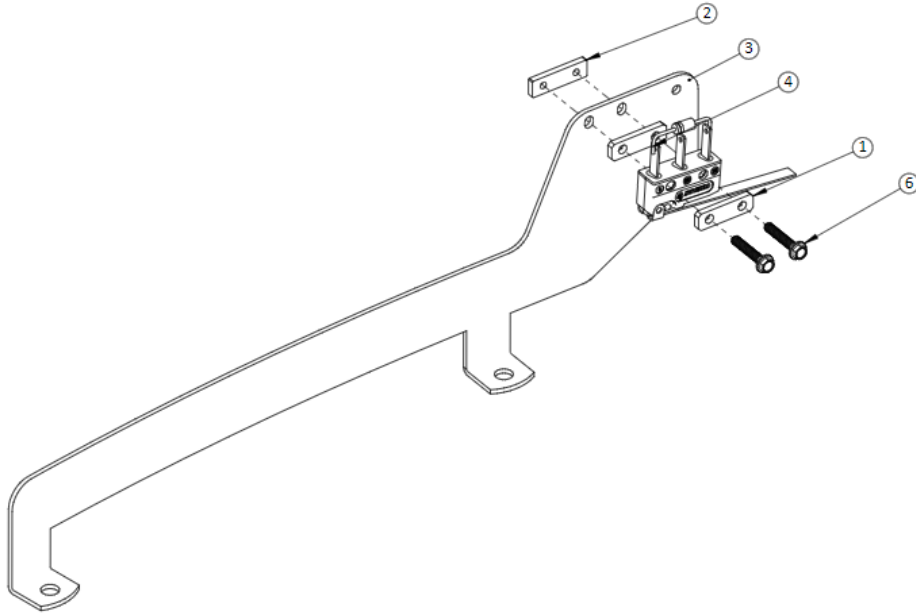


**POP BUMPER BOTTTOM ASSY.**  
**51-000004-01**



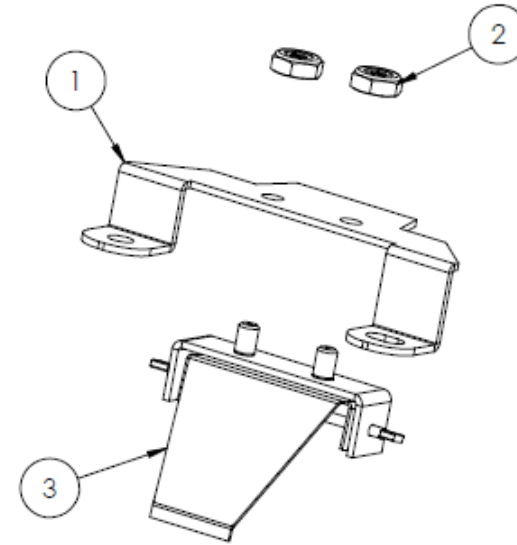
Item	Part Number	Description	Qty
1	10-005003-00	Pop Bumper Coil Brkt	1
2	10-007003-00	Pop Bumper Coil Centering Brkt	1
3	23-000010-00	26-1200 Coil	1
4	10-000021-00	Pop Bumper Yoke, Steel	1
5	10-000021-01	Pop Bumper Yoke, Backlite	1
6	11-000004-00	Pop Bumper Plunger	1
7	30-000014-28	1 3/4" Coil Tubing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

**UPPER LOOP RAMP SWITCH**  
51-100077-00



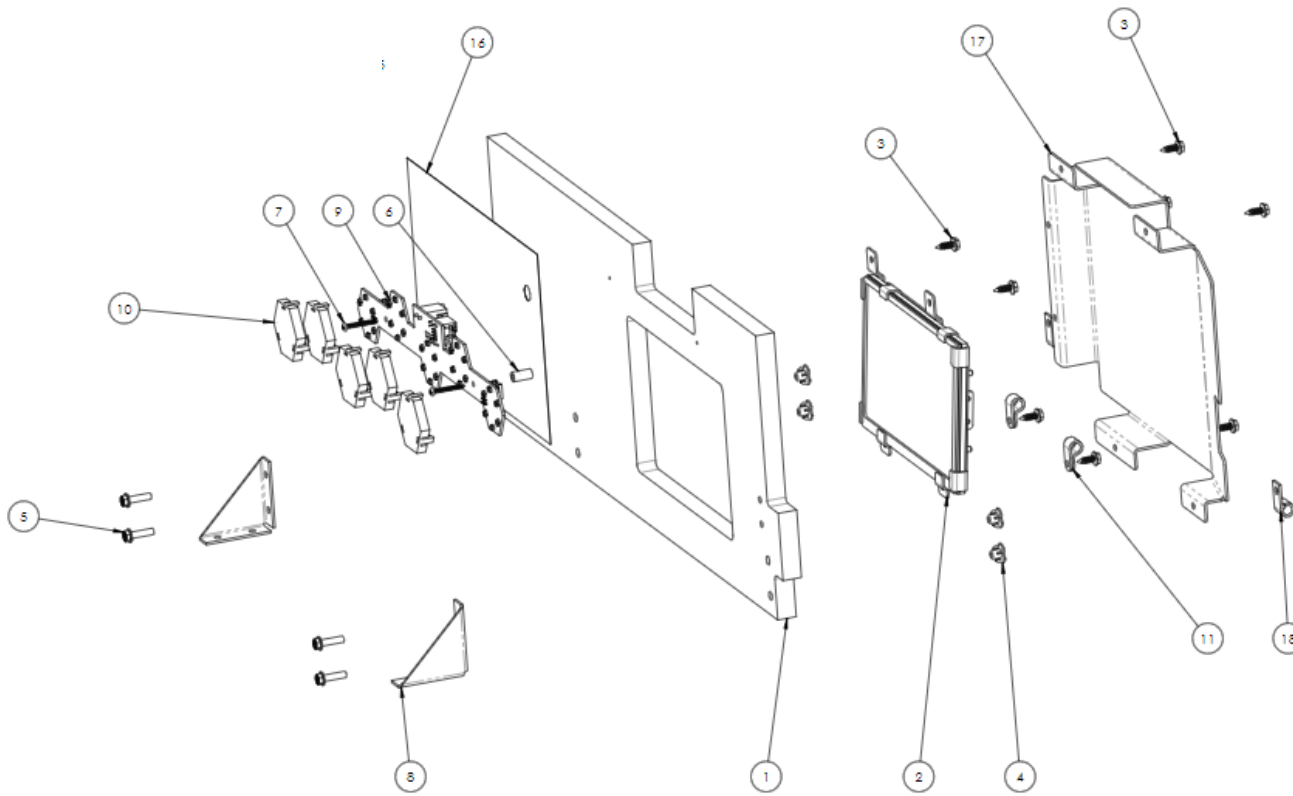
Item	Part Number	Description	Qty
1	10-000024-01	Microswitch Plate	2
2	10-000024-00	Microswitch Nut Plate 2-56	1
3	12-100025-10	Flatrail Upper Loop Ramp	1
4	18-003011-00	Microswitch	1
5	19-100082-00	Wire Harness (Not Shown)	1
6	80-002102-08	2-56 x 1/2" MS	2

**SLASH FLAP GATE**  
51-100079-00



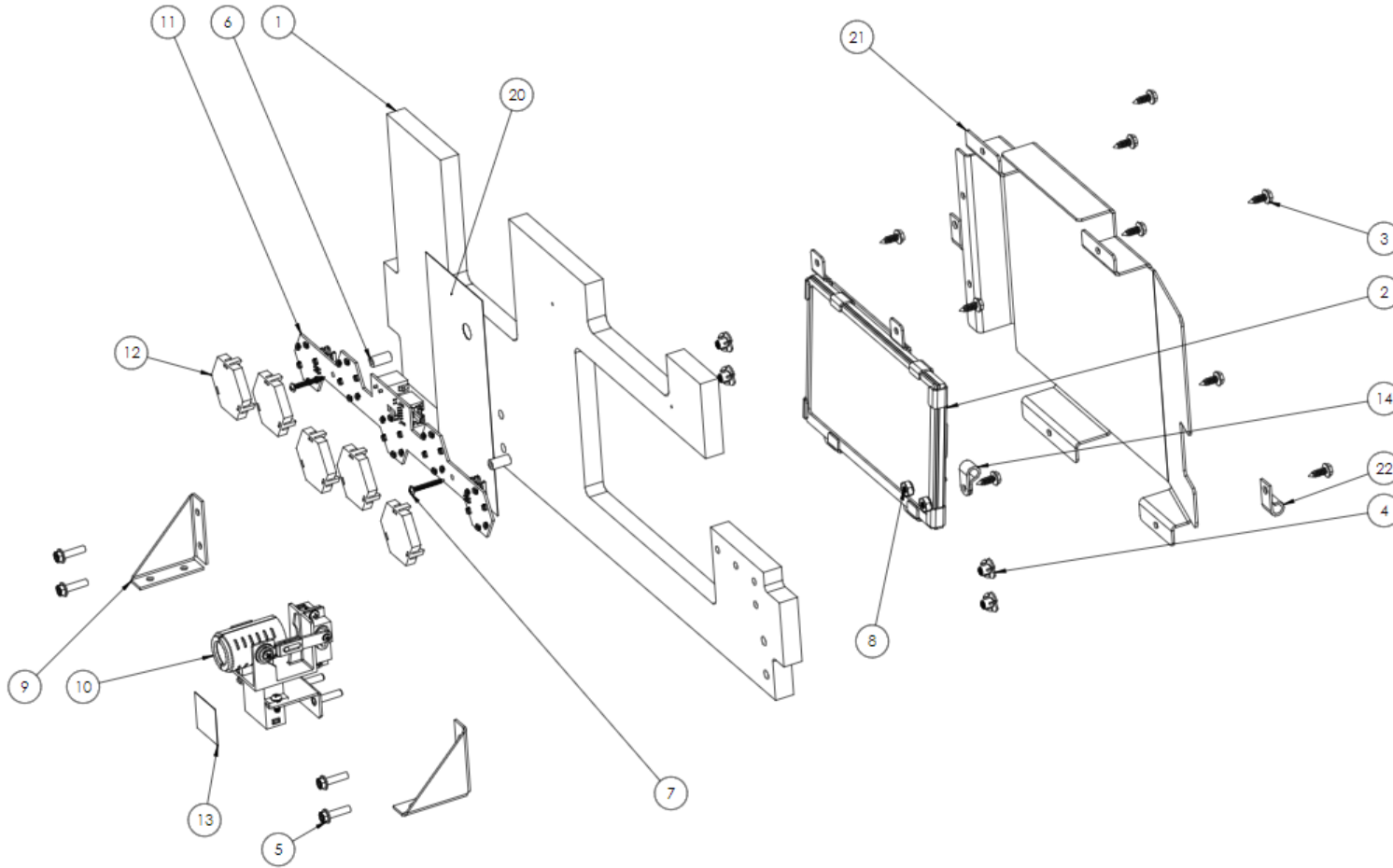
Item	Part Number	Description	Qty
1	10-100137-00	Flap Gate Mtg Brkt	1
2	91-000006-00	6-32 Nylon Stop Nut	2
3	51-000085-10	Flap Gate Pem Brkt Assy	1

**BACK PANEL ASSY. SE**  
**51-100052-01**

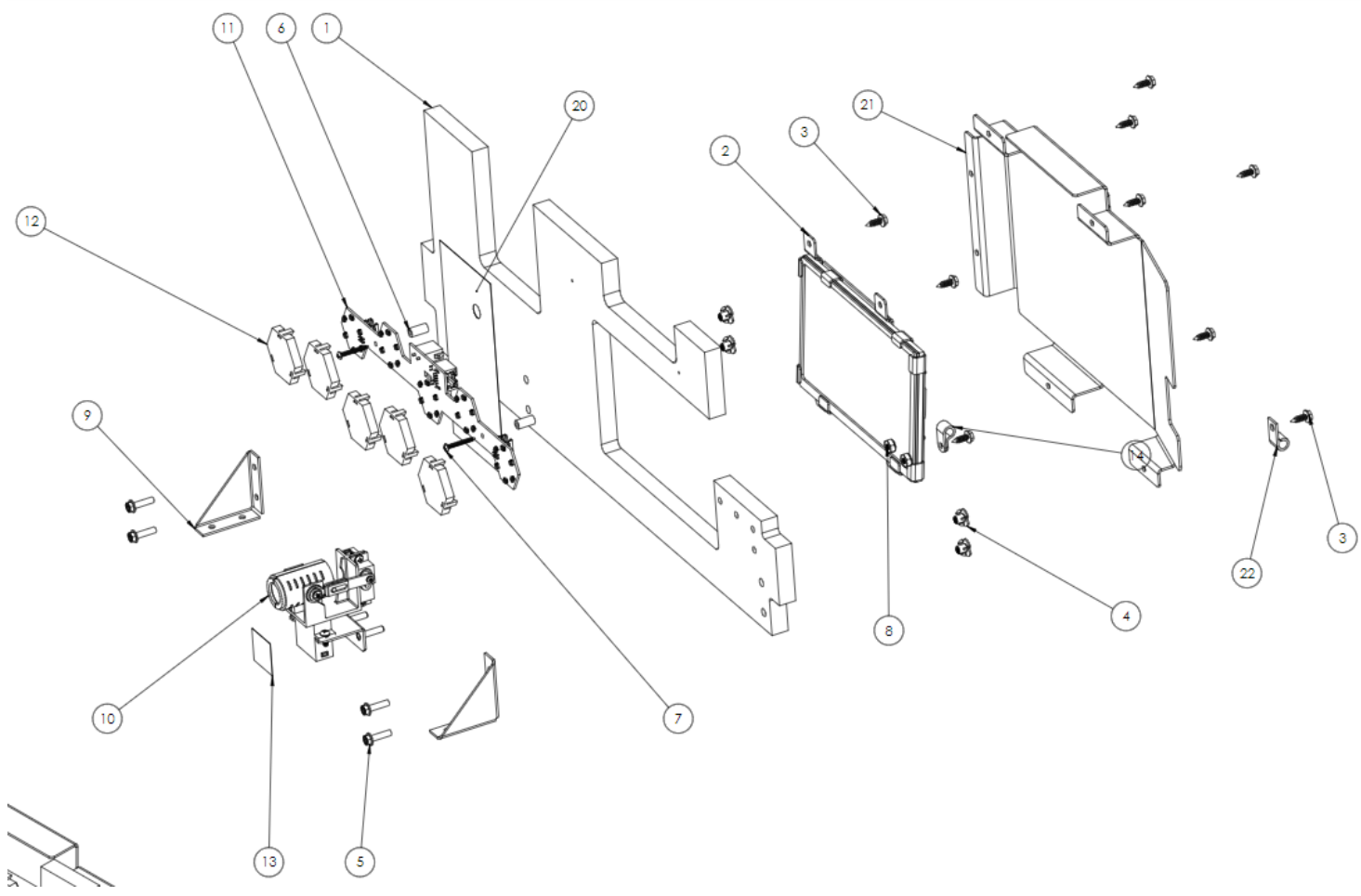


Item	Part Number	Description	Qty
1	05-100017-01	Back Panel	1
2	51-100059-00	LCD	1
3	82-009008-08	#8 x 1/2" PHILLIPS SMS	11
4	91-004008-00	8-32 x 1/4" T-Nut	4
5	80-002008-10	8-32 xx 5/8" PHILIPS MS	4
6	94-003003-01	Nylon Spacer	2
7	82-000004-14	#4 x 7/8" SMS	2
8	10-000162-00	Back Panel Support Brkt	2
9	15-100016-13	Lighting Truss LED Bd	1
10	30-100044-00	Lens Cover	5
11	30-000052-04	1/4" Cable Clamp Closed	2
12	19-100085-01	Power Cable	1
13	19-100041-08	8 Ft HDMI Cable	1
14	19-003111-03	Cat 5e, 3 Ft	1
15	30-000051-04	4" Wire Tie	1
16	62-100022-36	Decal	1
17	10-100160-00	Back Pan	1
18	30-000049-04	1/4" open Cable Clamp	2

**BACK PANEL ASSY. LE**  
**51-100052-00**



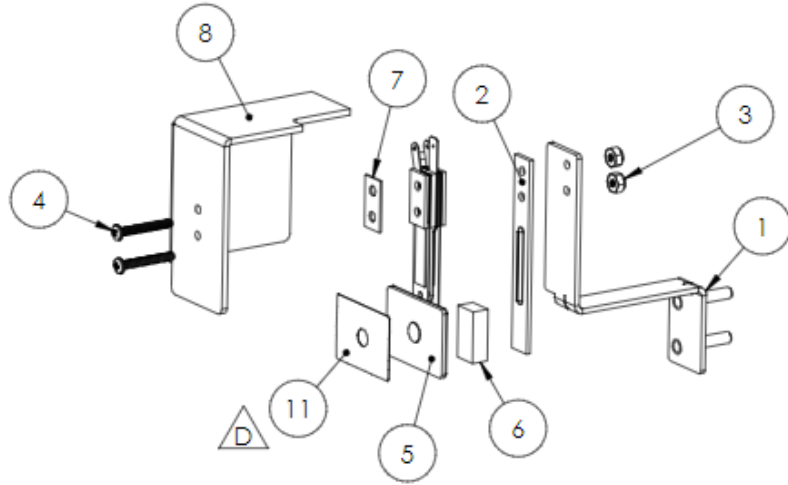
Item	Part Number	Description	Qty
1	05-100017-01	Back Panel	1
2	51-100059-00	LCD	1
3	82-009008-08	#8 x 1/2" PHILLIPS SMS	11
4	91-004008-00	8-32 x 1/4" T-Nut	4
5	80-002008-10	8-32 xx 5/8" PHILIPS MS	4
6	94-003003-01	Nylon Spacer	2
7	82-000004-14	#4 x 7/8" SMS	2
8	91-000008-00	8-32 Nylon Stop Nut	2
9	10-000162-00	Back Panel Support Brkt	2
10	51-100094-00	Spot Light Assy., Right	1
11	15-100016-13	Lighting Truss LED Bd	1
12	30-100044-00	Lens Cover	5
13	62-100018-18	Decal	1
14	30-000052-04	1/4" Cable Clamp Closed	2
15	30-000051-04	4" Wire Tie	1
16	19-100041-08	HDMI Cable 8ft	1
17	19-100053-00	Spotlight Cable	1
18	19-100085-01	Power Cable	1
19	19-003111-03	Cat 5e, 3 Ft	1
20	62-100024-36	Decal	1
21	10-100160-00	Back Pan	1
22	30-000049-04	1/4" open Cable Clamp	3



**BACK PANEL ASSY. CE**  
**51-100052-02**

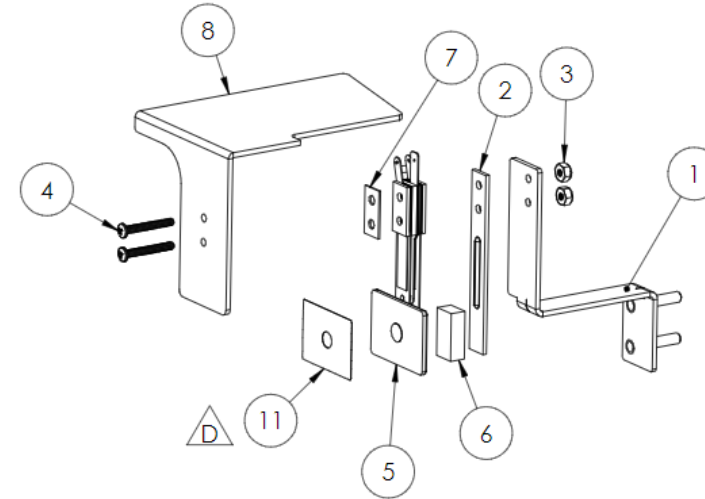
Item	Part Number	Description	Qty
1	05-100017-00	Back Panel	1
2	51-100059-00	LCD	1
3	82-009008-08	#8 x 1/2" PHILLIPS SMS	11
4	91-004008-00	8-32 x 1/4" T-Nut	4
5	80-002008-10	8-32 xx 5/8" PHILIPS MS	4
6	94-003003-01	Nylon Spacer	2
7	82-000004-14	#4 x 7/8" SMS	2
8	91-000008-00	8-32 Nylon Stop Nut	2
9	10-000162-00	Back Panel Support Brkt	2
10	51-100094-00	Spot Light Assy., Right	1
11	15-100016-13	Lighting Truss LED Bd	1
12	30-100044-00	Lens Cover	5
13	62-100018-18	Decal	1
14	30-000052-04	1/4" Cable Clamp Closed	2
15	30-000051-04	4" Wire Tie	1
16	19-100041-08	HDMI Cable 8ft	1
17	19-100053-00	Spotlight Cable	1
18	19-100085-01	Power Cable	1
19	19-003111-03	Cat 5e, 3 Ft	1
20	62-100023-36	Decal	1
21	10-100160-00	Back Pan	1
22	30-000049-04	1/4" open Cable Clamp	3

**DRUMSTICK TARGET ASSY. SE**  
**51-100053-01**



Item	Part Number	Description	Qty
1	10-100092-00	Drumstick Target Brkt	1
2	10-000095-00	Target Back Plate	1
3	91-000004-00	#4-40 Nylon Stop Nut	2
4	80-000004-14	Pan Head Screw	2
5	18-009015-00	Rectangle Stand up Target	1
6	25-001005-00	Foam	1
7	10-000022-01	Switch Plate	1
8	30-100060-30	Cover	1
9	19-100063-00	Cable (Not Shown)	1
10	30-000051-04	4" Wire Tie	2
11	62-100018-13	Decal	1

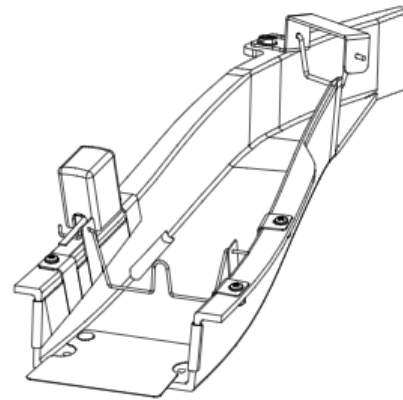
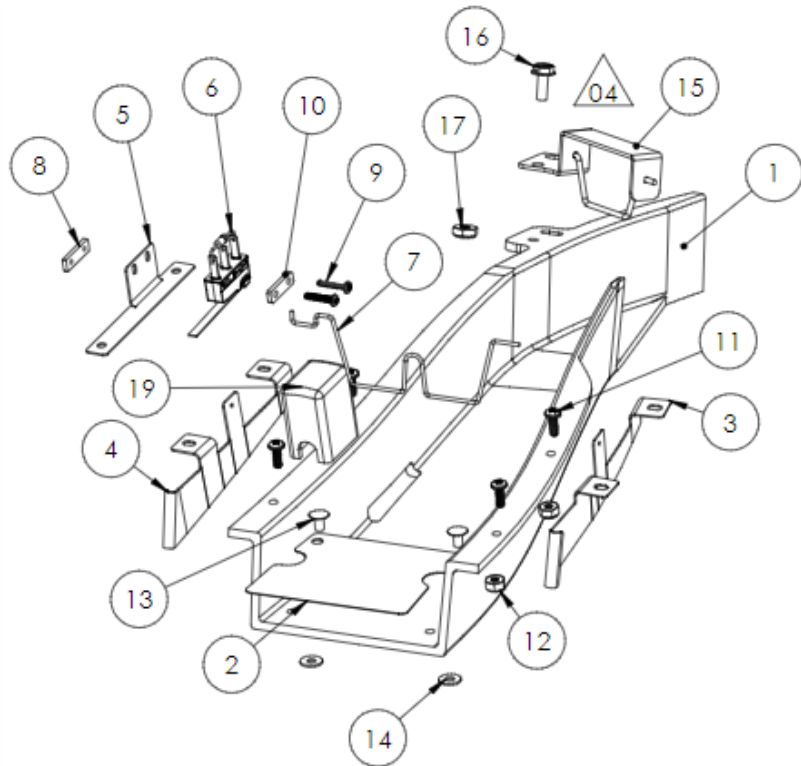
**DRUMSTICK TARGET ASSY.**  
**51-100053-00 LE**  
**51-100053-02 CE**



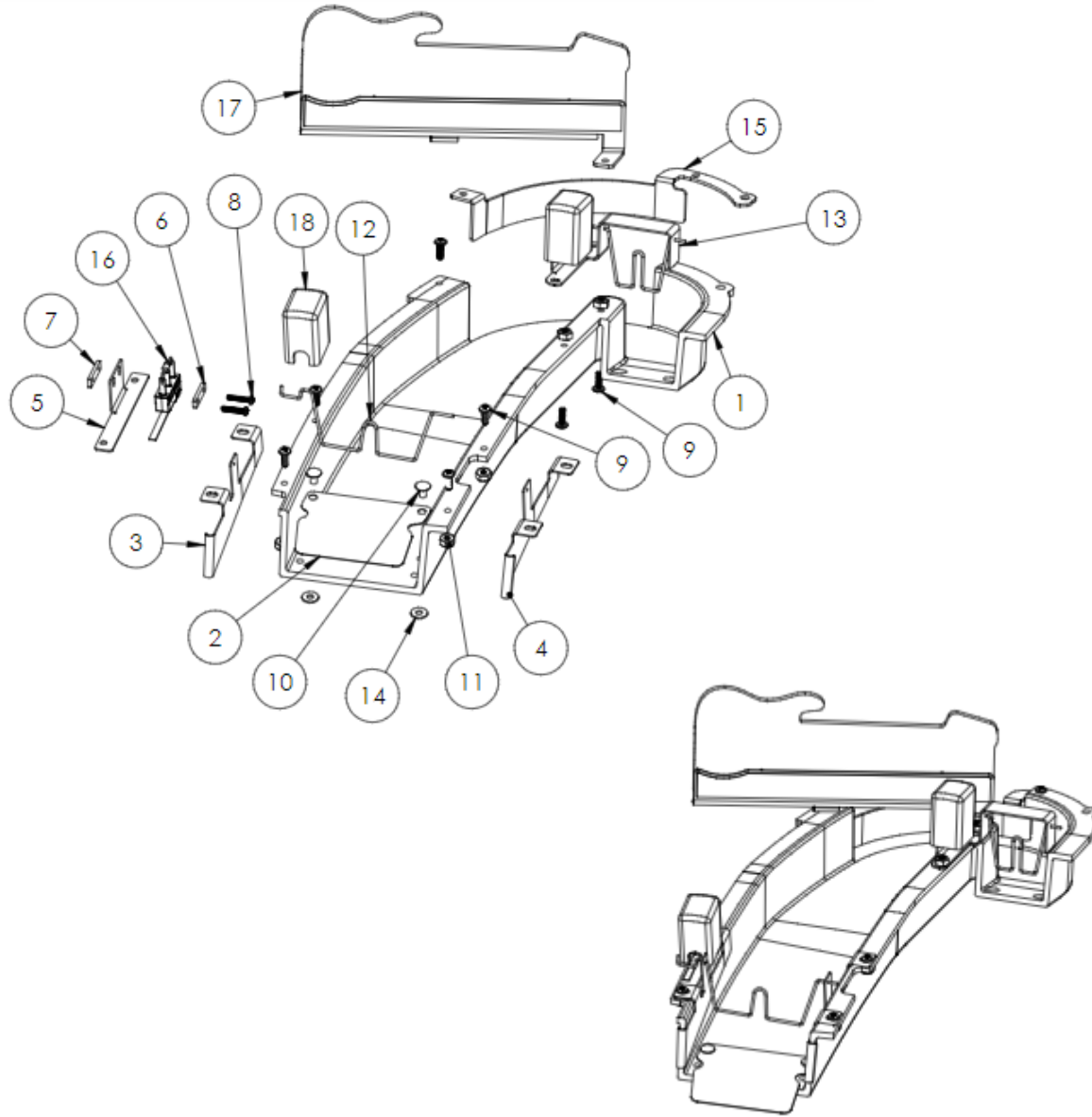
Item	Part Number	Description	Qty
1	10-100092-00	Drumstick Target Brkt	1
2	10-000095-00	Target Back Plate	1
3	91-000004-00	#4-40 Nylon Stop Nut	2
4	80-000004-14	Pan Head Screw	2
5	18-009015-00	Rectangle Stand up Target	1
6	25-001005-00	Foam	1
7	10-000022-01	Switch Plate	1
8	See Table	Cover	1
9	19-100063-00	Cable (Not Shown)	1
10	30-000051-04	4" Wire Tie	2
11	62-100018-13	Decal	1

ITEM # 8	
LE	30-100048-30
CE	30-100057-30

**PLASTIC RIGHT RAMP ASSEMBLY**  
51-100054-00



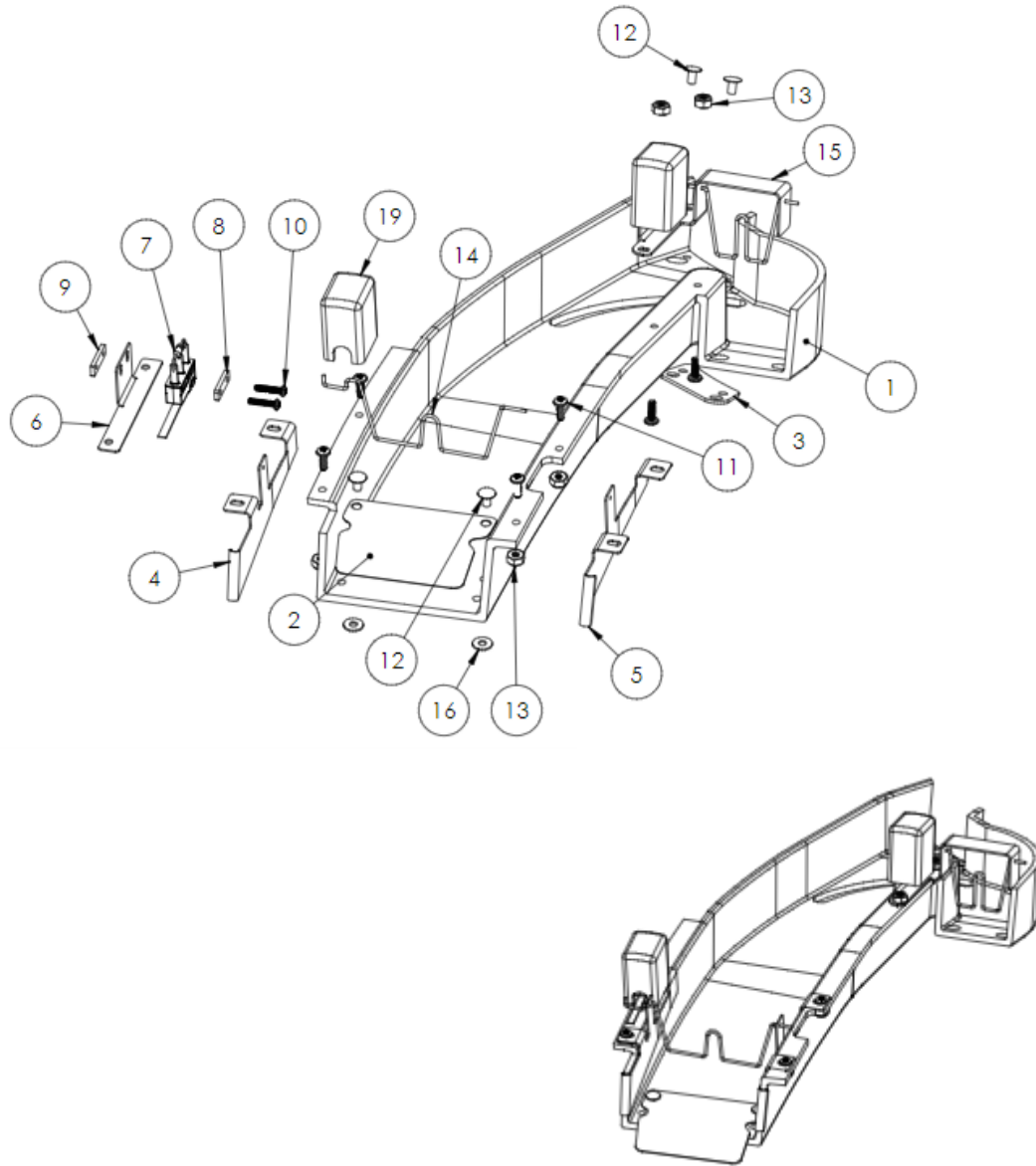
Item	Part Number	Description	Qty
1	31-100003-00	Plastic Ramp Right	1
2	10-100121-00	Ramp Flap	1
3	10-100122-00	Right Ramp Protector	1
4	10-100122-01	Left Ramp Protector	1
5	10-100122-02	Switch Bracket	1
6	18-003003-00	Microswitch	1
7	13-100008-00	Switch Wire	1
8	10-000024-00	Nut Plate 2-56	1
9	80-000002-07	2-56 x 7/16" MS	2
10	10-000024-01	Microswitch Plate	1
11	80-000004-05	#4-40 x 5/16" MS	4
12	91-000004-00	#4-40 Nylon Stop Nut	4
13	93-000000-00	1/8" x 7/32" Rivet	2
14	92-000004-00	#4 Flat Washer	2
15	51-100122-00	Ramp Gate Assy	1
16	80-002006-06	#6-32 x 3/8" MS	1
17	91-000006-00	6-32 Nylon Stop Nut	1
18	19-100062-00	Cable (Not Shown)	1
19	25-007001-02	Microswitch Cover	1



**PLASTIC LEFT RAMP ASSEMBLY SE**  
**51-100061-01**

Item	Part Number	Description	Qty
1	31-100006-01	Plastic Ramp Left	1
2	10-100102-00	Ramp Flap	1
3	10-100125-00	Left Ramp Protector	1
4	10-100125-01	Right Ramp Protector	1
5	10-100125-02	Switch Bracket	1
6	10-000024-01	Microswitch Plate	1
7	10-000024-00	Nut Plate 2-56	1
8	80-000002-07	2-56 x 7/16" MS	2
9	80-000004-05	#4-40 x 5/16" MS	8
10	93-000000-00	1/8" x 7/32" Rivet	2
11	91-000004-00	#4-40 Nylon Stop Nut	8
12	13-100010-00	Ramp Switch Wire	1
13	51-100074-00	Return Switch	1
14	92-000004-00	#4 Flat Washer	2
15	10-100179-00	Rear Ball Guide	1
16	18-003003-00	Microswitch	1
17	51-100128-00	Acrylic Guitar	1
18	25-007001-02	Microswitch Cover	1

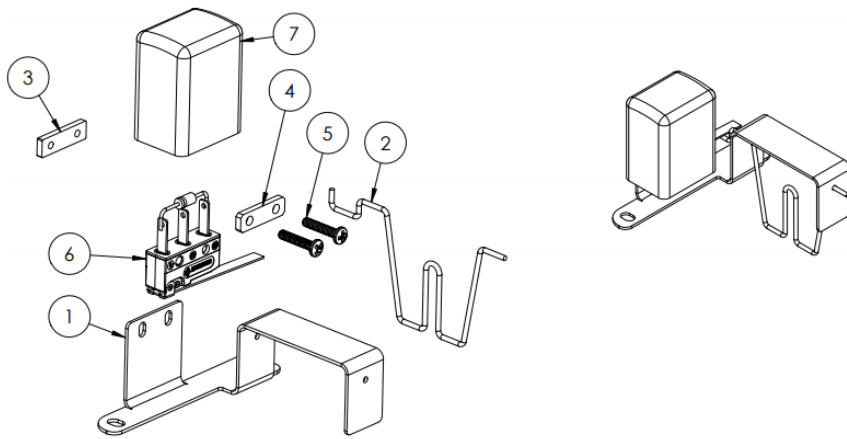




**PLASTIC LEFT RAMP ASSEMBLY LE & CE**  
**51-100061-00**

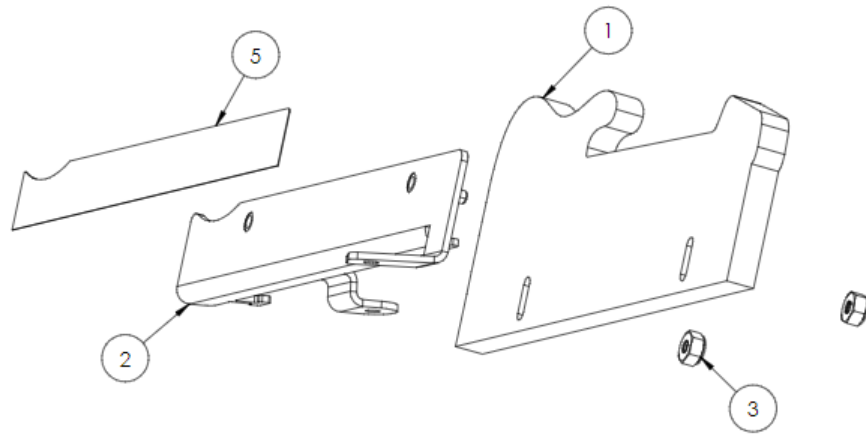
Item	Part Number	Description	Qty
1	31-100006-00	Plastic Ramp Left	1
2	10-100102-00	Ramp Flap	1
3	10-100126-00	Bumper Plate	1
4	10-100125-00	Right Ramp Protector	1
5	10-100125-01	Left Ramp Protector	1
6	10-100125-02	Switch Bracket	1
7	18-003003-00	Microswitch	1
8	10-000024-01	Switch Plate	1
9	10-000024-00	Nut Plate 2-56	1
10	80-000002-07	2-56 x 7/16" MS	2
11	80-000004-05	#4-40 x 5/16" MS	6
12	93-000000-00	1/8" x 7/32" Rivet	4
13	91-000004-00	#4-40 Nylon Stop Nut	6
14	13-100010-00	Switch Wire	1
15	51-100074-00	Return Switch	1
16	92-000004-00	#4 Flat Washer	2
17	19-100066-00	Enter Cable (Not Shown)	1
18	19-100067-00	Made Cable (Not Shown)	1
19	25-007001-02	Switch Cover	1

**Slash Return Switch Left**  
**51-100074-00**



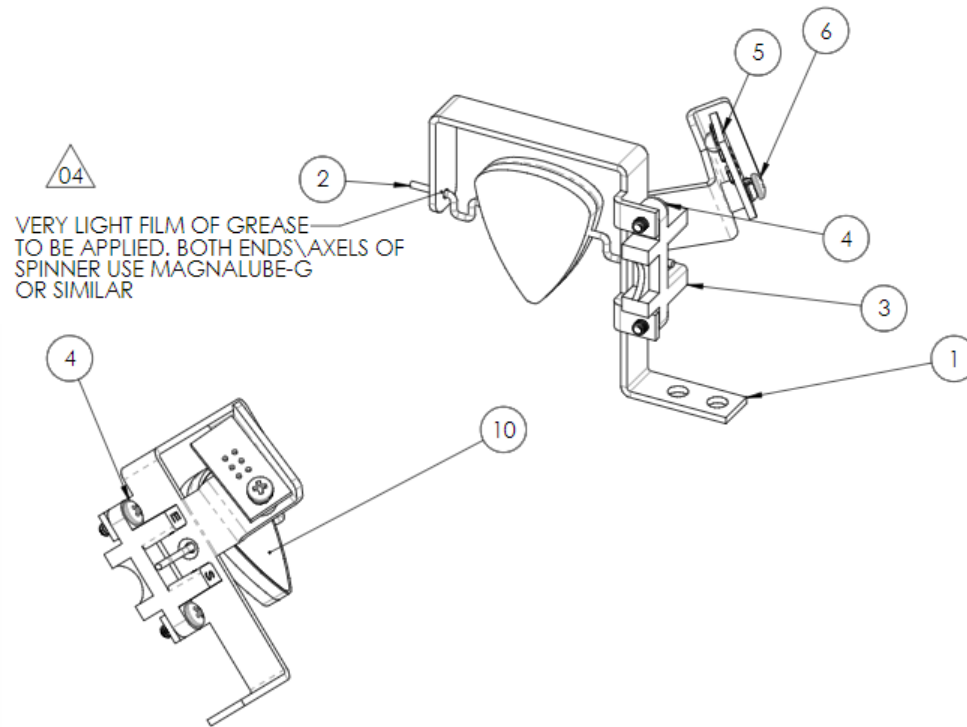
Item	Part Number	Description	Qty
1	10-100124-00	Bracket	1
2	13-100009-00	Wire	1
3	10-000024-00	Nut Plate, 2-56	1
4	10-000024-01	Protector Plate	1
5	80-000002-07	2-56 x 7/16" MS	2
6	18-003003-00	Microswitch	1
7	25-007001-02	Vinyl Cover	1

**ACRYLIC GUITAR ASSY SE**  
51-100128-00



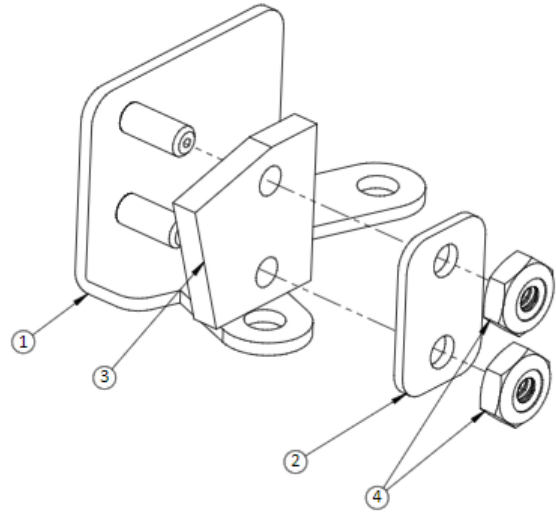
Item	Part Number	Description	Qty
1	30-100061-00	Acrylic Guitar	1
2	10-100185-00	Bracket	1
3	91-000004-00	#4-40 Nylon Stop Nut	2
4	51-100130-00	LED Strip Assy	1
5	62-100022-37	Decal Bass SE	1

**SPINNING GUITAR PICK ASSY**  
51-100066-00



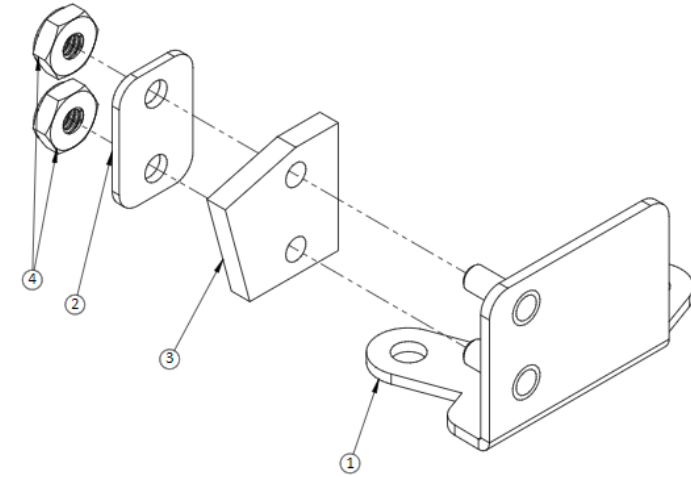
Item	Part Number	Description	Qty
1	10-100112-00	Spinner Brkt W/ LED	1
2	30-100037-00	Guitar Pick Spinner	1
3	18-005003-00	U Shaped OPTO	1
4	80-000004-05	#4-40 x 5/16" MS	2
5	15-100023-01	RGB W/ PCB Assy	1
6	80-000004-08	4-40 x 1/2" MS	1
7	19-000013-22R	MFJ Pins (Not Shown)	4
8	30-002011-04	MFJ Receptacle (Not Shown)	1
9	19-100046-00	Spinner Cable (Not Shown)	1
10	62-100015-00	Decal	1

**SNUBBER SIDE BRACKET ASSY., LEFT**  
**51-100065-00**



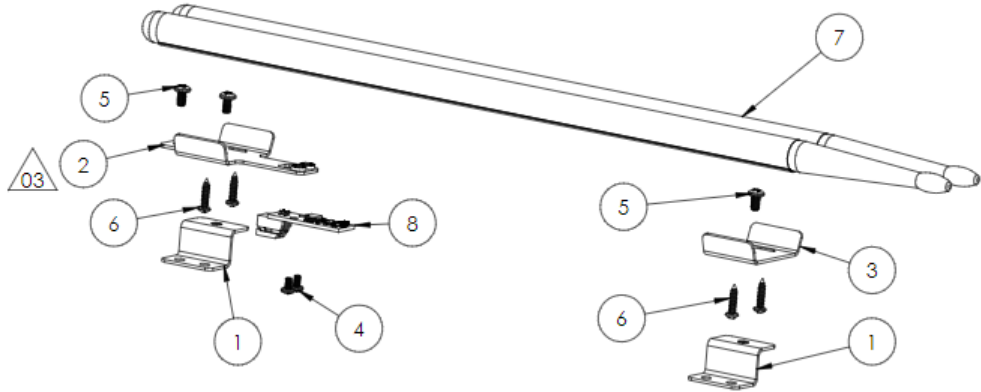
Item	Part Number	Description	Qty
1	10-100110-00	Snubber Brkt, Left	1
2	10-100113-00	Retaining Plate	1
3	25-100007-00	Snubber Block	1
4	91-000006-00	6-32 Nylon Stop Nut	2

**SNUBBER SIDE BRACKET ASSY., RIGHT**  
**51-100065-01**



Item	Part Number	Description	Qty
1	10-100110-01	Snubber Brkt, Right	1
2	10-100113-00	Retaining Plate	1
3	25-100007-00	Snubber Block	1
4	91-000006-00	6-32 Nylon Stop Nut	2

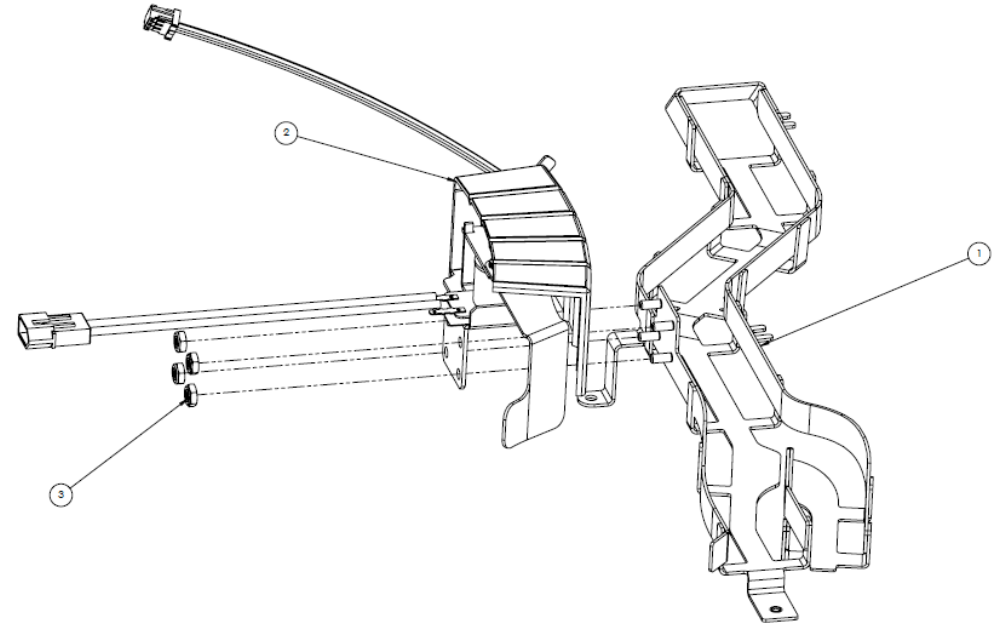
**DRUMSTICK RAMP**  
**51-100055-00 SE & LE**  
**51-100055-01 CE**



Item	Part Number	Description	Qty
1	10-100093-00	Lower Drumstick Brkt	2
2	10-100095-00	Front Upper Brkt	1
3	10-100094-00	Rear Upper Brkt	1
4	80-000004-03	#4-40 x 3/16" MS	2
5	80-000006-04	6-32 x 1/4" MS	3
6	82-000004-08	#4 x 1/2" MS	4
7	See Table	Drumstick W/ Mylar Decal	2
8	15-100024-02	Single Reflector OPTO BD	1
9	19-100101-00	Extension Cable	1

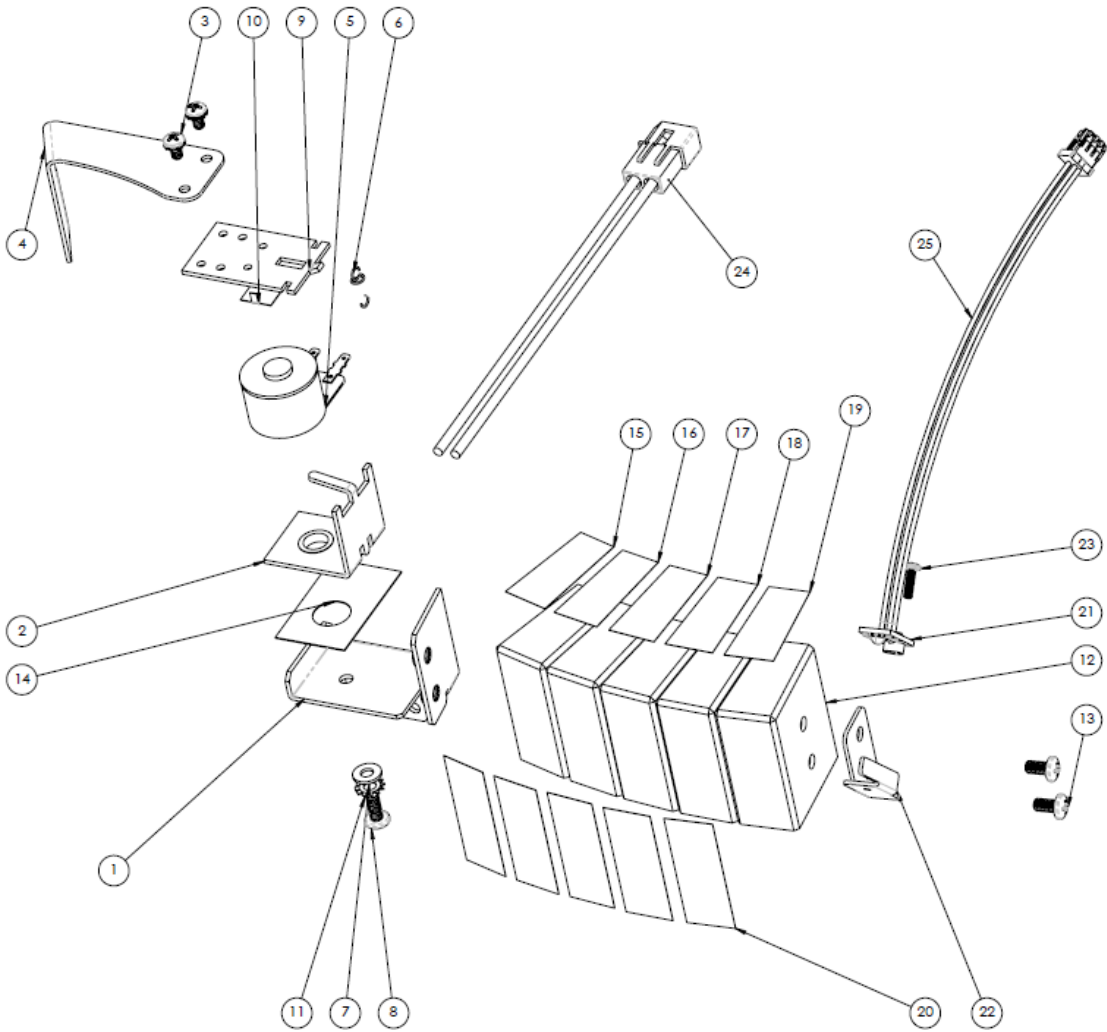
ITEM # 7	
SE & LE	51-100070-00
CE	51-100070-01

**CATWALK RAMP ASSY**  
**51-100142-00**



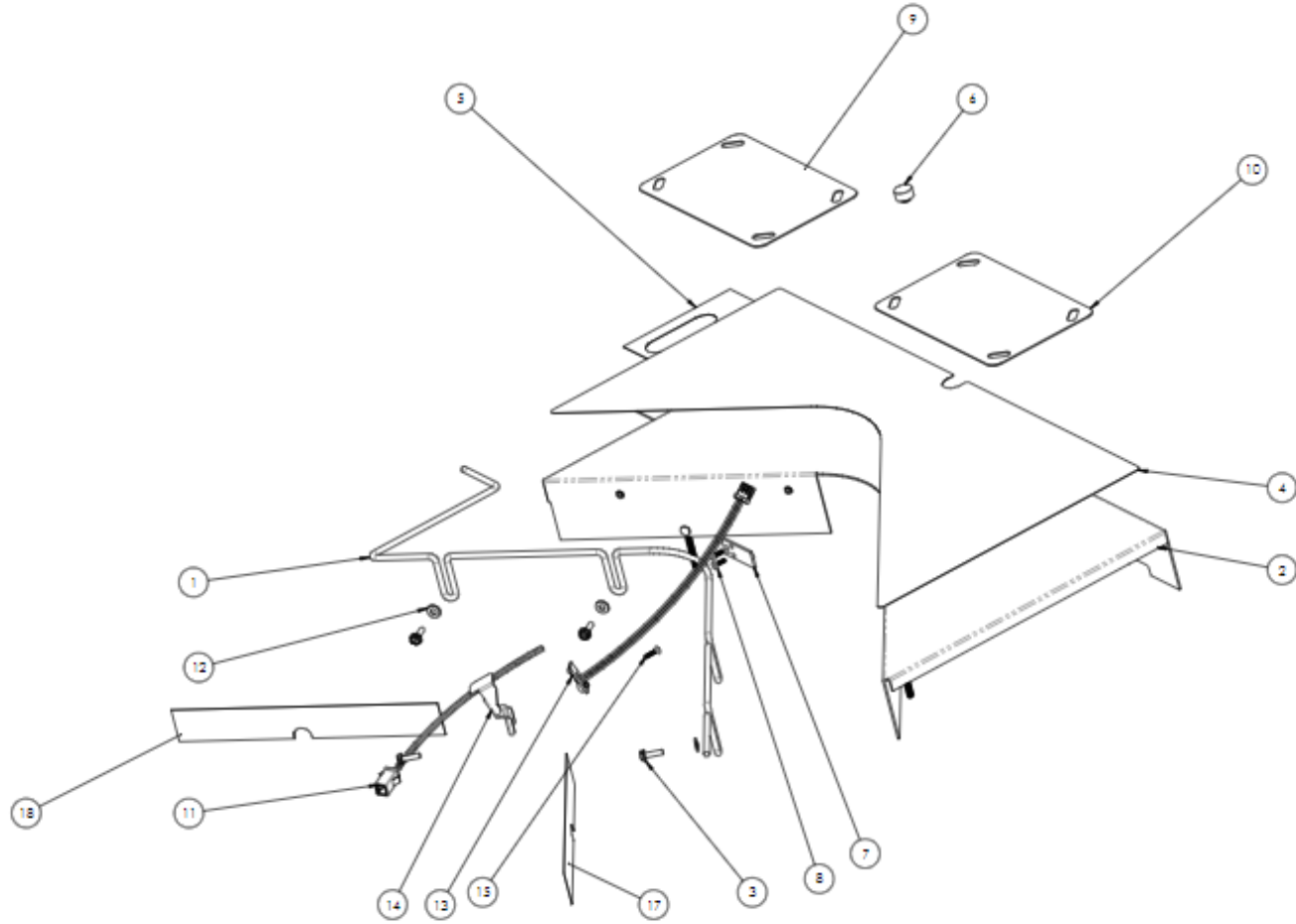
Item	Part Number	Description	Qty
1	51-100062-00	Cat Walk Diverter	1
2	10-100091-00	Cat Walk Ramp	1
3	91-000006-00	#6-32 Nylon Stop Nut	4

**CATWALK DIVERTER**  
**51-100062-00**



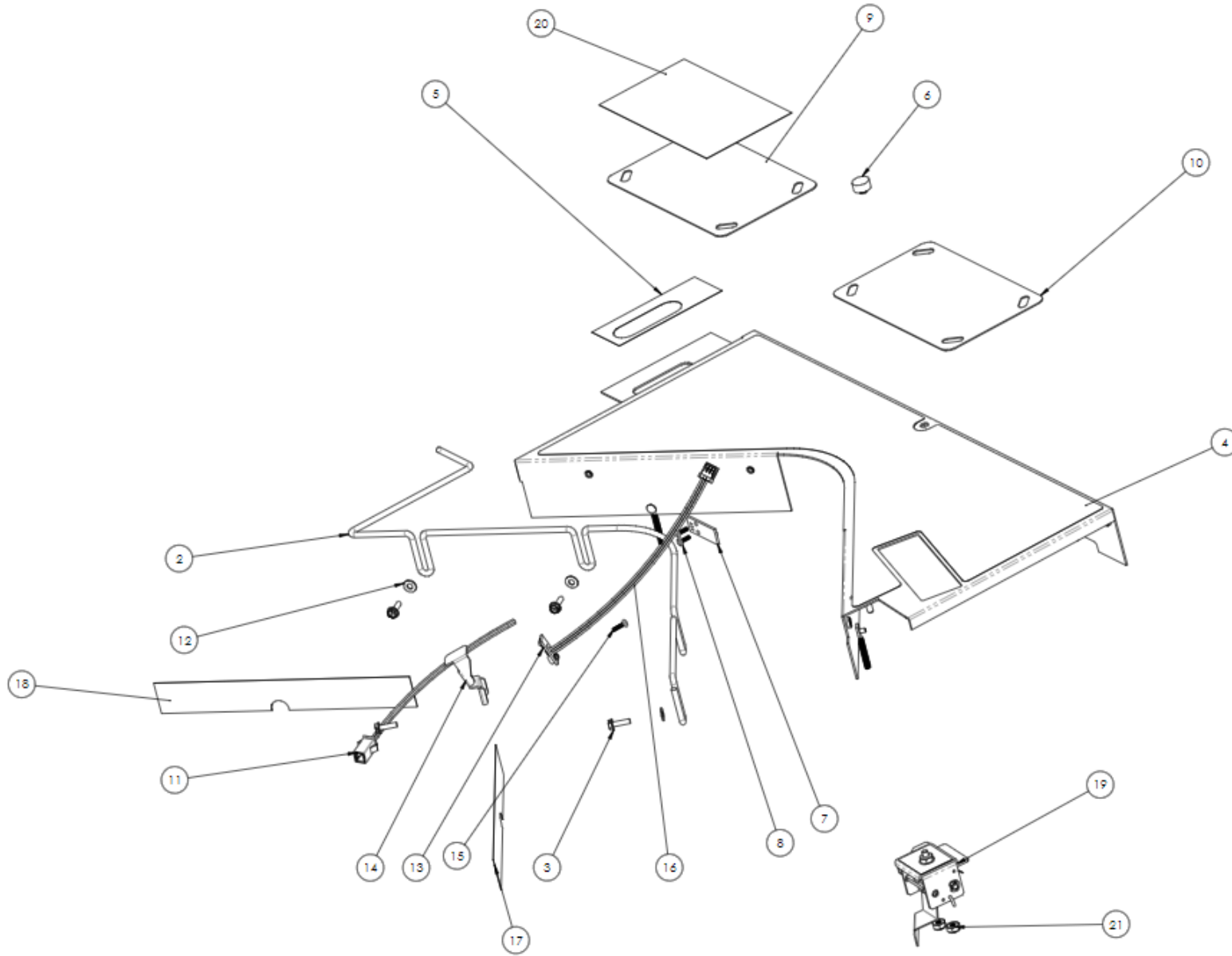
Item	Part Number	Description	Qty
1	10-100134-00	Mounting Bracket	1
2	10-000231-09	Trip Coil Frame	1
3	80-001006-04	#6-32 x 1/4" MS	2
4	10-100133-00	Diverter Guide	1
5	23-003008-01	26-600 Mini Coil Assy	1
6	13-007029-18	Spring 18 OZ	1
7	92-000308-00	#8 Flat Washer	1
8	80-000308-06	#8-32 x 3/8" MS	1
9	10-000213-06	Coil Armature Plate	1
10	10-000213-07	Residual Arnature Plate	1
11	92-003108-00	#8 Lock Washer	1
12	32-100006-00	Speaker Stack	1
13	80-000108-05	8-32 x 5/16" MS, Black	2
14	70-009001-01	Fish Paper	1
15	62-100018-28	Decal - NOT	1
16	62-100018-29	Decal - IN	1
17	62-100018-30	Decal - THIS	1
18	62-100018-31	Decal - LIFE	1
19	62-100018-32	Decal - TIME	1
20	62-100018-33	Decale - VERT	5
21	15-100023-01	RGB W/ PCB	1
22	10-100183-00	Bracket	1
23	80-000004-06	4-40 x 3/8" MS	1
24	19-100057-00	Coil Cable (Not Shown)	1
25	19-100100-24	RGB Cable	1

**APRON SE & LE**  
**52-100013-01 SE 52-100013-03 LE**



Item	Part Number	Description	Qty
1	13-100004-00	Arch Rail	1
2	10-100104-XX	Bottom Arch	1
3	80-002008-08	8-32 x 1/2" MS	4
4	SEE CHART	Decal Apron	1
5	62-100018-16	Decal Skill Shot	1
6	25-009014-00	Bottom Arch Rubber Plug	1
7	15-004328-00	Single RGB W/ PCB	1
8	80-000004-05	#4-50 x 5/16" MS	2
9	11-100032-00	Price Card	1
10	11-100032-01	Instruction Card	1
11	19-009038-06	Action Button LED Cable	1
12	92-000008-00	#8 Flat Washer	3
13	15-100023-01	RGB W/ PCB	1
14	10-100182-00	BRKT LED BD Tray	1
15	80-000004-06	4-40 x 3/8" MS	1
16	19-100100-24	RGB Floodlight Cable 24"	1
17	62-100019-09	Mylar Protector, Left	1
18	62-100019-03	Mylar Protector, Right	1

ASSEMBLY NUMBER	DESCRIPTION	COLOR	10-100104-XX	ITEM 4
52-100013-01	SE	BLACK	10-100104-01	62-100022-01
52-100013-03	LE	WILD COPPER	10-100104-02	62-100024-01

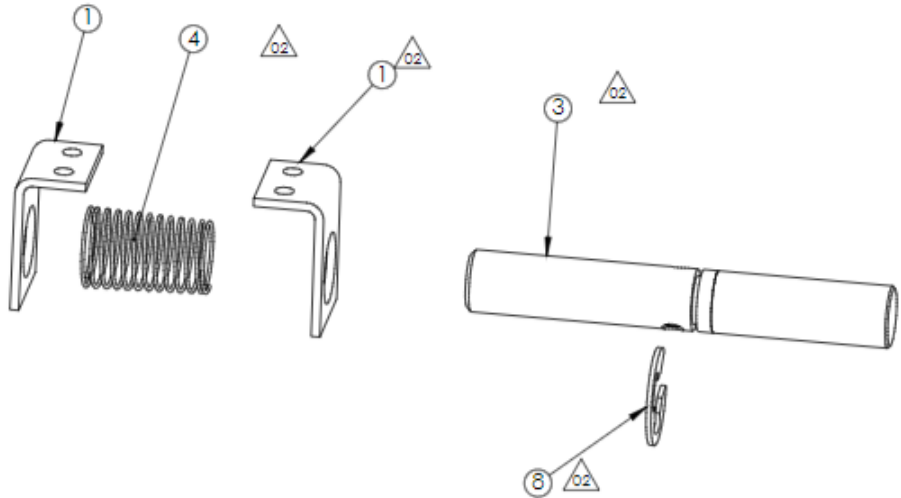
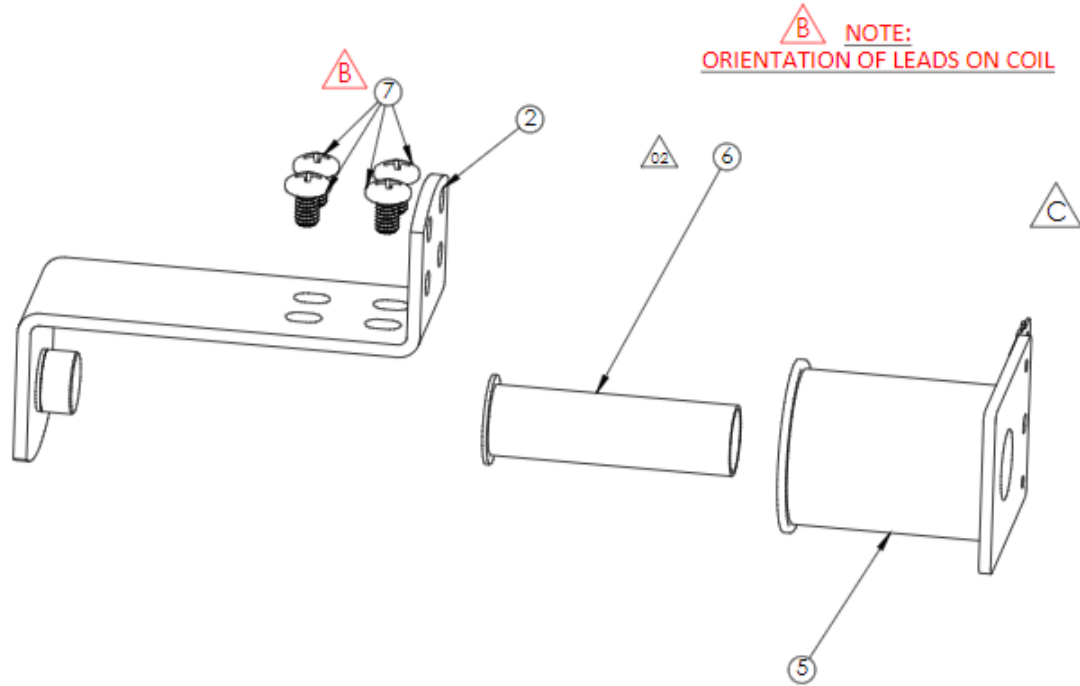


**APRON CE  
52-100016-00**

Item	Part Number	Description	Qty
1	10-100188-01	Bottom Arch	1
2	13-100004-01	Wire Rail	1
3	80-002008-08	8-32 x 1/2" MS	4
4	62-100023-01	Decal Apron	1
5	62-100018-16	Decale Skill Shot	1
6	25-009014-00	Bottom Arch Rubber Plug	1
7	15-004328-00	Single RGB W/ PCB	1
8	80-000004-05	#4-50 x 5/16" MS	2
9	11-100032-00	Price Card	1
10	11-100032-01	Instruction Card	1
11	19-009038-06	Action Button LED Cable	1
12	92-000008-00	#8 Flat Washer	3
13	15-100023-01	RGB W/ PCB	1
14	10-100182-00	BRKT LED BD Tray	1
15	80-000004-06	4-40 x 3/8" MS	1
16	19-100100-24	RGB Floodlight Cable 24"	1
17	62-100019-09	Mylar Protector, Left	1
18	62-100019-08	Mylar Protector, Right	1
19	51-100075-03	Solenoid Gate Assy.	1
20	71-100007-00	CE Signature Card	1
21	91-000008-00	8-32 Nylon Stop Nut	2

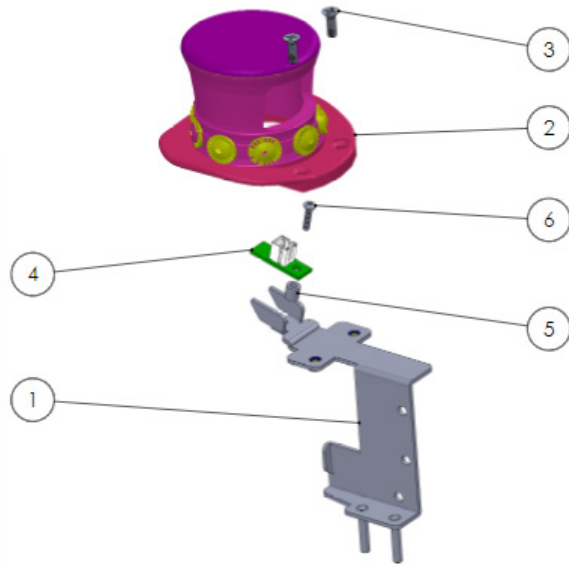


**COMA BALL LOCK DOWN POST CE**  
**51-100020-00**



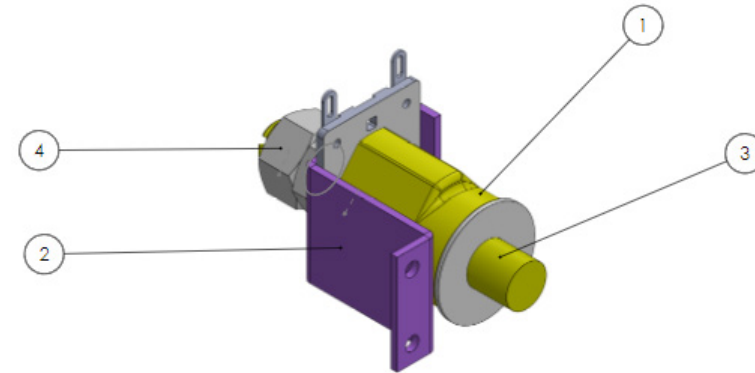
Item	Part Number	Description	Qty
1	10-007000-00	Coil Retaining Bracket	2
2	10-100060-00	Main Bracket	1
3	11-100015-00	Plunger	1
4	13-007004-00	Spring	1
5	23-000003-00	23-800 Coil	1
6	30-000014-28	1 3/4" Coil Sleeve	1
7	80-000008-04	8-32 x 1/4" MS	4
8	94-004011-14	E-Ring	1

**HAT ASSY**  
51-100080-00



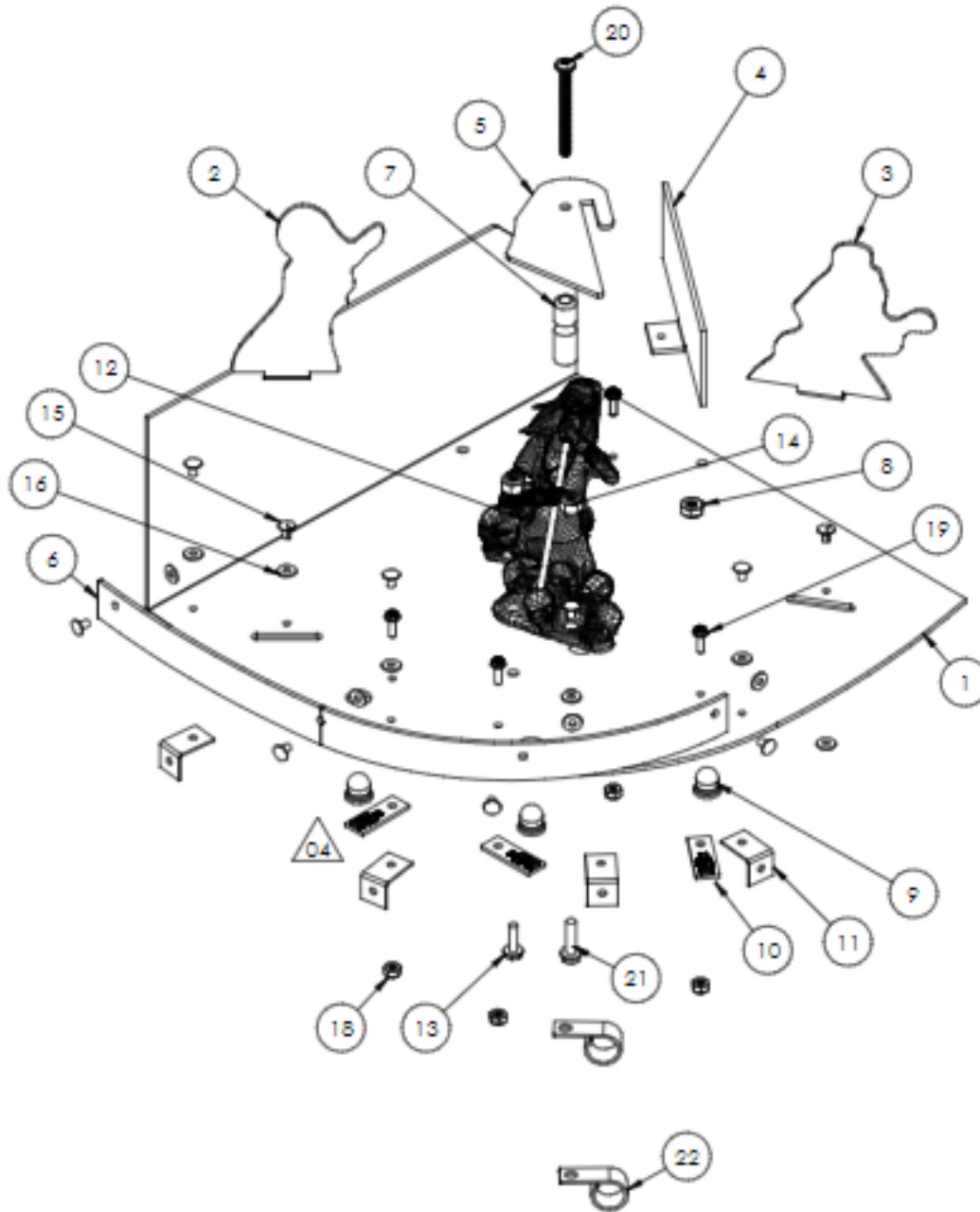
Item	Part Number	Description	Qty
1	10-100141-00	Bracket	1
2	32-100007-00	Hat	1
3	80-006308-08	8-32 x 1/2" MS	2
4	15-100008-00	RGB GI	1
5	30-100010-00	Spacer	1
6	82-000004-08	4-40 x 1/2" MS	1
7	19-100098-00	RGB GI Extension Cable	1
8	30-000051-04	4" Wire Tie	3

**SINGLE COIL MAGNET**  
51-100012-00

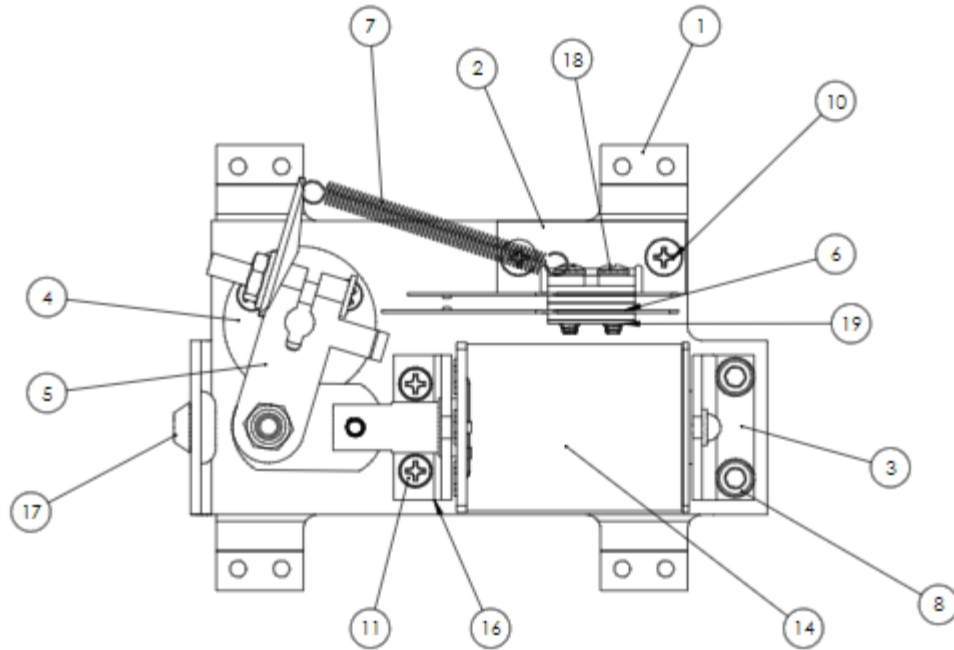


Item	Part Number	Description	Qty
1	23-100000-00	Coil	1
2	10-100035-00	Bracket	1
3	11-100008-00	Core	1
4	91-100000-00	Hex Nut	1

**ROCK STAGE SE**  
**51-100123-00**

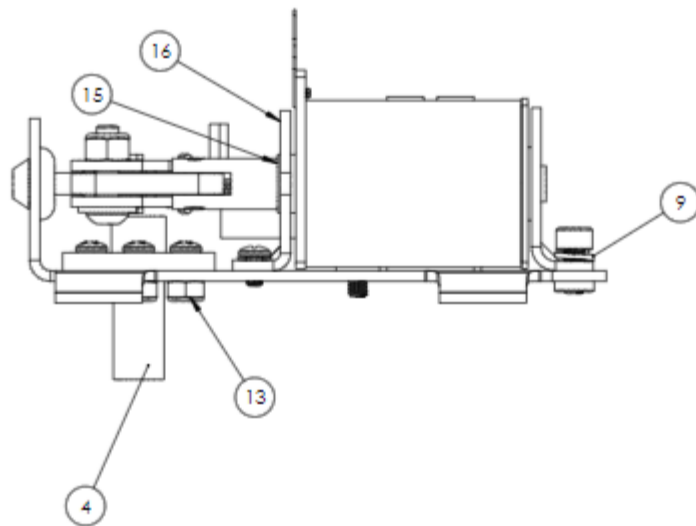


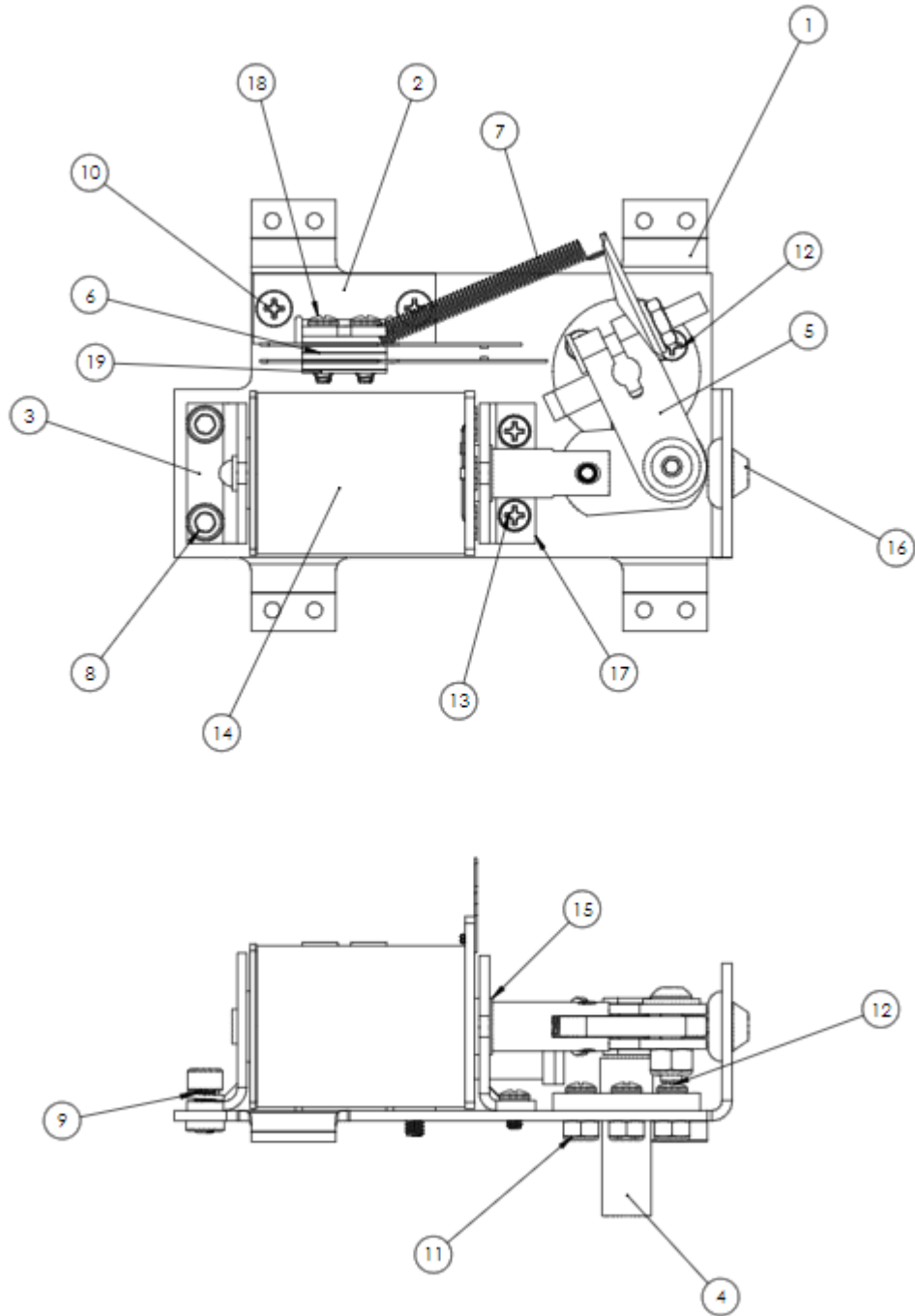
Item	Part Number	Description	Qty
1	30-100060-10	Stage Floor	1
2	30-100060-22	Duff Stand Up	1
3	30-100060-20	Slash Stand Up	1
4	30-100060-18	Ball Trap Verticle	1
5	30-100006-19	Ball Trap Horizontal	1
6	30-100060-17	Stage Front	1
7	30-009000-12	Clear Post	1
8	91-000008-00	8-32 Stop Nut	1
9	30-000034-03	Ramp Light Rod	4
10	15-100008-01	RGB GI	4
11	10-000227-01	Mounting Bracket	4
12	32-100008-00	AXL Sulpture	1
13	80-002008-08	8-32 x 1/2" MS	1
14	91-000108-00	8-32 Nylon Stop Nut	2
15	93-000000-00	1/8" x 7/32" Rivet	11
16	92-000004-00	#4 Flat Wasaher	11
17	19-100097-00	RGB GI Cable	1
18	91-000104-00	4-40 Nylon Stop Nut	4
19	80-002104-06	4-40 x 3/8" MS	1
20	80-000008-28	#8-32 x 1-3/4" MS	1
21	80-002008-10	#8-32 x 5/8" MS	1
22	30-000049-08	Cable Clamp, Open 1/2"	2



**FLIPPER ASSEMBLY, RIGHT**  
**52-000121-00 BOTTOM**  
**52-000131-00 TOP**

Item	Part Number	Description	Qty
1	10-005001-00	Base Plate, Right	1
2	10-000018-00	EOS Bracket	1
3	10-007001-00	Coil Stop	1
4	30-009002-00	Bushing	1
5	51-005018-00	Plunger, Pawl and Link, Right	1
6	18-000001-00	EOS Switch	1
7	13-007001-00	Return Spring	1
8	90-004010-06	10-32 x 3/8" Screw	2
9	92-001010-00	#10 Split Washer	2
10	80-000008-05	8-32 x 5/16" MS	2
11	80-001006-04	6-32 Nylon Stop Nut	2
12	80-000006-06	6-32 x 3/8" MS	3
13	91-000006-00	6-32 x 1/4" MS	3
14	23-00200-00	FL-11629 Bottom Flipper Coil	1
14	23-002003-00	FL-15411 Top Flipper Coil	1
15	30-000014-35	2-3/16" Coil Sleeve	1
16	10-007002-01	Centering Bracket	1
17	25-009001-00	Bumper Plug, Black	1
18	82-000006-08	#6 x 1/2" SMS	2
19	91-006000-00	Tinnerman Nut	1

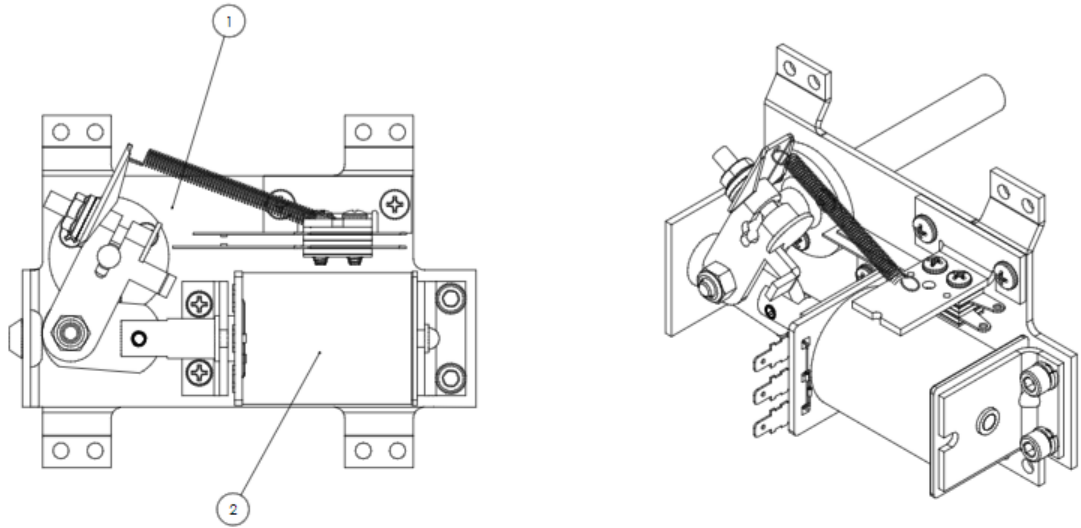




**FLIPPER ASSEMBLY, LEFT**  
**52-000132-00**

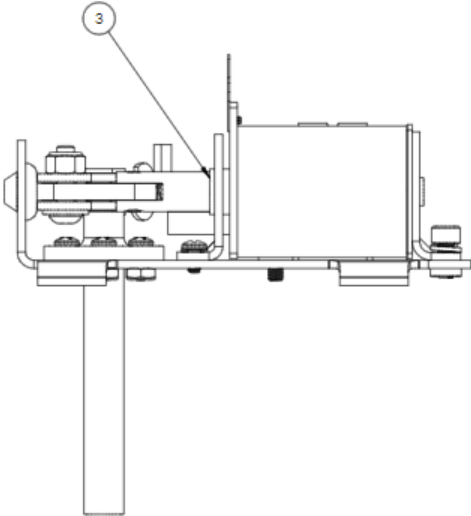
Item	Part Number	Description	Qty
1	10-005002-00	Base Plate, Left	1
2	10-000018-00	EOS Bracket	1
3	10-007001-00	Coil Stop	1
4	30-009002-00	Bushing	1
5	51-005018-01	Plunger, Pawl and Link, Left	1
6	18-000001-00	EOS Switch	1
7	13-007001-00	Return Spring	1
8	90-004010-06	10-32 x 3/8" Screw	2
9	92-001010-00	#10 Split Washer	2
10	80-000008-05	8-32 x 5/16" MS	2
11	91-000006-00	6-32 x 1/4" MS	2
12	80-000006-06	6-32 x 3/8" MS	3
13	80-001006-04	6-32 x 1/4" MS	2
14	23-002003-00	FL-15411 Top Flipper Coil	1
15	30-000014-35	2-3/16" Coil Sleeve	1
16	25-009001-00	Bumper Plug, Black	1
17	10-007002-01	Centering Bracket	1
18	82-000006-08	#6 x 1/2" SMS	2
19	91-006000-00	Tinnerman Nut	1

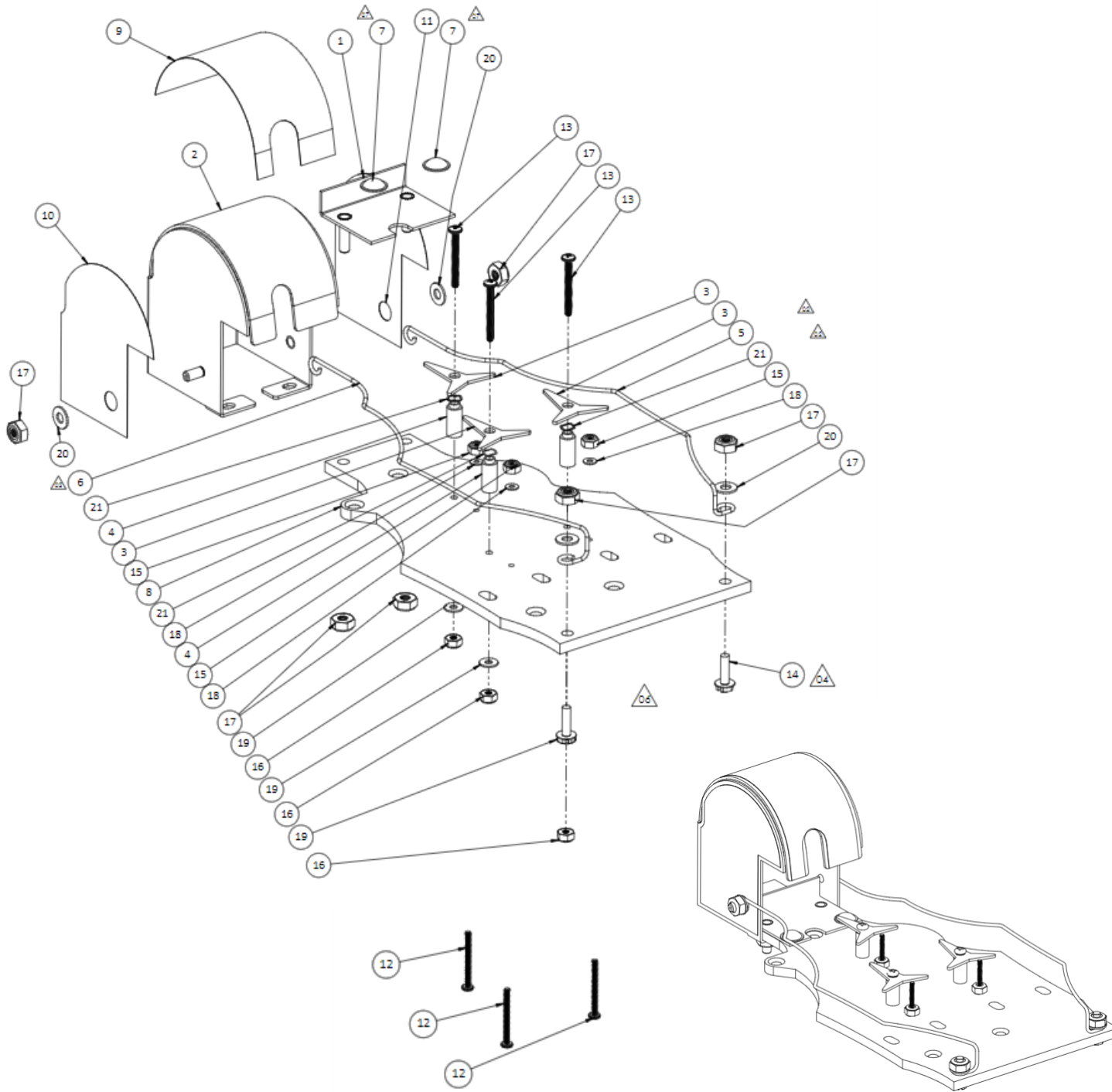
**UPPER PLAYFIELD FLIPPER ASSEMBLY RIGHT  
LE & CE  
52-000151-00**



Item	Part Number	Description	Qty
1	51-000001-4X	Extended Bushing	1
2	23-002000-00	FL-11722 Coil	1
3	30-000014-35	2 3/16: Coil Sleeve	1

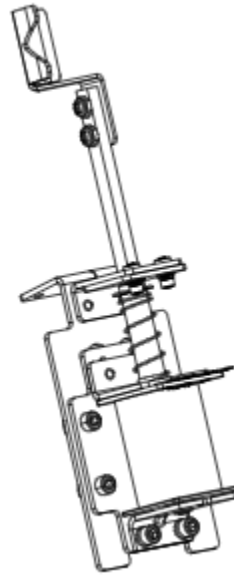
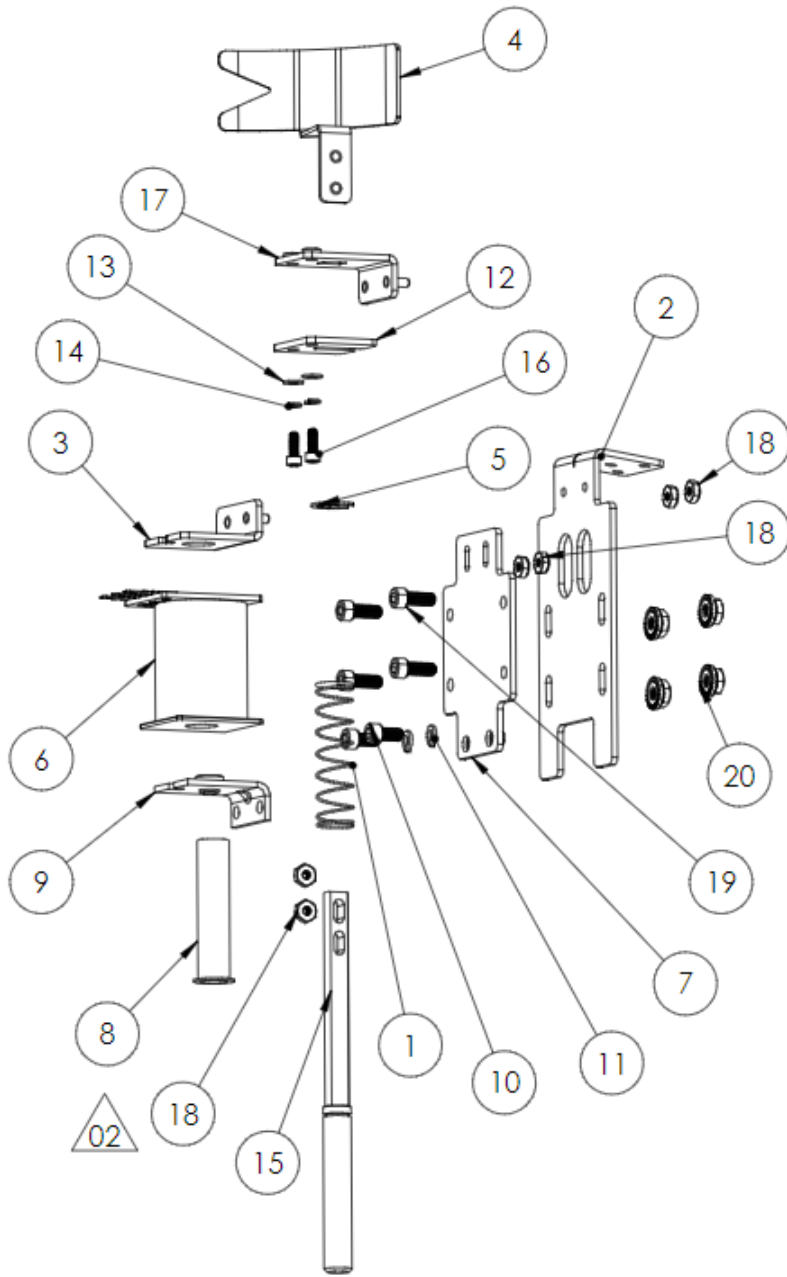
52-000151-00 - FLIPPER ASSEMBLY, RIGHT, EXTENDED BUSHING - (SHOWN)





**BASS HEAD ASSY  
LE & CE  
52-100082-00**

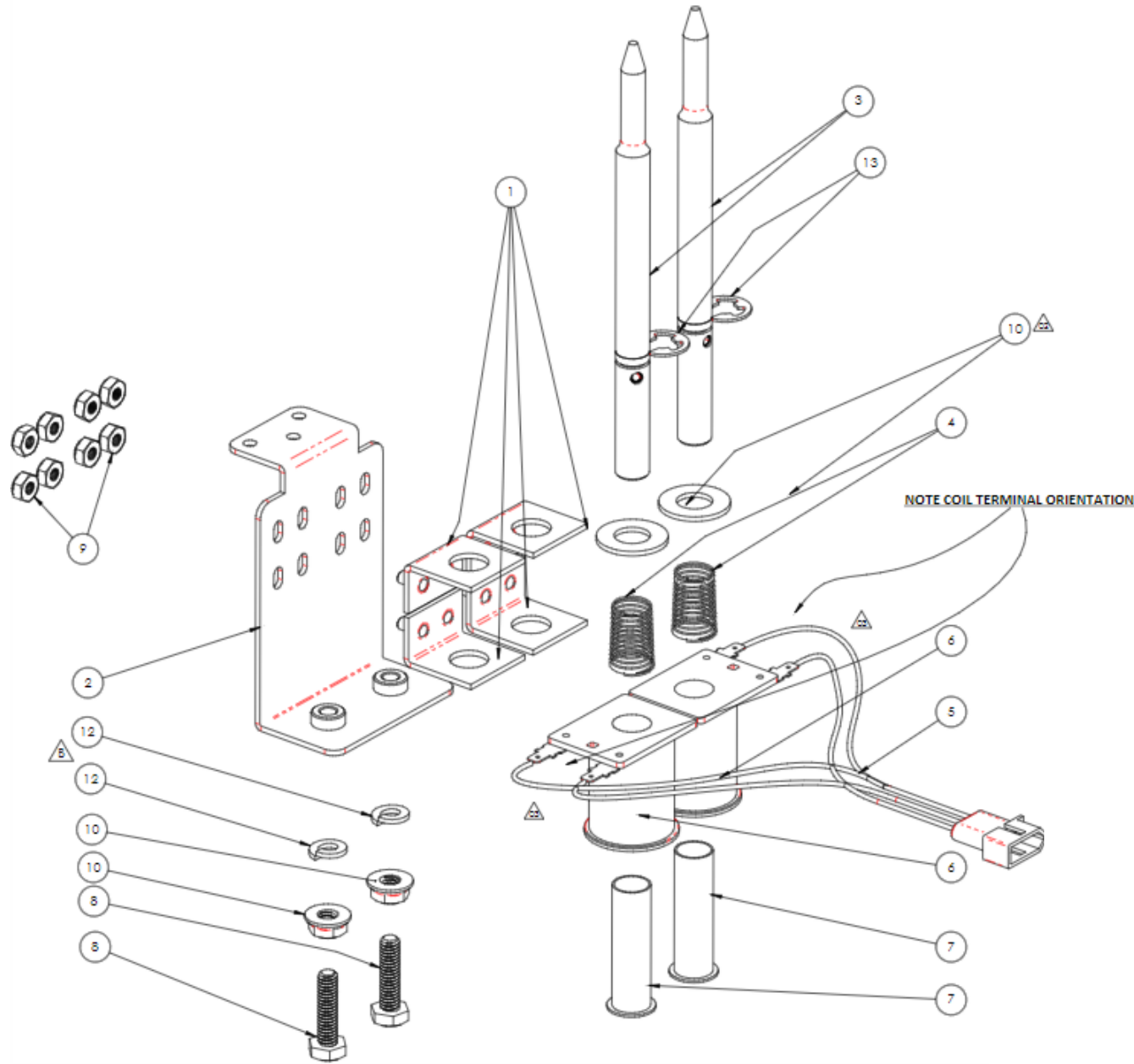
Item	Part Number	Description	Qty
1	10-100128-00	Mounting Plate	1
2	10-100129-00	Scoop	1
3	10-100138-00	Kinetic Diverter	3
4	11-100027-00	Post	3
5	13-100014-00	Right wireform	1
6	13-100015-00	Left Wireform	1
7	25-009009-00	Mylar Dots	2
8	30-100034-00	Bass Head	1
9	62-100018-05	Decal	1
10	62-100018-06	Decal	1
11	62-100018-07	Decal	1
12	80-000002-14	2-56 x 7/8" MS	3
13	80-000004-16	4-40 x 1" MS	3
14	80-002008-08	8-32 x 1/2" MS	2
15	91-000002-00	2-56 Nylon Stop Nut	3
16	91-000004-00	#4-40 Nylon Stop Nut	3
17	91-000008-00	8-32 Nylon Stop Nut	6
18	92-000002-00	#2 FLat Washer	3
19	92-000008-00	#4 Flat Washer	3
20	92-000008-00	#8 Flat Washer	4
21	92-001012-00	Wave Disc Spring	3



**POPUP DIVERTER ASSY  
LE & CE  
52-100063-00**

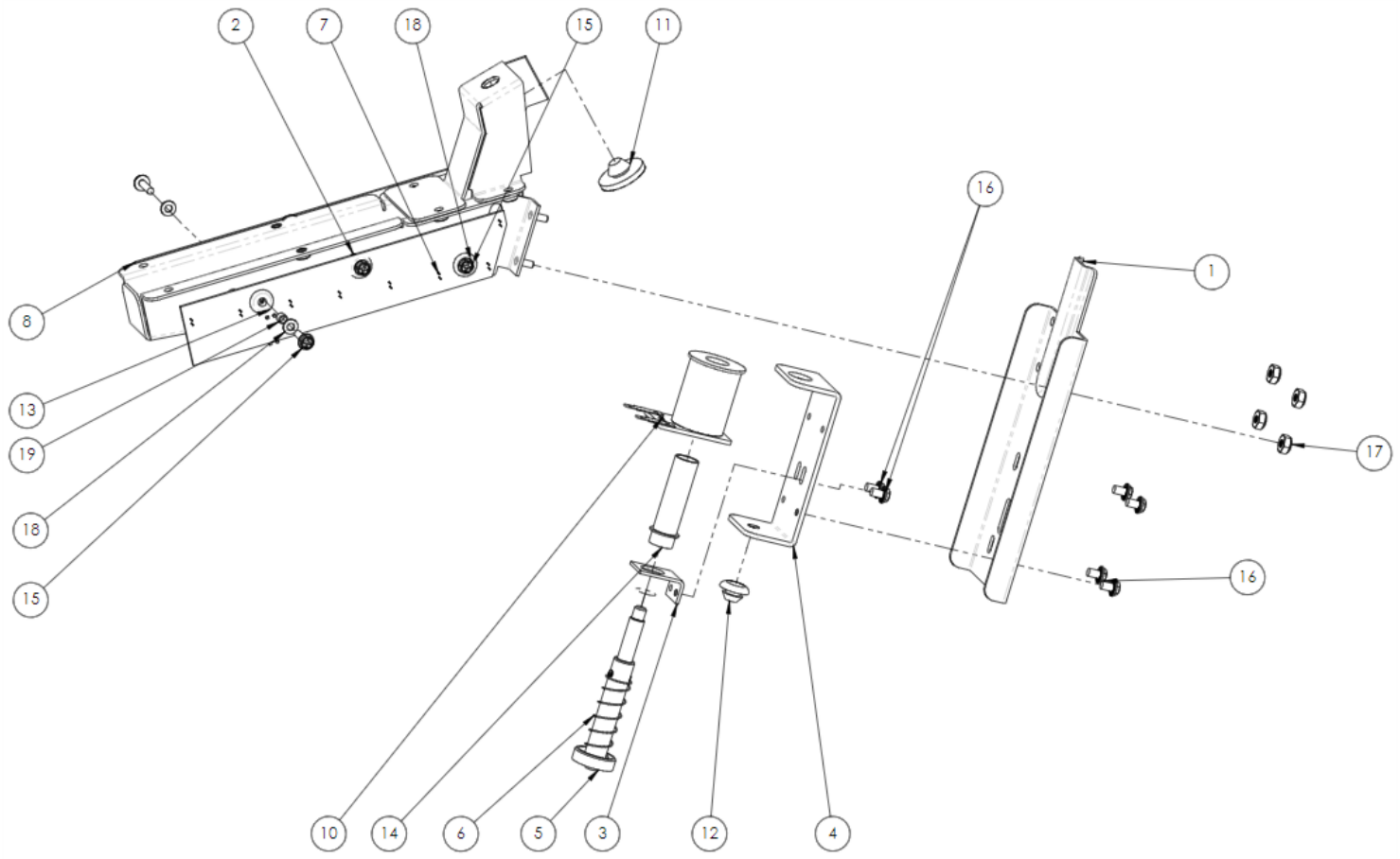
Item	Part Number	Description	Qty
1	10-1100018-00	Spring	1
2	10-100140-05	Main Bracket	1
3	10-100140-04	Soleniod Bracket	1
4	10-100140-01	Diverter	1
5	94-004011-14	E Ring	1
6	23-002000-00	FL-11722 Coil	1
7	10-100140-00	Adjustment Plate	1
8	30-000014-35	2 3/16" Coil Sleeve	1
9	10-007008-00	Coil Stop	1
10	90-004010-06	10-32 x 3/8" Screw	2
11	92-001010-00	#10 Split Lock Washer	2
12	10-100140-02	Jam Plate	1
13	92-000006-00	#6 Flat Washer	2
14	92-001006-00	#6 Split Washer	2
15	11-100028-00	Shaft	1
16	90-004006-06	6-32 x 3/8" Screw	2
17	10-100140-03	Guide Bracket	1
18	91-000006-00	6-32 Nylon Stop Nut	6
19	90-004010-08	10-32 x 1/2" Screw	4
20	91-002010-00	10-32 Flange Nut	4
21	19-100058-00	Cable (Not Shown)	1





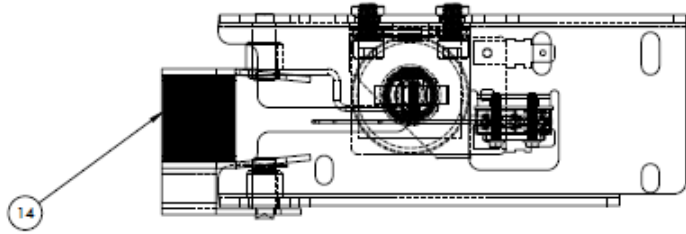
**DUAL UP DOWN POSTS  
LE & CE  
52-100067-00**

Item	Part Number	Description	Qty
1	10-007004-00	Centering Bracket	4
2	10-100115-00	Bracket	1
3	11-100023-00	Plunger	2
4	13-007004-00	Spring	2
5	19-100061-00	Coil Cable	1
6	23-000003-00	23-800 Coil	2
7	30-000014-28	1 3/4" Coil Sleeve	2
8	80-003025-16	1/4"-20 Hex Head Bolt	2
9	91-000008-00	8-32 Nylon Stop Nut	8
10	91-002025-00	#1/4"-20 Flange Nut	2
11	92-000044-02	7/16" Flat Washer	2
12	92-001025-00	1/4-20 Split Washer	2
13	94-004011-14	E Ring	2

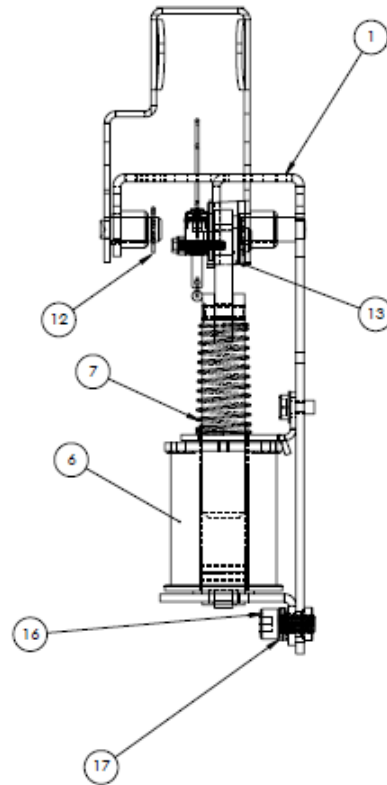
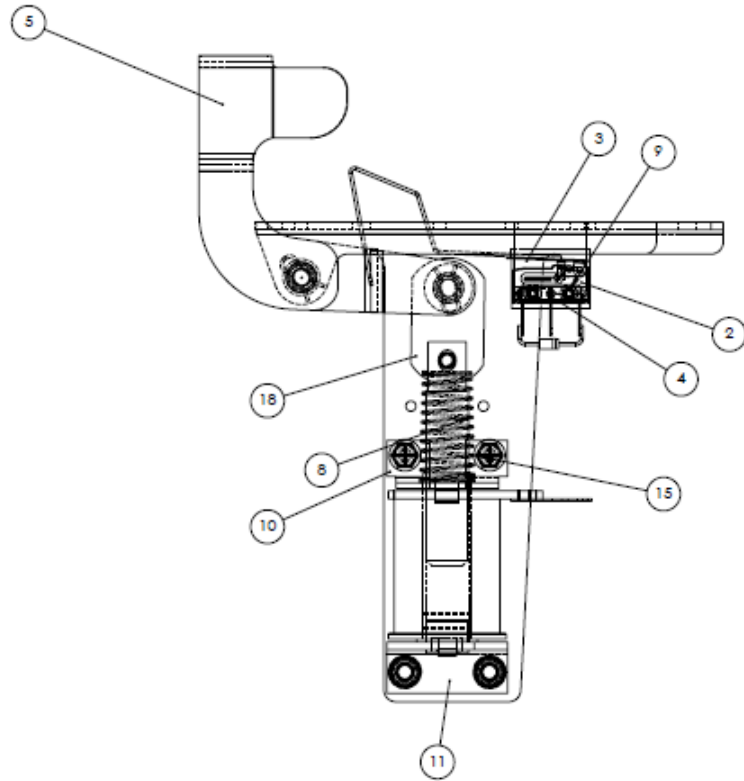


**6 - BALL TROUGH ASSY**  
**51-100022-00**

Item	Part Number	Description	Qty
1	10-005010-01	Coil Bracket	1
2	10-005010-00	Main 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	23-000010-00	26-1200 Coil	1
11	25-009001-01	Bumper Plug, Blue	1
12	25-009001-00	Bumper Plug, Black	1
13	25-009006-00	Rubber Grommet	6
14	30-000014-30-1	1 7/8" Coil Sleeve	1
15	80-002006-10	#6 x 5/8" MS	6
16	80-002008-14	#8-32 x 1/4" MS	6
17	91-000008-00	8-32 Nylon Stop Nut	4
18	92-000006-00	#6 Flat Washer	6
19	94-003002-00	Bushing	6

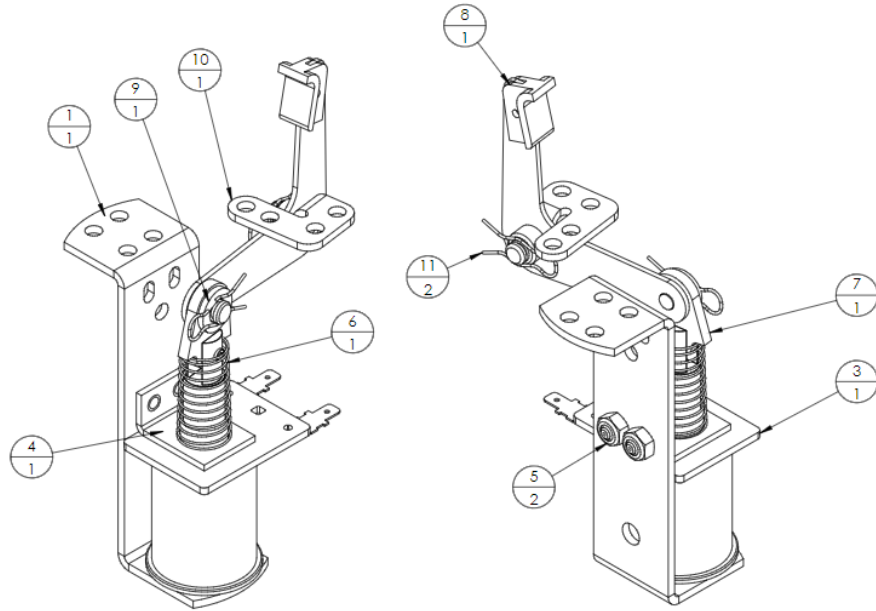


**AUTO-LAUNCH ASSY  
51-000026-00**



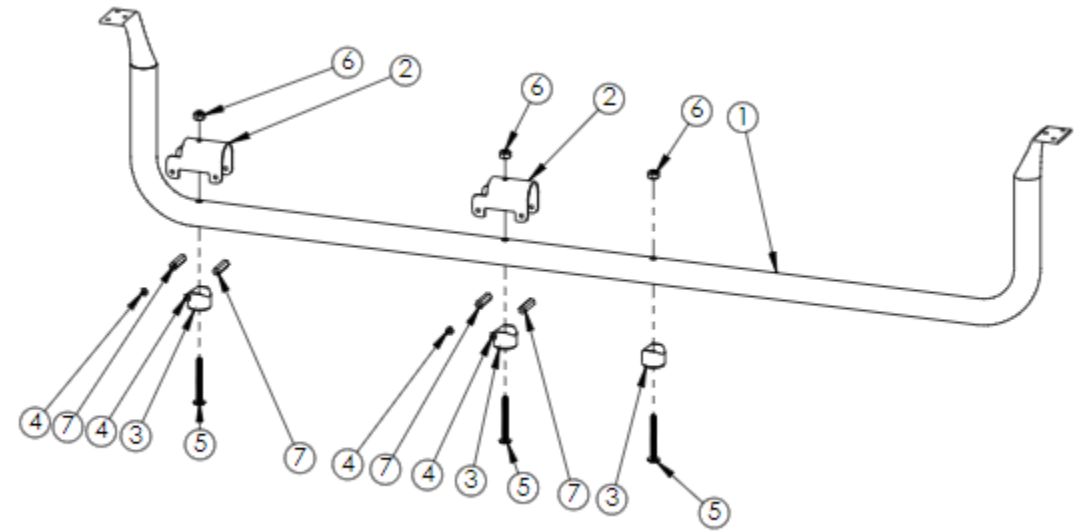
Item	Part Number	Description	Qty
1	10-005009-00	Coil Bracket	1
2	18-003001-00	Microswitch	1
3	70-009002-00	Fish Paper	1
4	10-000024-01	Protector Plate	1
5	10-000028-00	Crank Bracket	1
6	23-000003-00	23-800 Coil	1
7	30-000014-28	1 3/4" Coil Sleeve	1
8	13-007004-00	Spring	1
9	80-002102-08	2-56 x 1/2" MS	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

**SLINGSHOT ASSY**  
51-000003-00



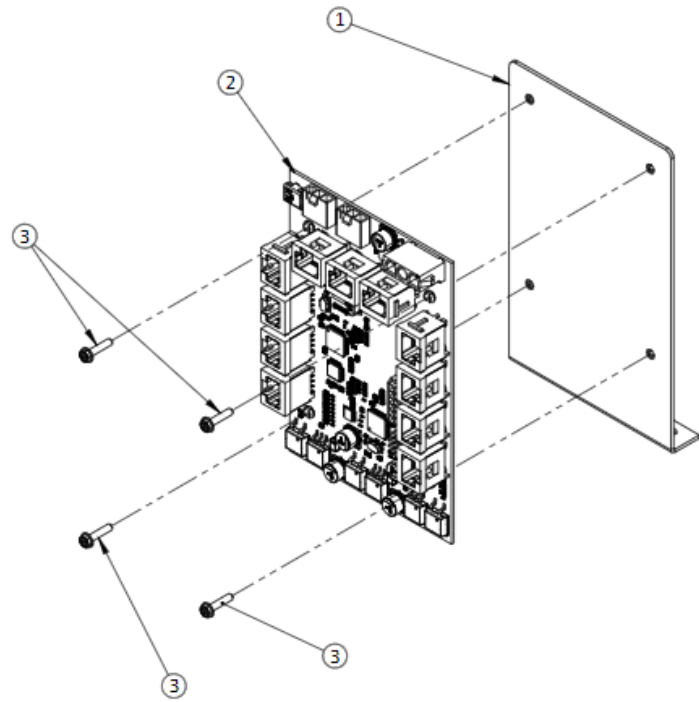
Item	Part Number	Description	Qty
1	10-005004-00	Coil Bracket	1
2	30-000014-28	2 1/16" Coil Sleeve	1
3	23-000003-00	23-800 Coil	1
4	10-007000-01	Centering Bracket	1
5	91-000006-00	6-32 Nylon Stop Nut	2
6	13-007004-00	Spring	1
7	11-005003-00	Plunger, Link Assy.	1
8	10-000042-00	Crank Assy.	1
9	95-002651-20-67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

**PLAYFIELD SUPPORT ASSY.**  
51-100001-00



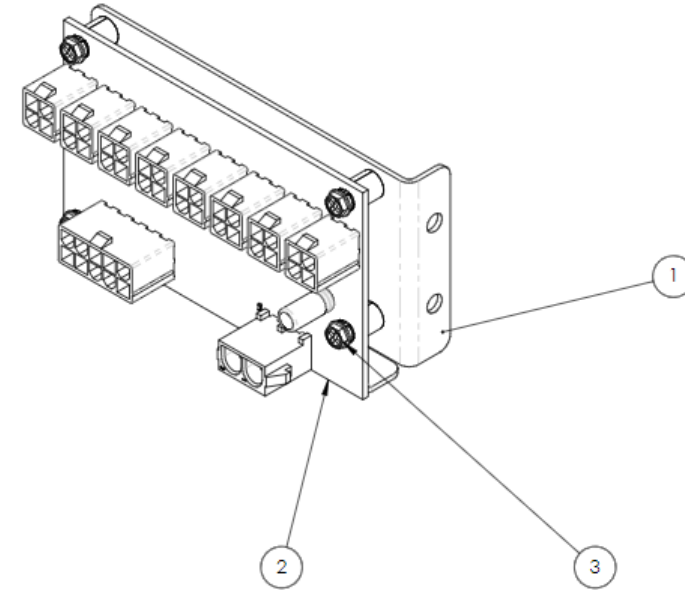
Item	Part Number	Description	Qty
1	10-000093-00	Support Tube	1
2	10-000280-00	Foot Bracket	2
3	25-009008-00	Rubber Spacers	1
4	80-000006-04	6-32 x 5/16" MS	8
5	80-007010-28	10-24 x 1 3/4" MS	3
6	91-000011-00	#10-24 Nylon Stop Nut	3
7	94-001406-16	#6-32 Female Hex Spacer	4

**PLAYFIELD CONTROLLER BOARD ASSY**  
51-000103-05

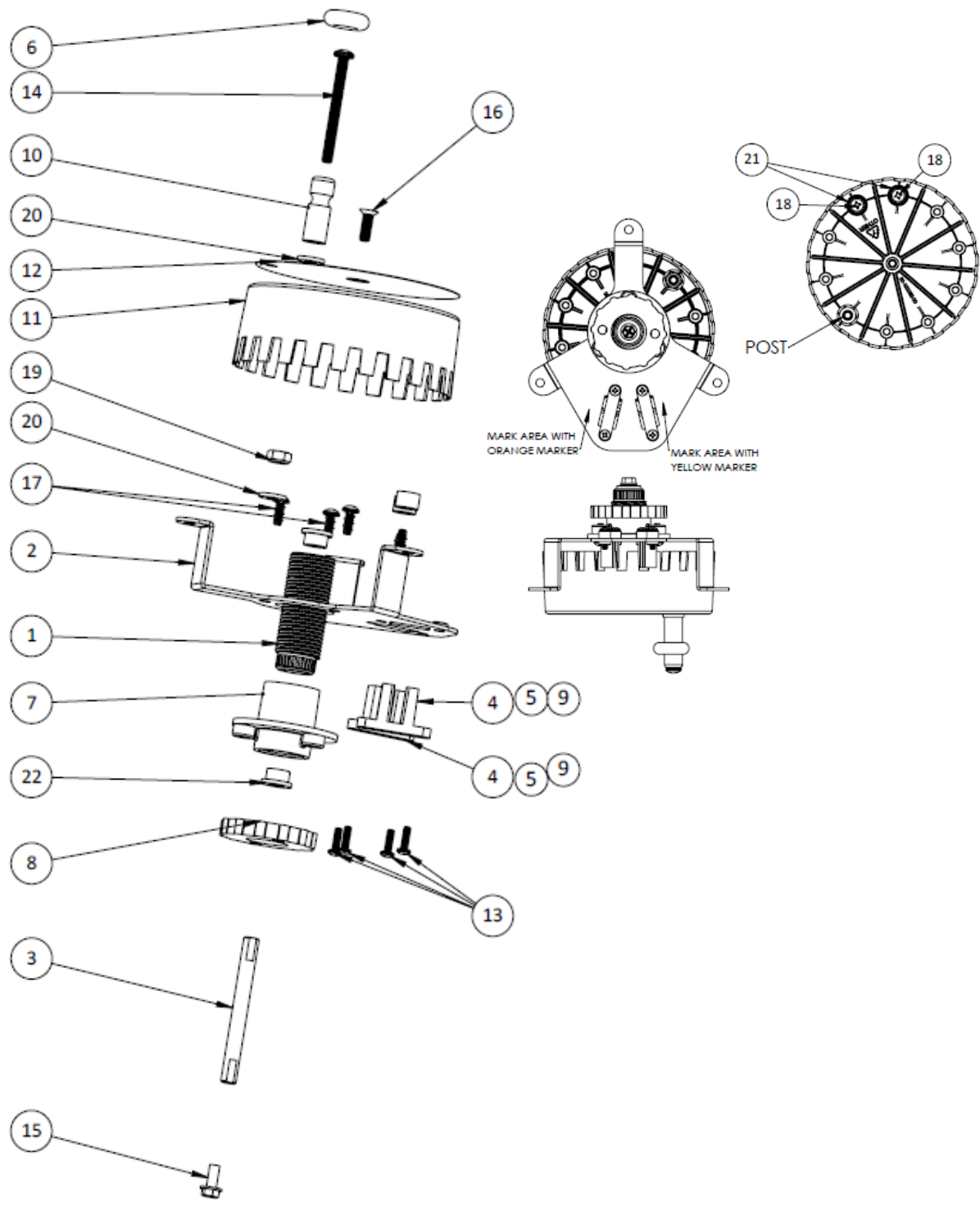


Item	Part Number	Description	Qty
1	10-005035-00	Mounting Bracket	1
2	15-100019-00	Playfield Controller Board	1
3	80-002104-08	4-40 x 3/8" MS	4

**OPTO BOARD ASSY**  
52-100008-00

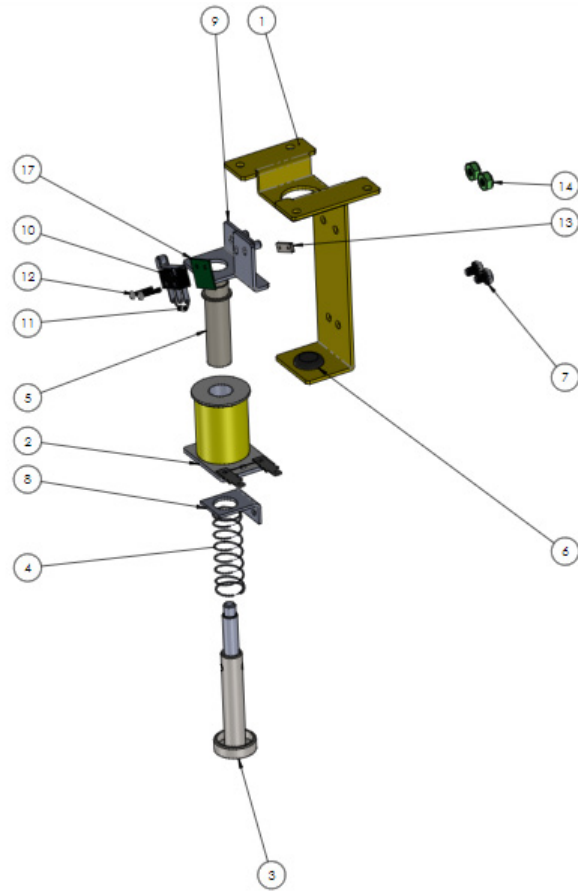


Item	Part Number	Description	Qty
1	10-005020-00	Mounting Bracket	1
2	15-100005-00	OPTO Board	1
3	80-002104-08	4-40 x 1/2" MS	4



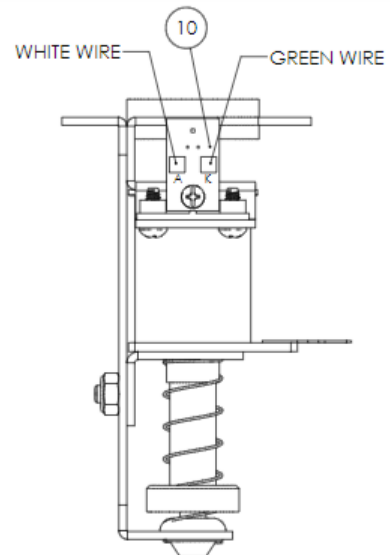
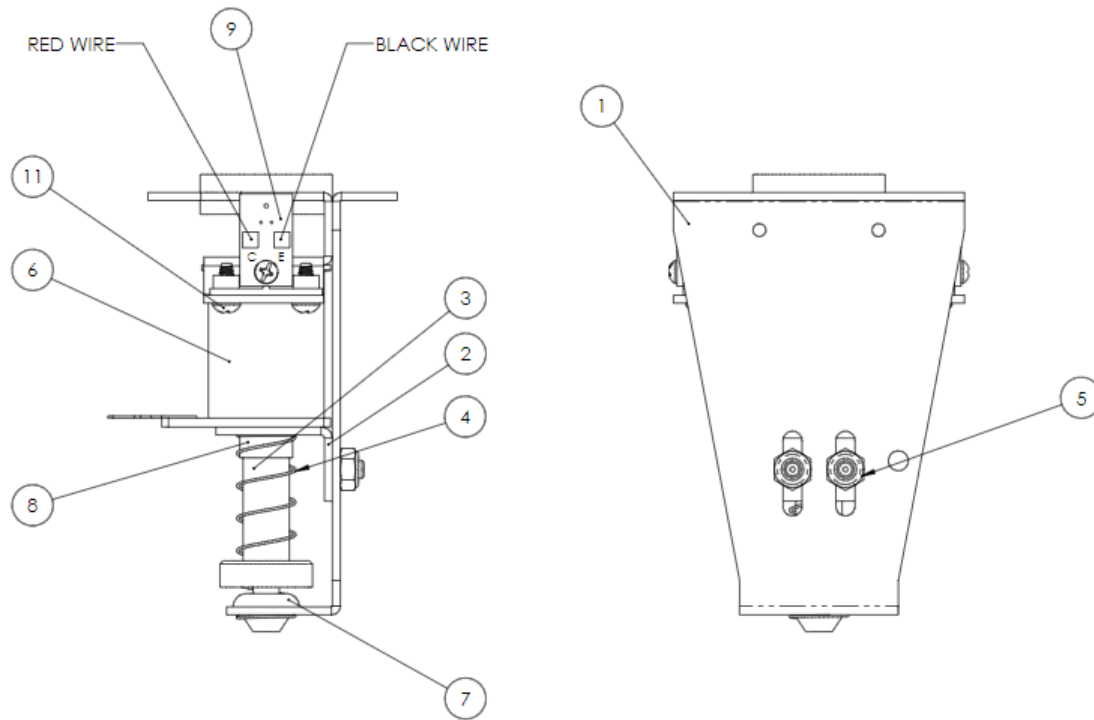
**RECORD ASSEMBLY**  
**51-100058-00**

Item	Part Number	Description	Qty
1	10-000254-11	Height Adjustment Screw	1
2	10-100097-00	Bracket	1
3	11-100033-00	Shaft	1
4	18-005000-00	U-Shaped OPTO	2
5	19-000013-22R	Crimp Pin	8
6	25-002004-03-13	3/16" Mini Post Ring	1
7	30-000121-11	Bushing	1
8	30-000121-12	Jam Nut	1
9	30-002011-04	Cable Connector	2
10	30-009004-13	1 1/16" Clear Post	1
11	30-100032-00	Disk	1
12	62-100017-XX	Decal	1
13	80-000004-06	4-40 x 3/8" MS	4
14	80-000008-28	8-32 x 1 3/4" MS	1
15	80-002008-06	8-32 x 3/8" MS	1
16	80-006208-08	#8-32 x 1/2" MS	1
17	83-001008-06	#8 x 3/8" Screw TF	3
18	83-001008-08	#8 x 1/2" Screw TF	2
19	91-000008-00	8-32 Nylon Stop Nut	1
20	92-000008-00	#8 Flat Washer	2
21	94-003017-01	#8 Round Spacer	2
22	96-000003-04	Sleeve Bearing	2



**SAUCER VUK**  
**51-100104-00**

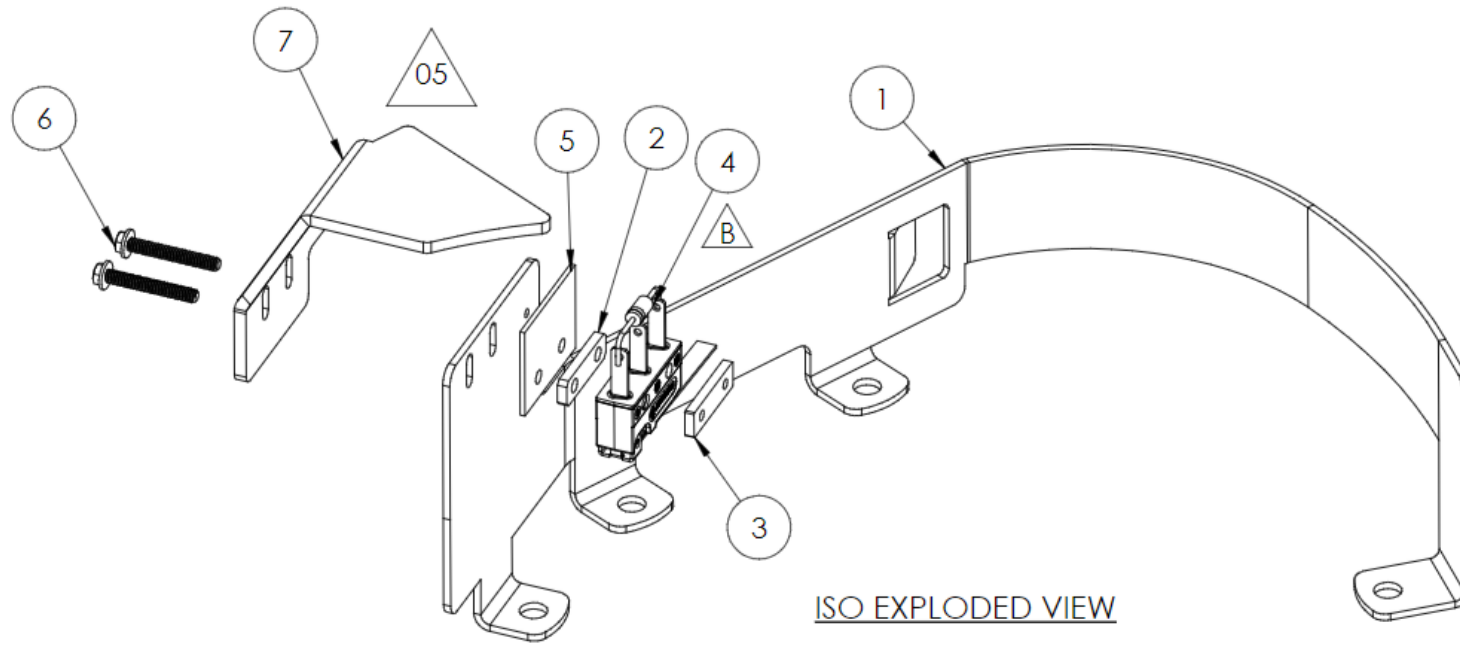
Item	Part Number	Description	Qty
1	10-100167-00	Bracket	1
2	23-000003-00	23-800 Coil	1
3	11-005012-00	Plunger	1
4	13-007002-00	Spring	1
5	30-000014-30-1	1 7/8" Coil Sleeve	1
6	25-009001-00	Bumper Plug, Black	1
7	80-001008-04	8-32 x 1/4" MS	2
8	10-007000-00	Centering Bracket	1
9	10-100167-01	Coil and Switch Bracket	1
10	18-003005-00	Rollover Switch	1
11	110-000002-OT	Diode 1N4401	1
12	80-000002-07	5-56 x 7/16" MS	2
13	10-000024-00	2-56 Nut Plate	1
14	91-000008-00	8-32 Nylon Stop Nut	2
15	19-100087-00	Coil Cable (Not Shown)	1
16	19-100090-00	Switch Cable (Not Shown)	1
17	70-009002-00	Fish Paper	1



**VUK ASSY. LE & CE**  
**51-100109-00**

Item	Part Number	Description	Qty
1	10-005005-00	Bracket	1
2	10-007004-00	Centering Bracket	1
3	11-005001-00	Plunger	1
4	13-007005-00	Spring	1
5	91-000008-00	8-32 Nylon Stop Nut	2
6	23-000003-00	23-800 Coil	1
7	25-009001-00	Bumper Plug, Black	1
8	30-000014-30-1	1 7/8" Coil Sleeve	1
9	15-005004-01	OPTO, Transmitter	1
10	15-005004-00	OPTO, Reciever	1
11	83-000006-06	#6-32 x 3/8" MS	4





ISO EXPLODED VIEW

**UPPER PLAYFIELD BALL GUIDE ASSY.**

**51-100183-00 LE**

**51-100083-01 CE**

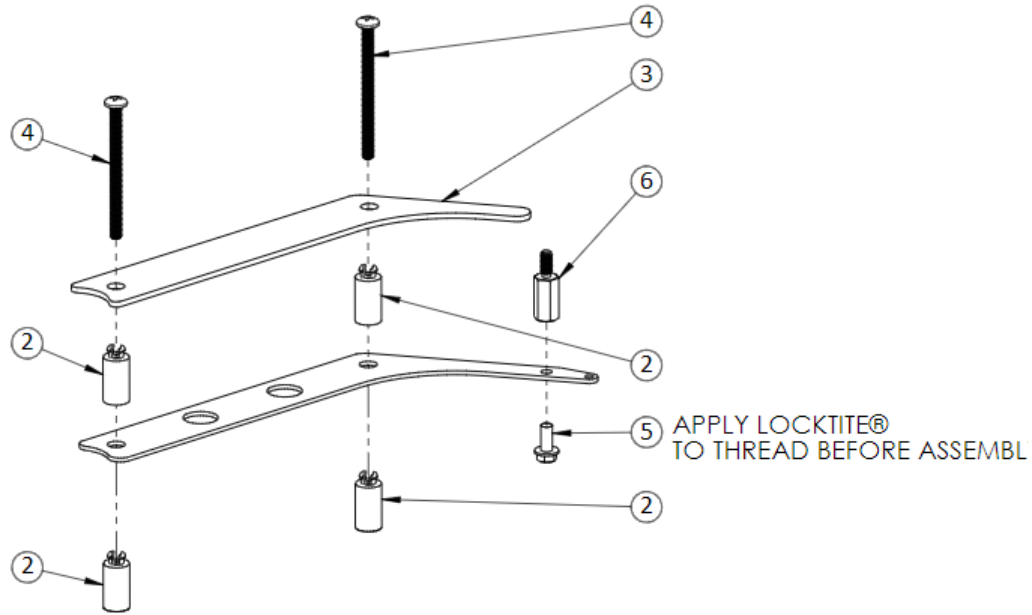
Item	Part Number	Description	Qty
1	12-100026-03	Ball Guide	1
2	10-000024-01	Protector Plate	1
3	10-000024-00	Nut Plate	1
4	18-003003-00	Microswitch	1
5	70-009002-00	Fish Paper	1
6	80-002002-10	2-56 x 5/8" MS	2
7	See Table	Ball Trap Plastic	1

ITEM # 7	
LE	30-100048-18
CE	30-100057-18

**LEFT RETURN LANE ASSY.**

51-100106-00 SE & LE

51-100147-00 CE



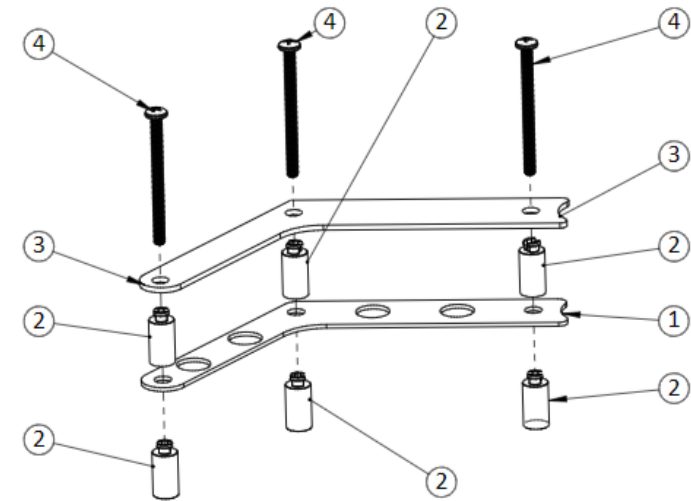
Item	Part Number	Description	Qty
1	12-100025-06	Flattrail Left Lane	1
2	30-000083-04	Spacer	4
3	See Table	Left Flipper Guide	1
4	80-000008-32	#8-32 x 2" MS	2
5	80-002008-06	8-32 x 3/8" MS	1
6	95-001518-10	5/16" Female Hex Spacer	1

ITEM # 3	
SE and LE	30-100048-02
CE	30-100057-02

**RIGHT RETURN LANE ASSY.**

51-100106-01 SE & LE

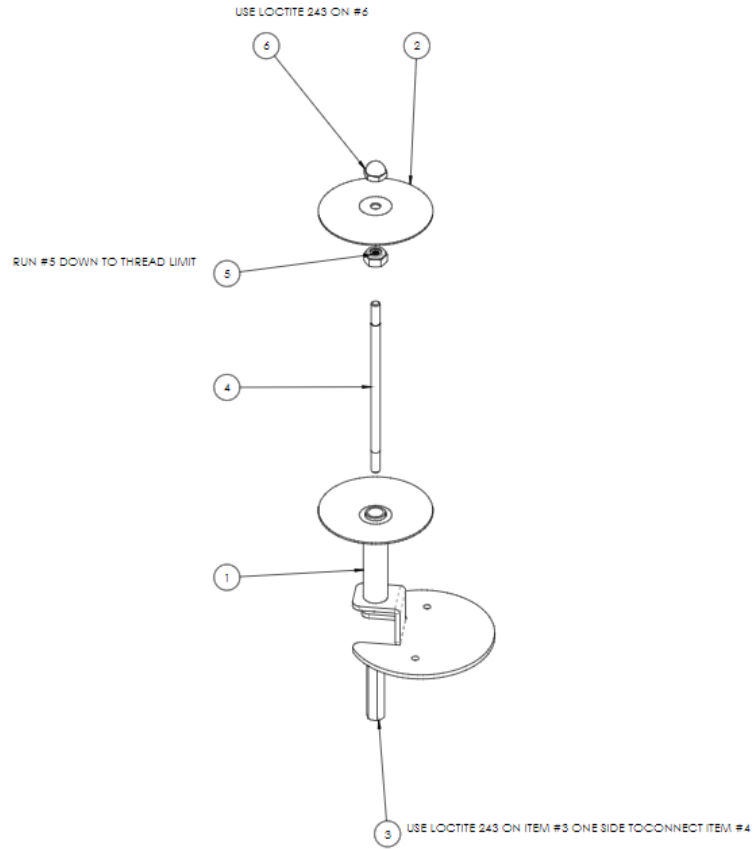
51-100127-01 CE



Item	Part Number	Description	Qty
1	12-100025-07	Flattrail Right Lane	1
2	30-000083-04	Spacer	6
3	30-100048-03	Right Flipper Guide	1
4	80-000008-32	#8-32 x 2" MS	2

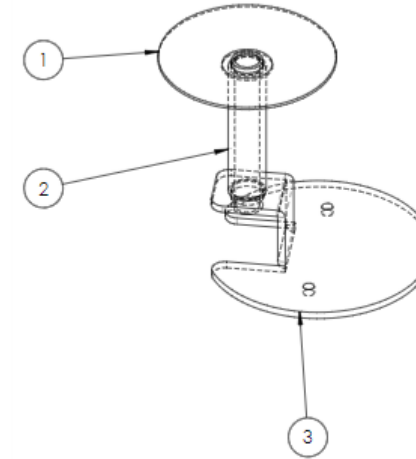
ITEM # 3	
SE and LE	30-100048-03
CE	30-100057-03

**HIGH HAT ASSY. LE & CE**  
**51-100092-00**



Item	Part Number	Description	Qty
1	51-100086-00	Mounting Bracket	1
2	10-100146-00	Cymbal	1
3	94-000406-16	1/4" x 1" Hex Spacer 6-32	1
4	11-100029-00	Shaft	1
5	91-000006-00	6-32 Nylon Stop Nut	1
6	91-000206-00	6-32 Acorn Nut	1

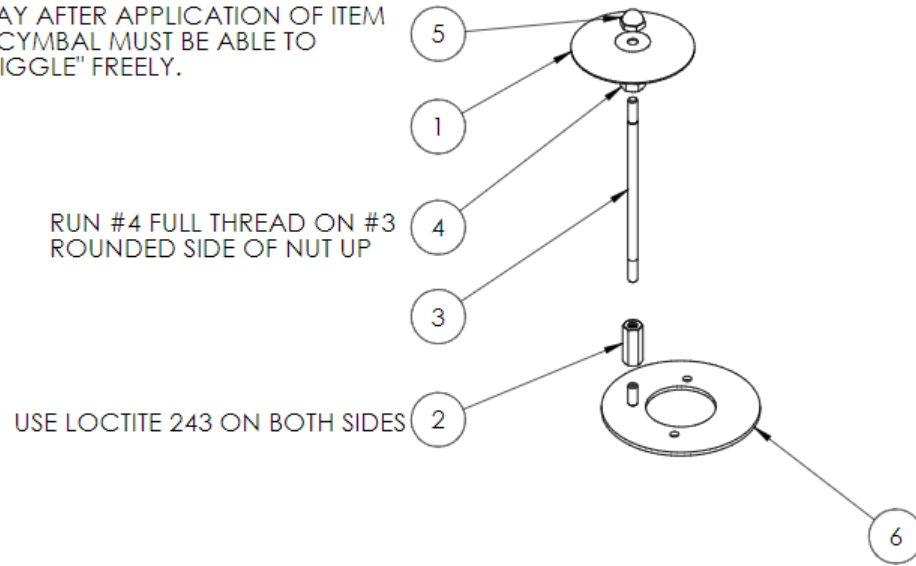
**HIGH HAT MOUNTING BRACKET ASSY. LE & CE**  
**51-100086-00**



Item	Part Number	Description	Qty
1	10-100147-00	Bottom High Hat	1
2	11-100030-00	Spacer	1
3	10-100148-00	Mounting Bracket	1

**CYMBAL ASSY. LE & CE**  
**51-100092-00**

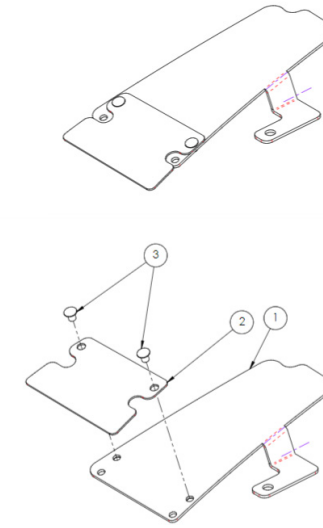
BLUE LOCTITE ON ITEM 5  
 NOTE THAT THERE SHOULD BE SOME  
 PLAY AFTER APPLICATION OF ITEM  
 5. CYMBAL MUST BE ABLE TO  
 "WIGGLE" FREELY.



RUN #4 FULL THREAD ON #3  
 ROUNDED SIDE OF NUT UP

USE LOCTITE 243 ON BOTH SIDES

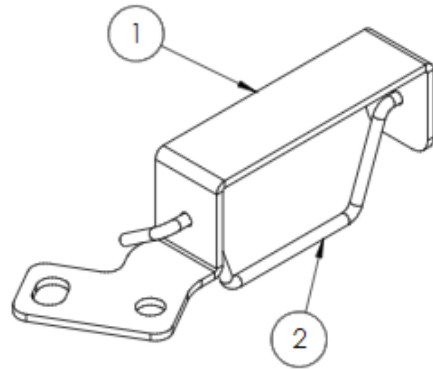
**UPPER CENTER LOOP RAMP ASSY.**  
**51-100076-00**



Item	Part Number	Description	Qty
1	10-100146-00	Cymbal	1
2	94-001406-10	1/4" x 5/8" Hex Spacer 6-32	1
3	11-100029-00	Shaft	1
4	91-000006-00	6-32 Nylon Stop Nut	1
5	91-000206-00	6-32 Acorn Nut	1
6	10-100149-00	Mounting Bracket	1

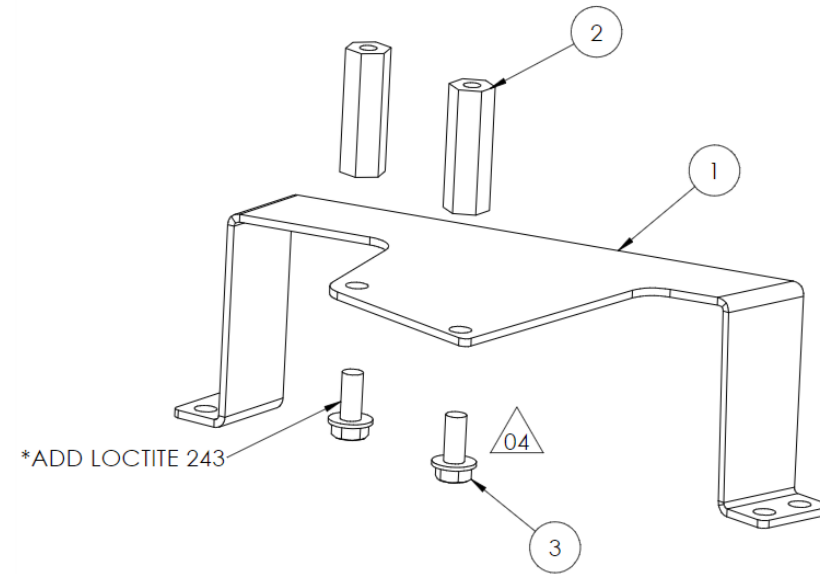
Item	Part Number	Description	Qty
1	10-100099-00	Upper Loop Ramp	1
2	11-100025-00	Transition Flap	1
3	93-000002-00	1/8" x 3-16" Rivet	2

**RIGHT RAMP GATE ASSY.**  
51-100122-00



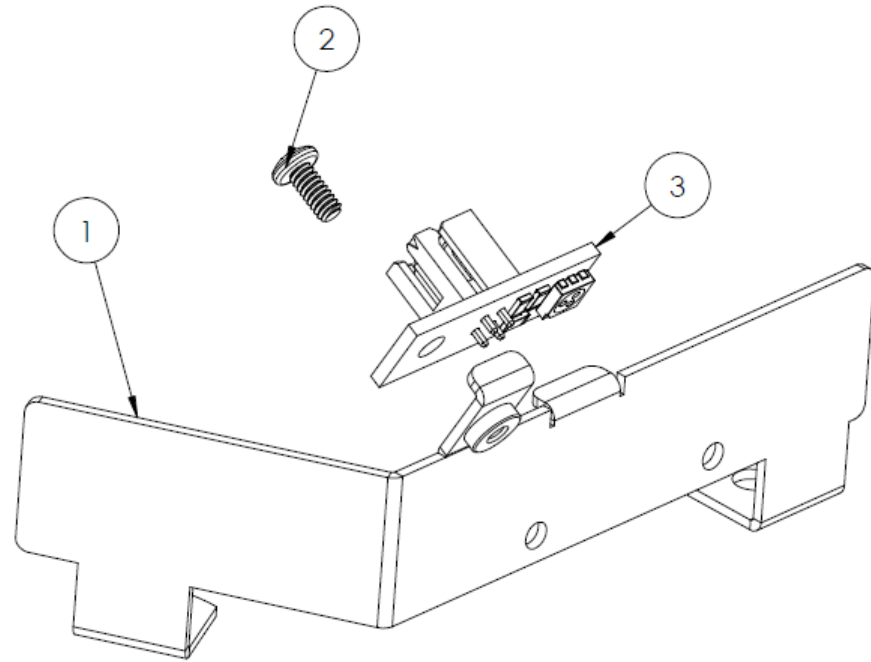
Item	Part Number	Description	Qty
1	10-100184-00	Right Ramp Gate Brkt	1
2	13-100021-00	Wire	1

**LEFT RAMP PEAR MOUNT**  
51-100087-00



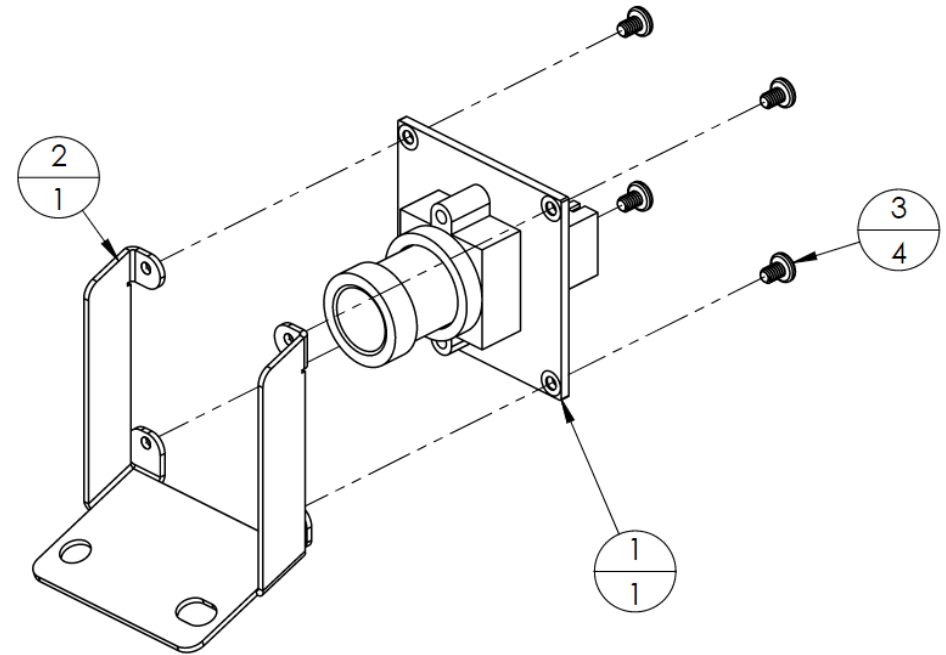
Item	Part Number	Description	Qty
1	10-100153-00	Mounting Bracket	1
2	95-001508-16	5/16" x 1" Hex Spacer 8-32	2
3	80-002008-06	8-32 x 3/8" MS	2

**INNER BALL TROUGH ASSY. CE**  
51-100100-00



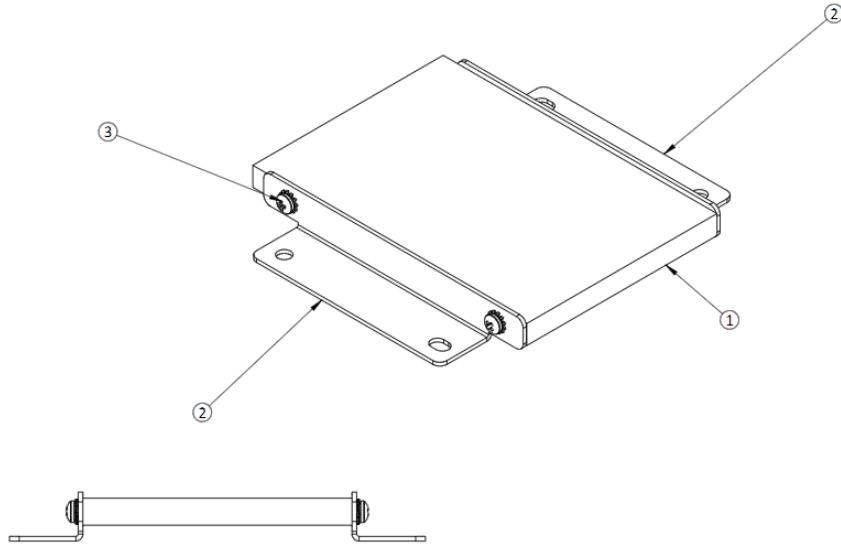
Item	Part Number	Description	Qty
1	12-100025-04	Flatrail	1
2	80-000004-04	4-40 x 1/4" MS	1
3	15-100008-00	RGB GI	1

**USB CAMERA ASSY.**  
51-005041-00



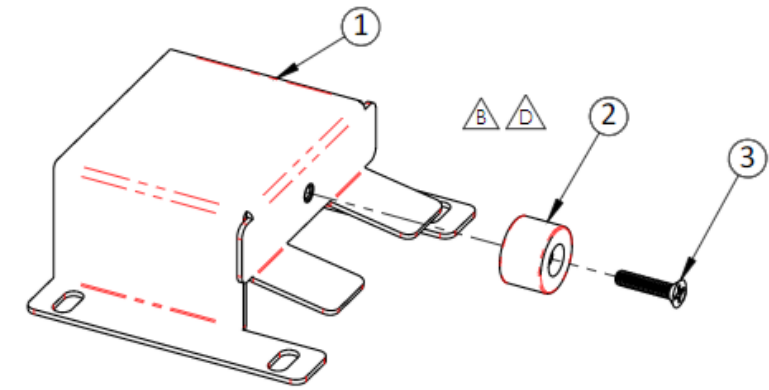
Item	Part Number	Description	Qty
1	15-115034-00	USB Camera, 1 MP, 720P	1
2	10-000226-00	Bracket	1
3	80-000002-04	2-56 x 1/4" MS	4

**SSD BACKBOX MOUNT**  
51-005044-03



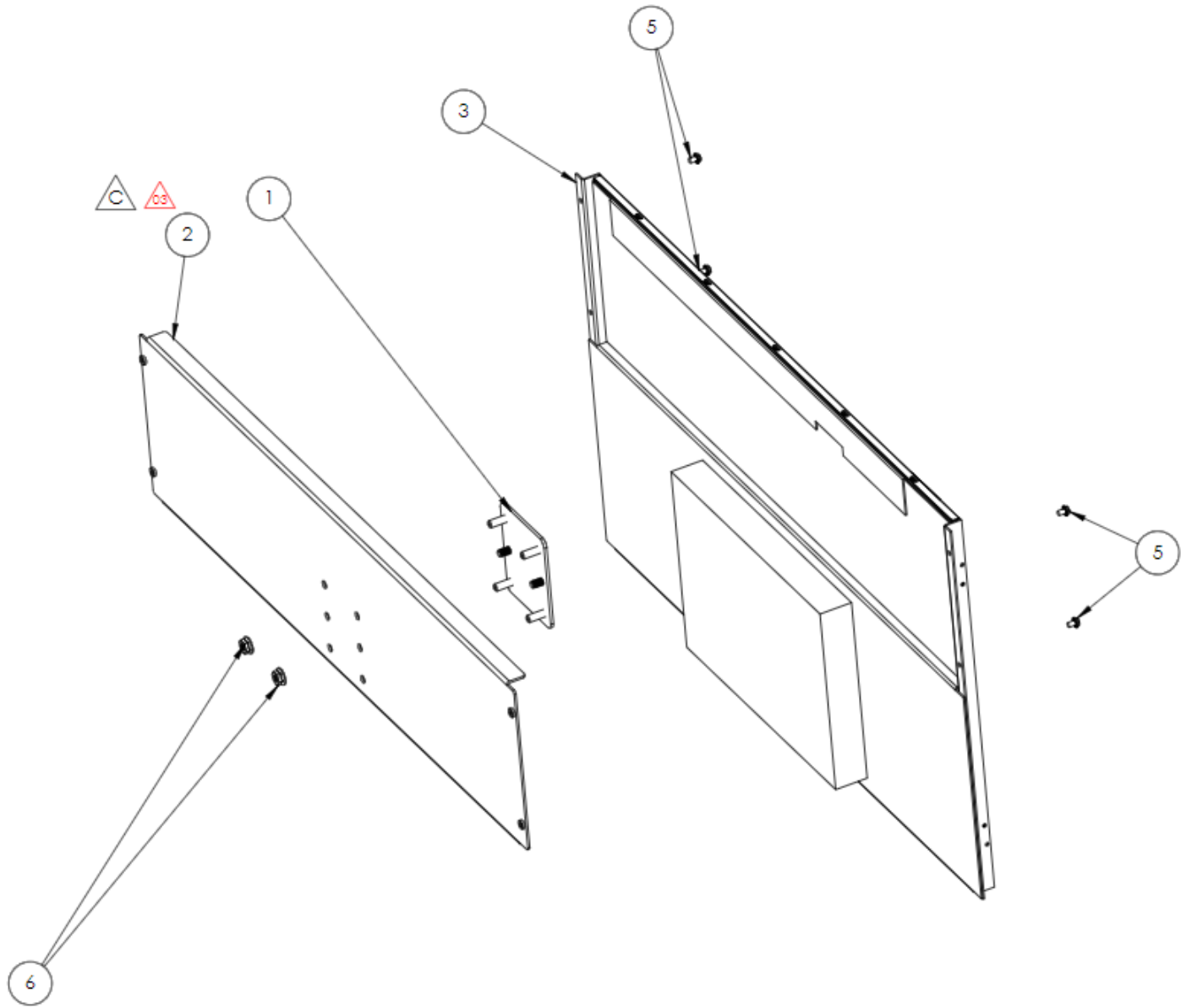
Item	Part Number	Description	Qty
1	15-000003-03	Solid State Drive	1
2	10-000209-00	SSD Mounting Bracket	2
3	80-001003-03	M3 x 5MM	4

**MONITOR MAGNETIC LATCH**  
51-100050-00

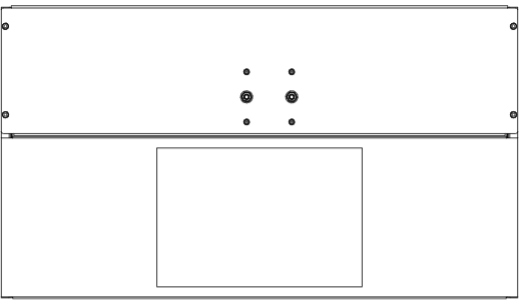


Item	Part Number	Description	Qty
1	10-100065-00	Bracket Screen Lock	1
2	23-100003-00	Magnet	1
3	80-006008-12	#8-32 x 3/4" MS	1

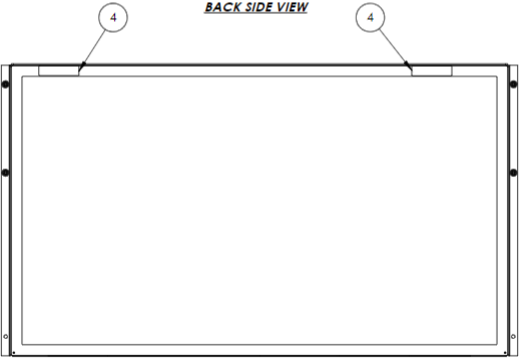
**27" LCD MONITOR ASSY**  
**51-100021-00**



Item	Part Number	Description	Qty
1	10-000206-07	27" LCD MTG Plate	1
2	10-100069-00	27" LCD MTG Bracket	1
3	17-000000-02	27" LCD Panel	1
4	62-100012-00	PULL HERE Decal	2
5	80-002006-04	#8-32 x 1/4" MS	4
6	91-002025-00	#1/4" - 20 Flange Nut	2



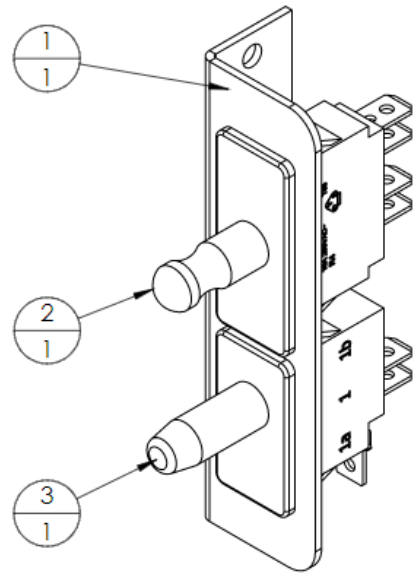
BACK SIDE VIEW



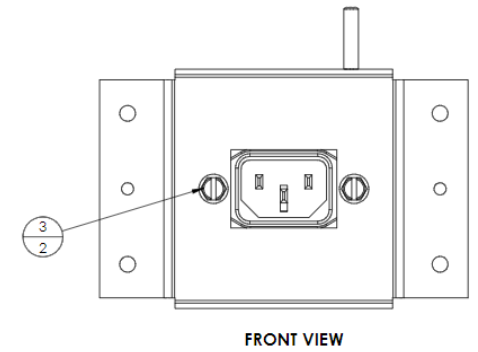
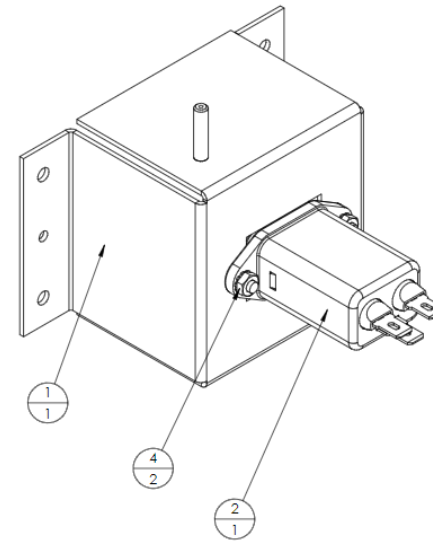
FRONT SIDE VIEW



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



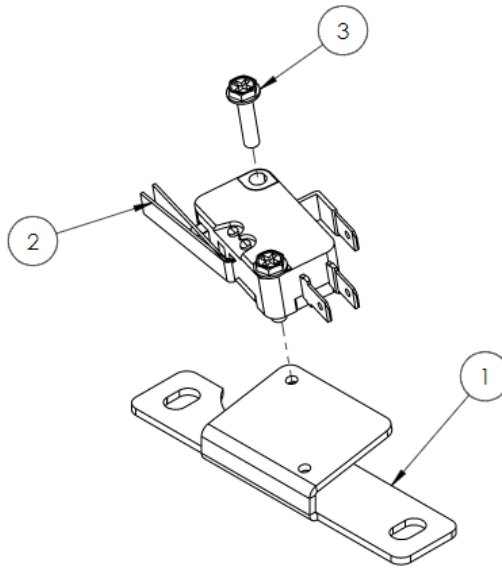
**LINE FILTER BOX ASSY.**  
51-005023-00



Item	Part Number	Description	Qty
1	10-000089-01	Mounting Bracket	1
2	18-003007-01	Coil Interlock Switch	1
3	18-003008-00	Coin Door Switch	1

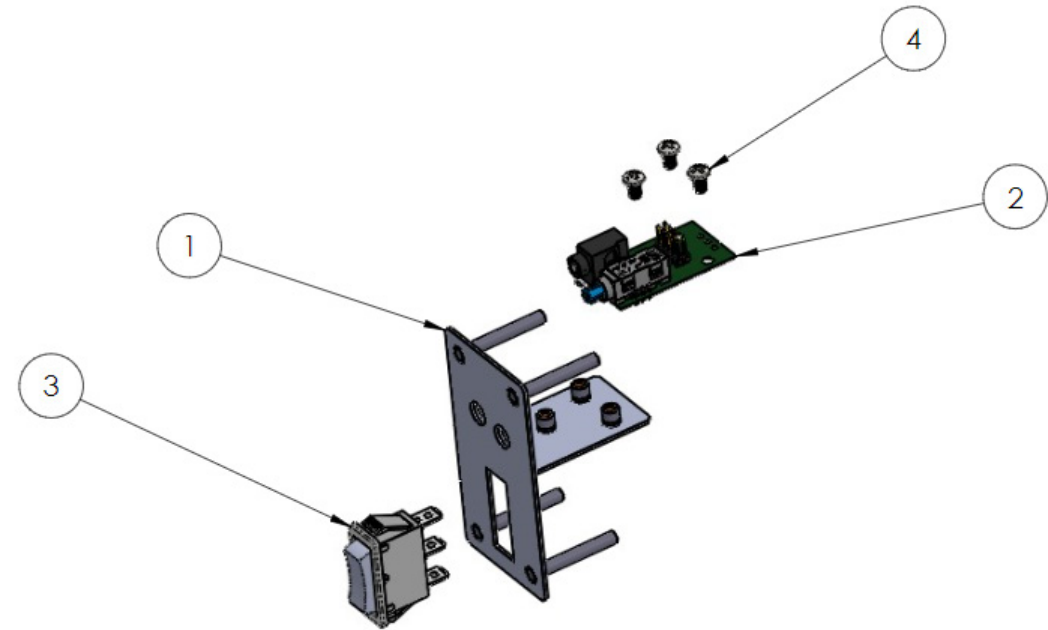
Item	Part Number	Description	Qty
1	10-000009-00	Mounting Bracket	1
2	22-000000-01	Line Filter with Resistor	1
3	80-002006-06	#6-32 x 3/8" MS	2
4	91-001006-00	#6-32 Keps Nut	2

**ACTION BUTTON, LOCKDOWN ASSY.**  
51-000066-10



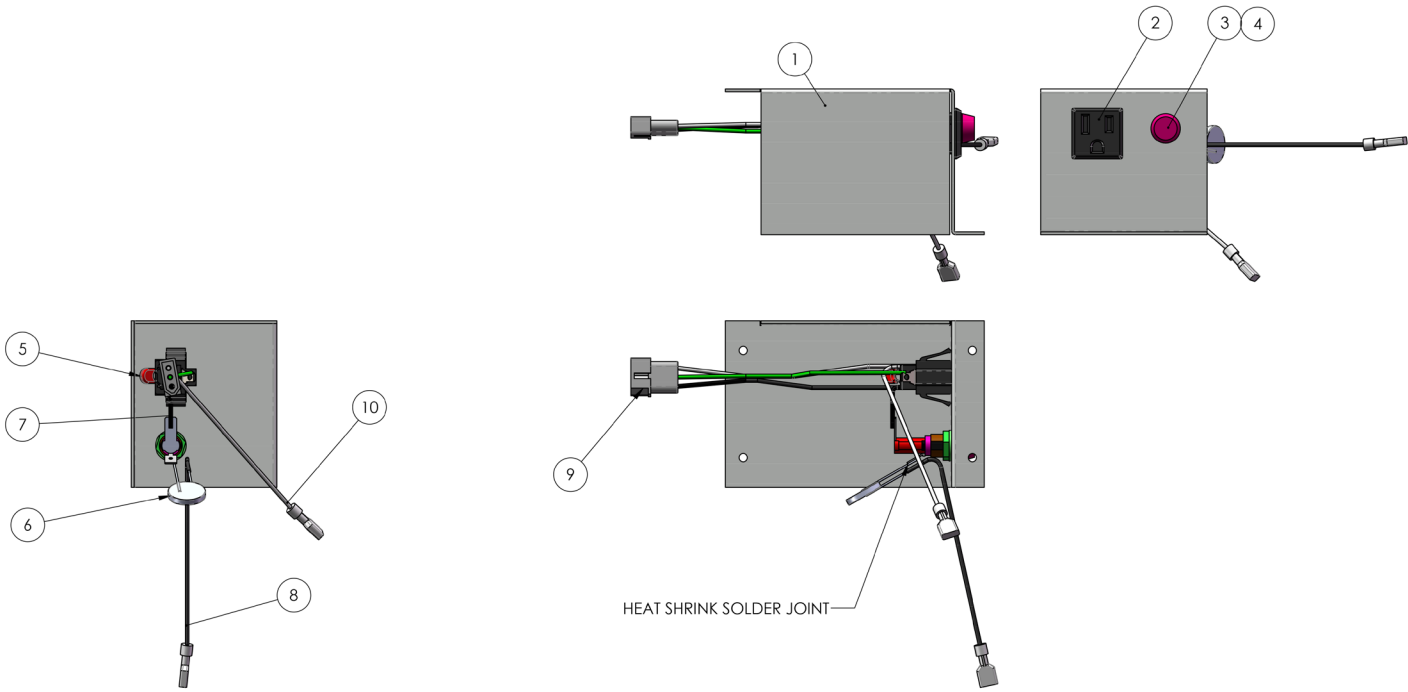
Item	Part Number	Description	Qty
1	10-000167-10	Mounting Bracket	1
2	18-003015-00	Switch	1
3	80-002104-08	4-40 X 3/8" MS	2
4	19-003107-10	Cable (Not Shown)	1

**HEADPHONE & BLUETOOTH ASSY.**  
51-000035-00



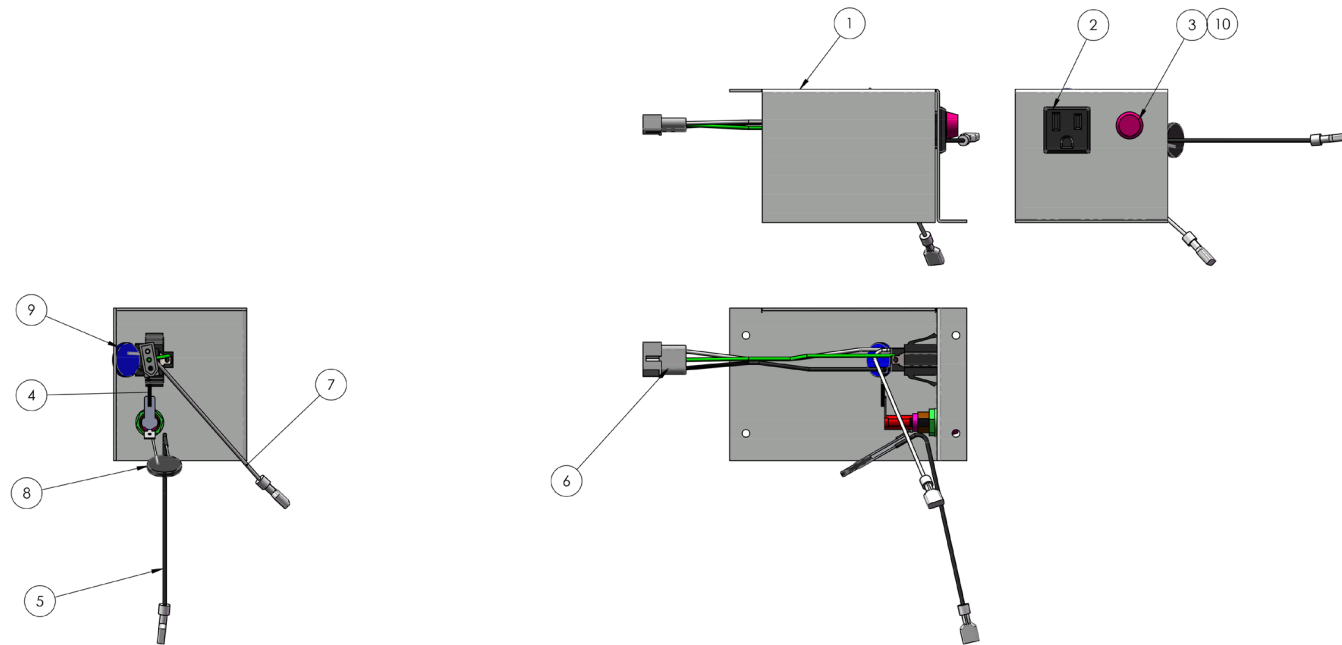
Item	Part Number	Description	Qty
1	10-100168-00	Mounting Plate	1
2	15-100025-00	PCB	1
3	18-003006-01	Volume Switch	1
4	80-000006-04	6-32 x 1/4" MSS	3
5	19-003115-01	Harness (Not Shown)	1

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



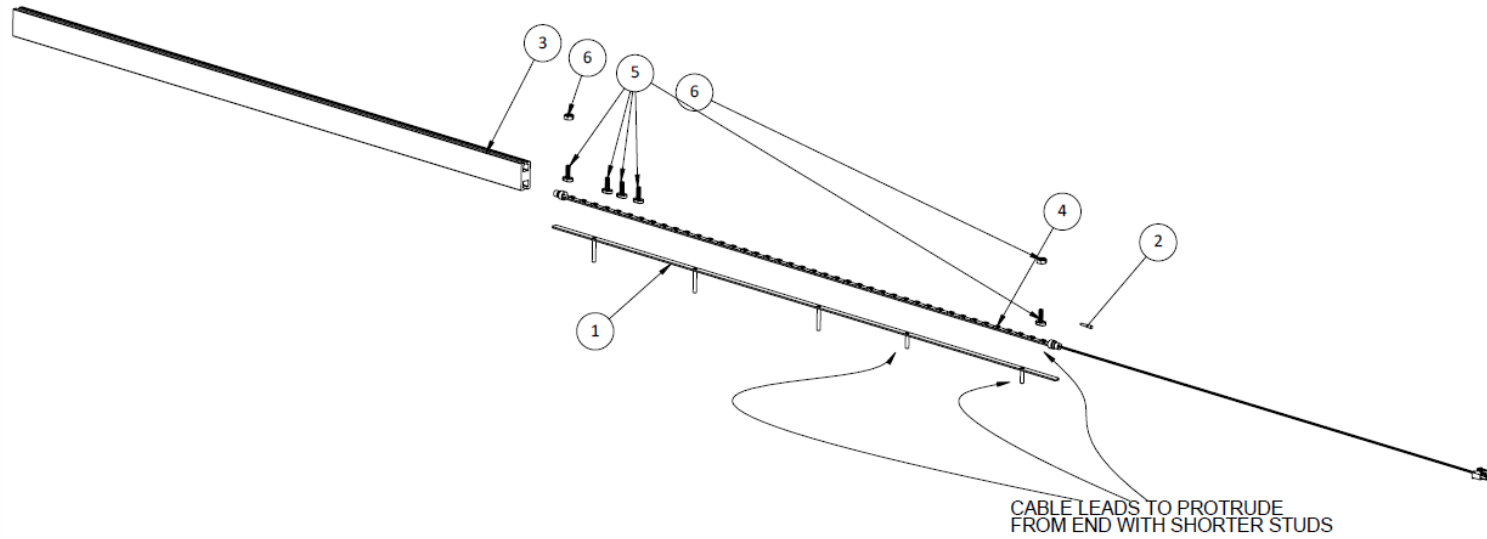
Item	Part Number	Description	Qty
1	10-000008-01	Power Box	1
2	22-000001-00	Service Outlet	1
3	22-008000-00	Line Fuse Holder	1
4	170-000110-SR	Fuse Slow Blow 10A 125V	1
5	180-000001-00	Thermistor	1
6	180-000000-00	Varistor	1
7	19-001000-18	Wire, 18 AWG, Black	1
8	19-003052-00	Jump Wire 18AWG, Black	1
9	19-100115-00	Cabinet Power Cable	1
10	19-003053-00	Jump Wire 18AWG, White	1

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

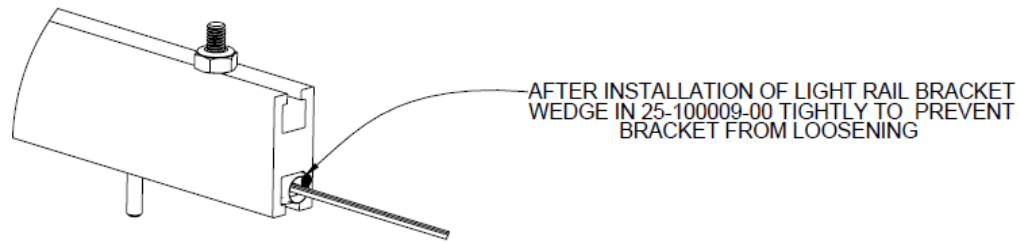
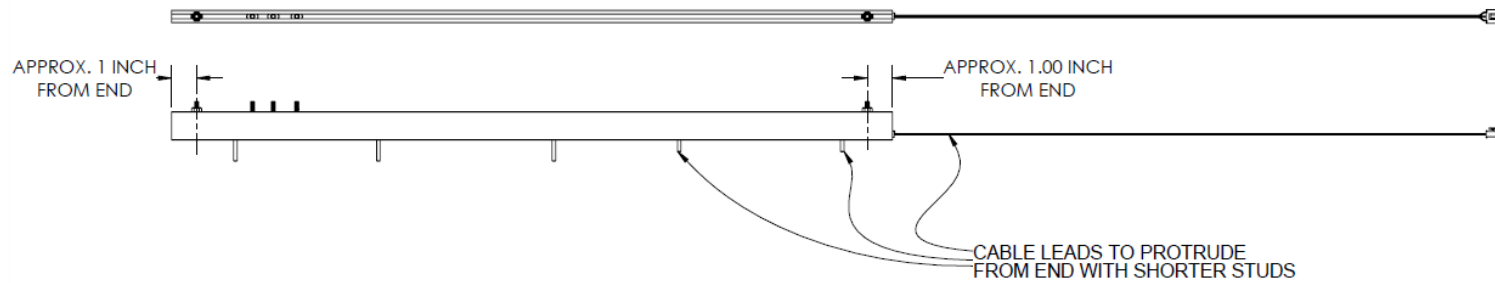


Item	Part Number	Description	Qty
1	10-000008-01	Power Box	1
2	22-000001-00	Service Outlet	1
3	22-008000-00	Line Fuse Holder	1
4	19-001000-18	Wire 18AWG, Black	1
5	19-003052-00	Jump Wire 18AWG, Black	1
6	19-100115-00	Cabinet Power Cable	1
7	19-003053-00	Jump Wire, 18 AWG, White	1
8	180-000002-00	European Varistor	1
9	180-000003-01	Varistor European	1
10	170-000205-SR	Fuse Slow Blow 5A 250V	1

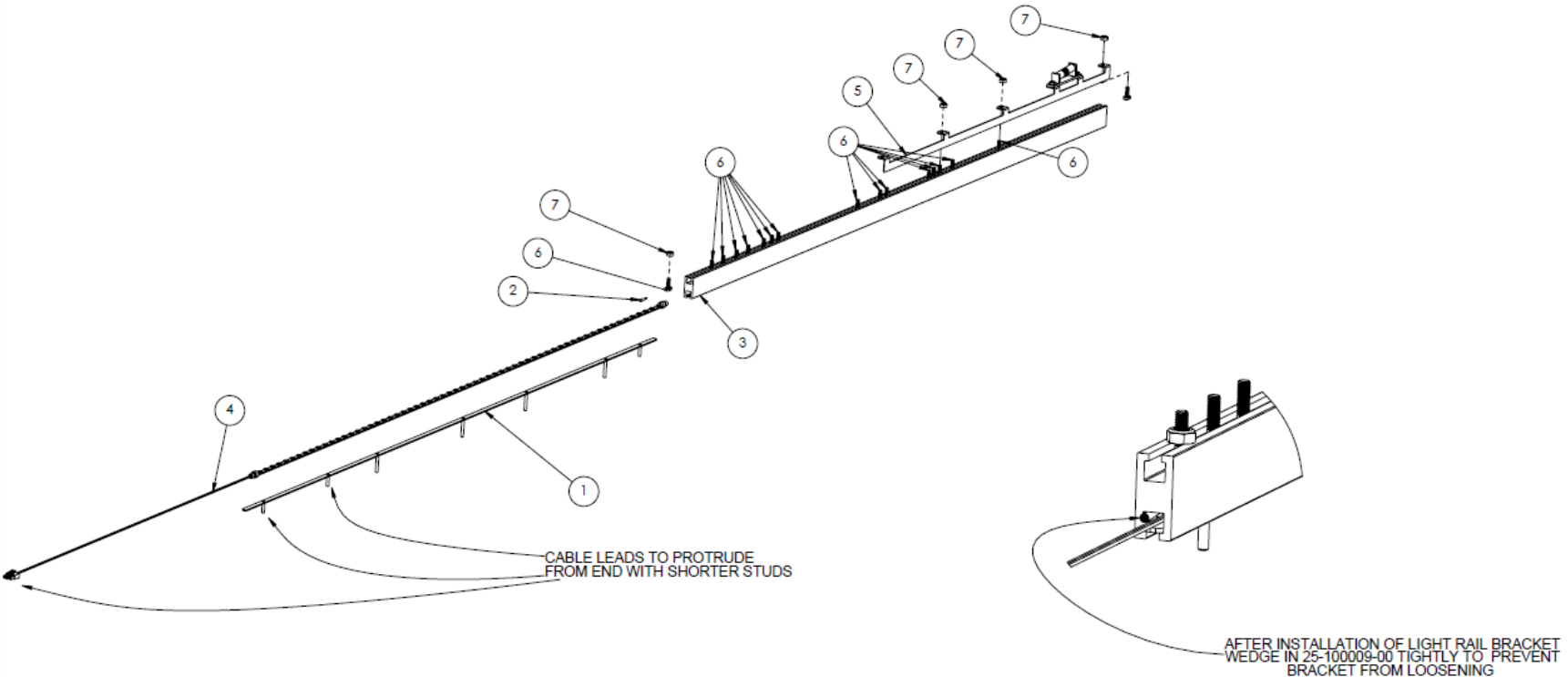
**HOT RAIL, SHORT - RIGHT SIDE**  
**51-100171-00 - SE**  
**51-100164-00 - LE & CE**



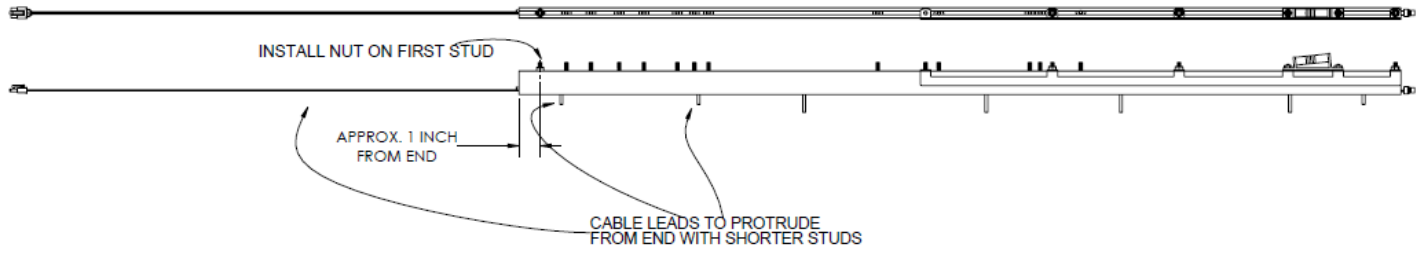
Item	Part Number	Description	Qty
1	10-100166-00	Bracket Short	1
2	25-100009-00	Plug Rubber	1
3	30-100029-00	Hot Rail, Short	1
4	51-100102-00	LE & CE RGB LED Assy.	1
4	51-100136-00	SE White LED Assy	1
5	85-009008-08	8-32 x 1/2" Screw	5
6	91-000008-00	8-32 Nylon Stop Nut	2

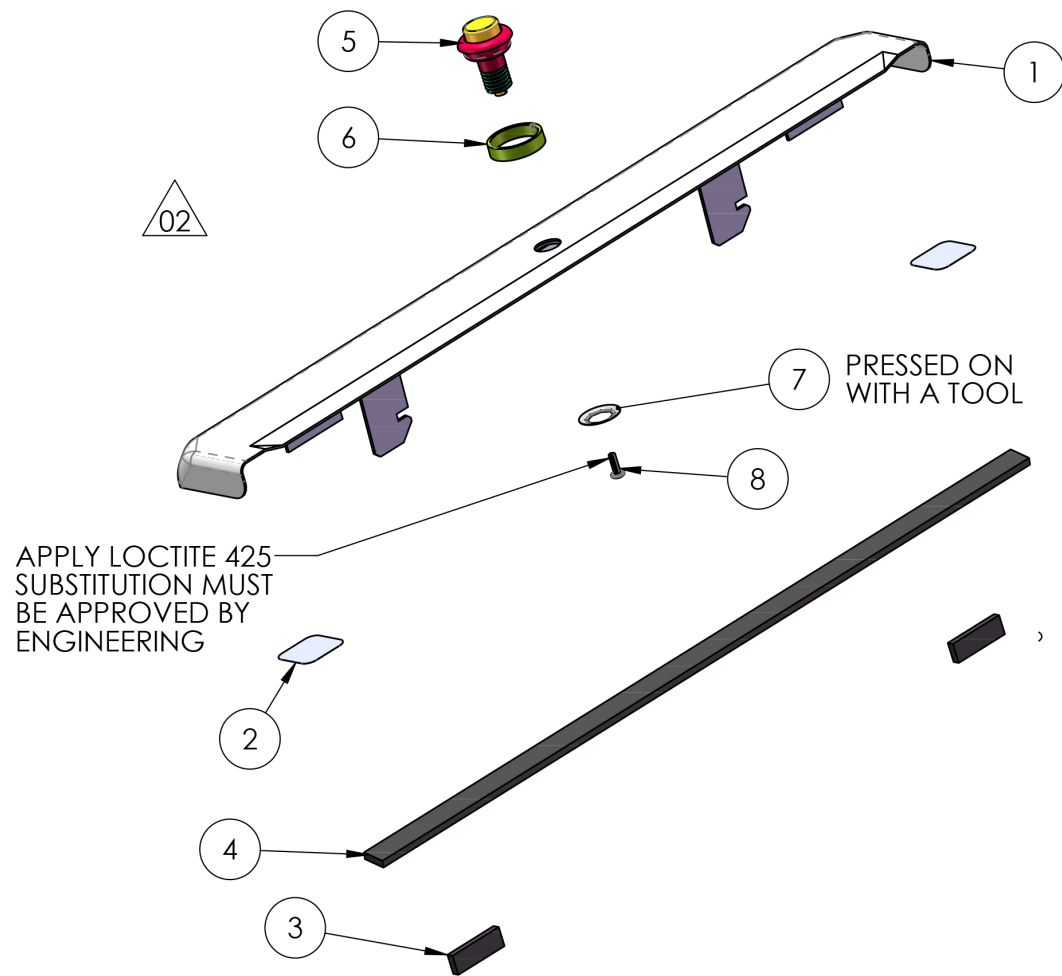


**HOT RAIL, LONG - LEFT SIDE**  
**51-100170-00 - SE**  
**51-100165-00 - LE & CE**



Item	Part Number	Description	Qty
1	10-100166-01	Bracket Long	1
2	25-100009-00	Plug Rubber	1
3	30-100030-00	Hot Rail, Long	1
4	51-100102-01	LE & CE RGB LED Assy.	1
4	51-100136-01	SE White LED Assy	1
5	51-100103-00	Shooter lane Rail Assy.	1
6	85-009008-08	8-32 x 1/2" Screw	17
7	91-000008-00	8-32 Nylon Stop Nut	4





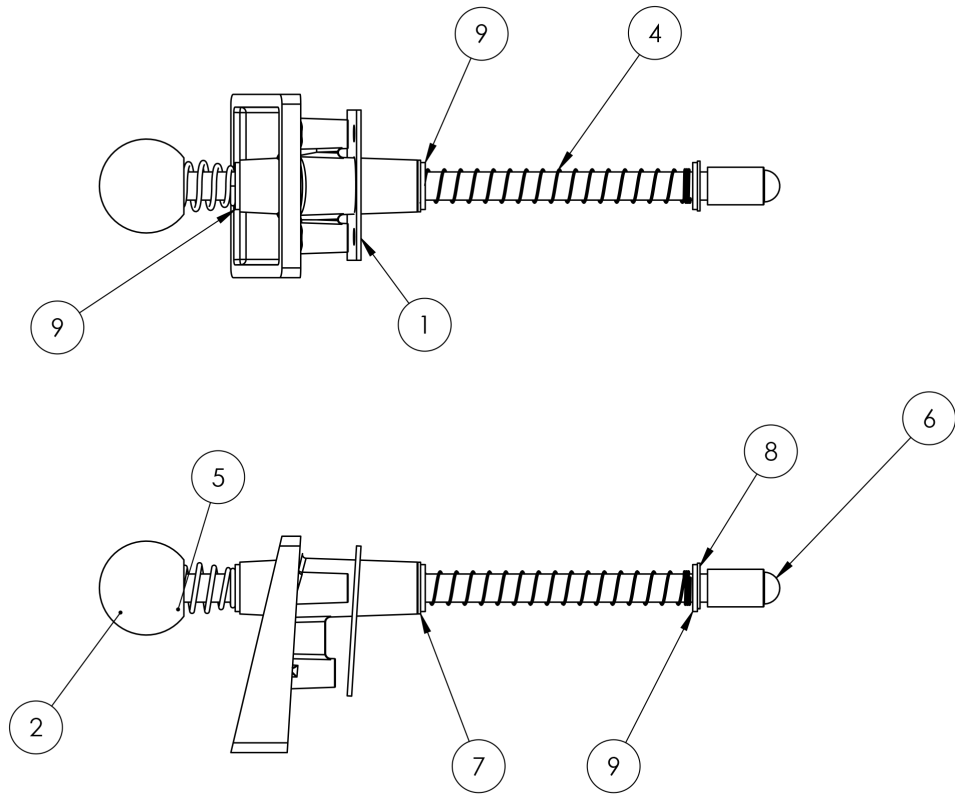
### LOCKDOWN BAR ASSY. WITH BUTTON

51-100101-01- SE 51-100101-00 - LE  
51-100134-00 CE

Item	Part Number	Description	Qty
1	10-000282-01	SE Lockdown Bar	1
1	10-000282-00	LE Lockdown Bar	1
1	10-000282-02	CE Lockdown Bar	1
2	62-100019-10	Mylar	2
3	61-009003-01	Foam Tape 1.5 Inches	2
4	61-009003-00	Foam Tape 21.0 Inches	1
5	30-000124-13	Flipper Button	1
6	30-000126-00	Spacer	1
7	94-100000-00	Push Nut	1
8	80-000008-08	8-32 x 1/2" MS	1
9	32-100010-00	CE Sculpture (Not Shown)	1
10	61-009014-00	CE Sculpture Tape (Not Shown)	5

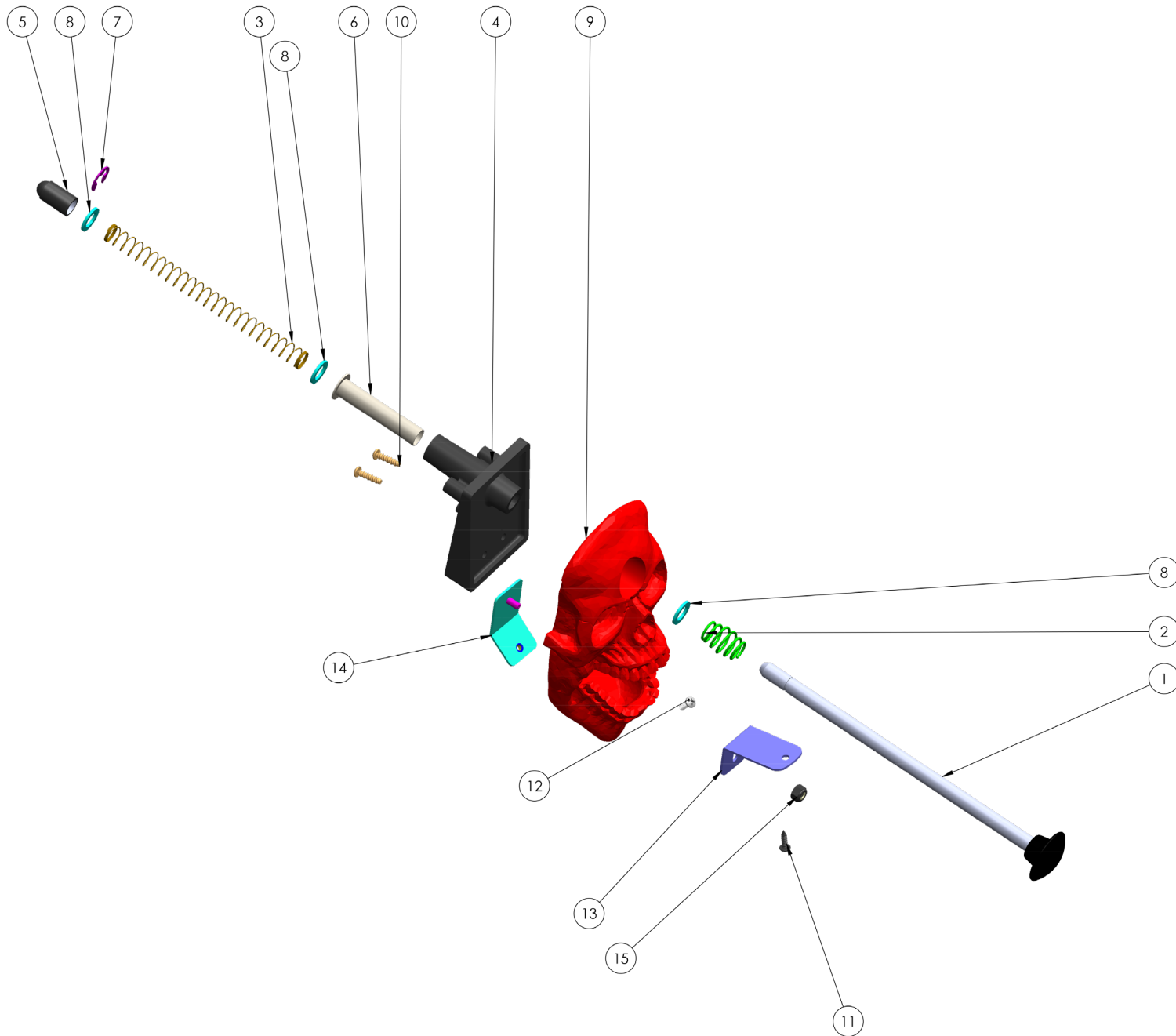
**BALL SHOOTER ASSEMBLY**

51-000092-09 SE 51-100092-08 LE



Item	Part Number	Description	Qty
1	10-000025-00	Cabinet Mounting Plate	1
2	11-000007-00	Shooter Rod	1
3	14-000001-11	LE Ball Shooter Housing	1
3	14-000001-22	SE Ball Shooter Housing	1
4	13-007007-02	Power Spring	1
5	13-007006-00	Outer Spring	1
6	25-009003-00	Shooter Rubber Tip	1
7	30-000021-00	Sleeve	1
8	94-004011-12	E-Clip	1
9	95-002564-58-16	Washer	1





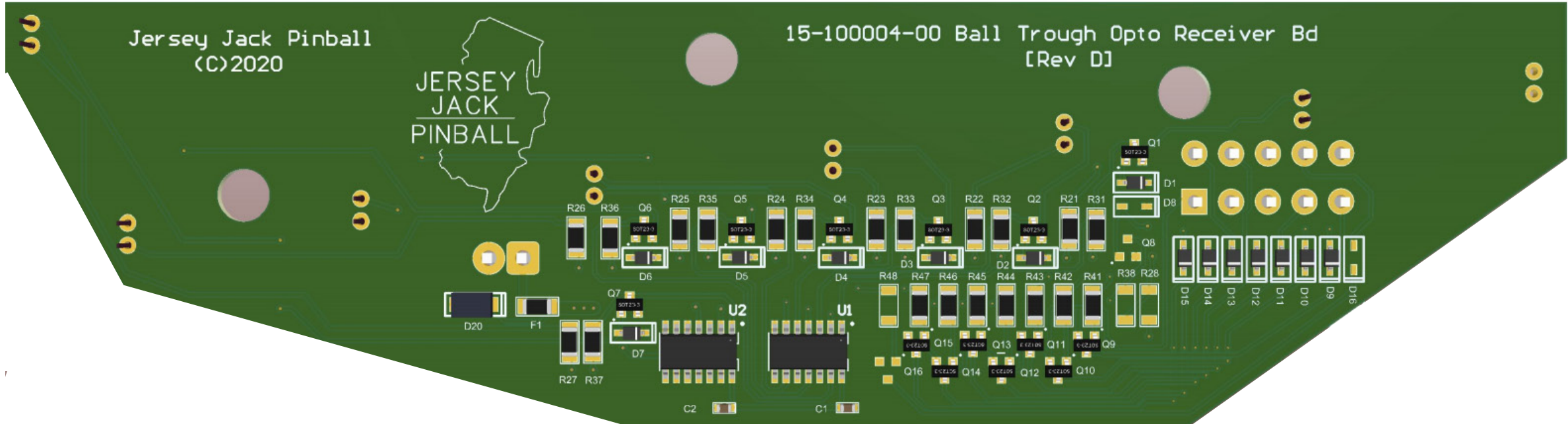
**BALL SHOOTER ASSEMBLY**  
**51-100131-01 CE**

Item	Part Number	Description	Qty
1	11-100034-00	Shooter Rod	1
2	13-007006-00	Outer Spring	1
3	13-007007-02	Power Spring	1
4	14-000002-01	Shooter Housing	1
5	25-009003-00	Shooter Rubber Tip	1
6	30-000021-00	Sleeve	1
7	94-004011-12	E-Clip	1
8	95-002564-58-16	Washer	1
9	32-100009-00	Skull Cover	1
10	83-001008-10	#8 x 5/8" Screw	2
11	82-000106-08	#6 x 1/2" SMS	1
12	80-000106-06	6-32 x 3/8" Screw	1
13	10-100190-00	Bracket	1
14	10-100190-01	Bracket	1
15	91-000108-00	8-32 Stop Nut	1

# REFERENCE DIAGRAMS & SCHEMATICS



**6-Ball Trough Opto Receiver Board**  
15-100004-00



**J1 Switch Inputs**

Pin

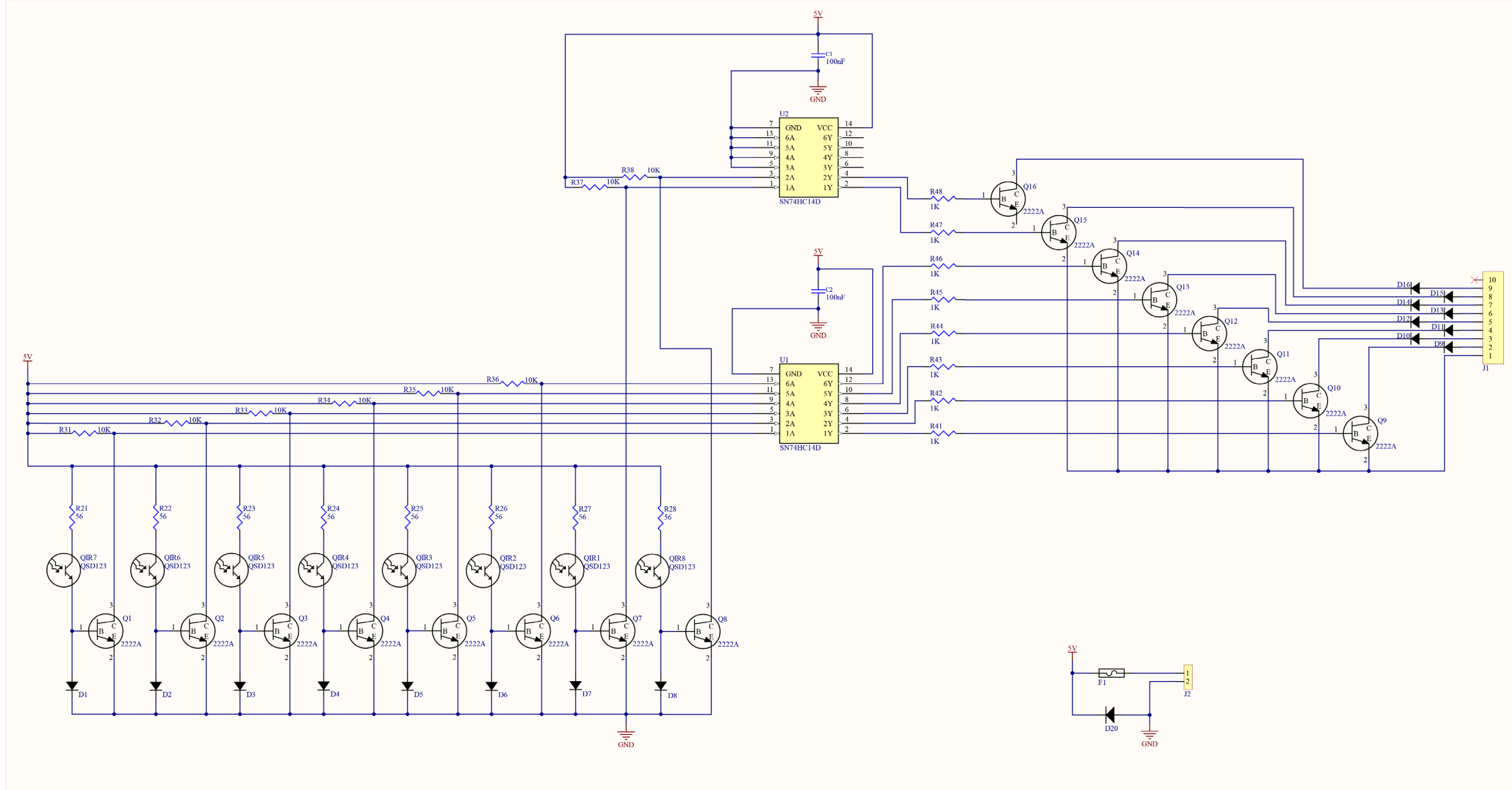
- |    |                |                                |
|----|----------------|--------------------------------|
| 1  | Black / Green  | Column 1 From I/O Board J201-1 |
| 2  | White / Blue   | Row 7 from I/O Board J200-7    |
| 3  | White / Black  | Row 1 from I/O Board J200-1    |
| 4  | White / 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**

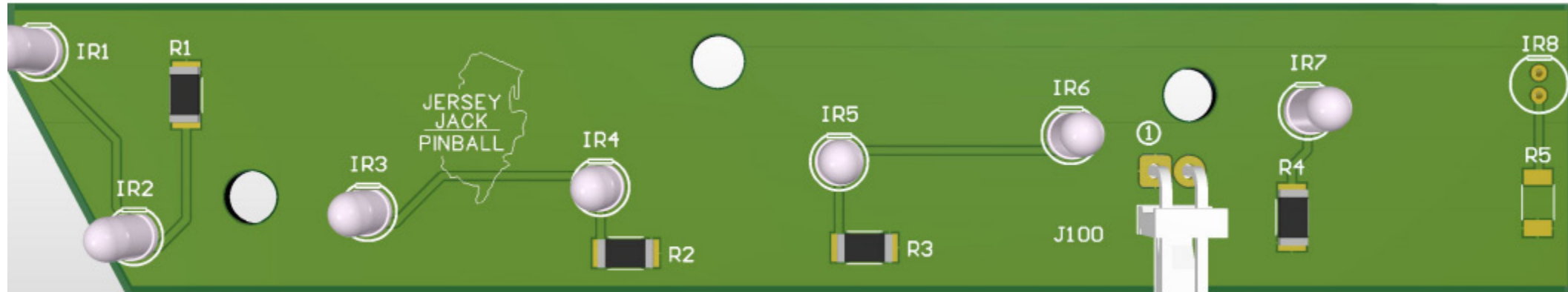
Pin

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

# 6-Ball Trough Opto Receiver Board 15-100004-00

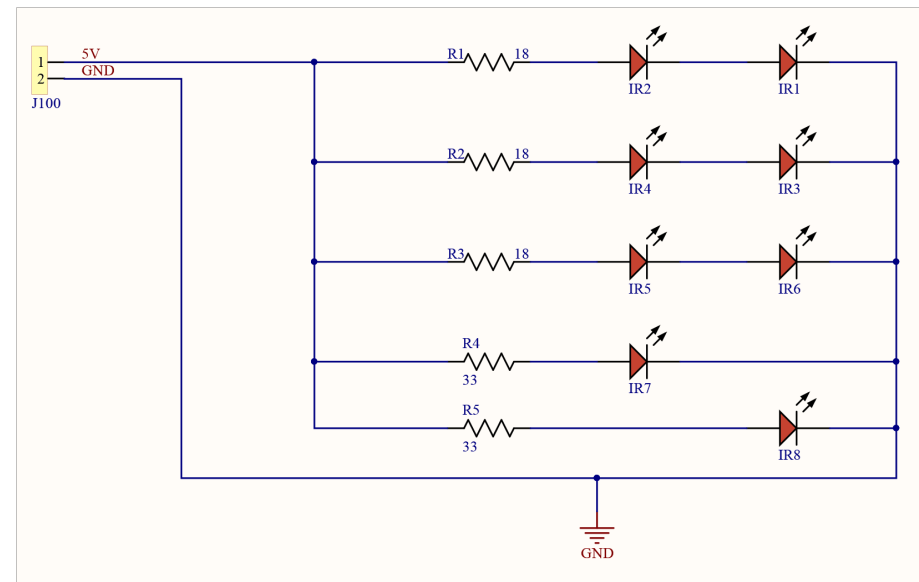


## 6-Ball Trough Opto Transmitter Board 15-100002-00

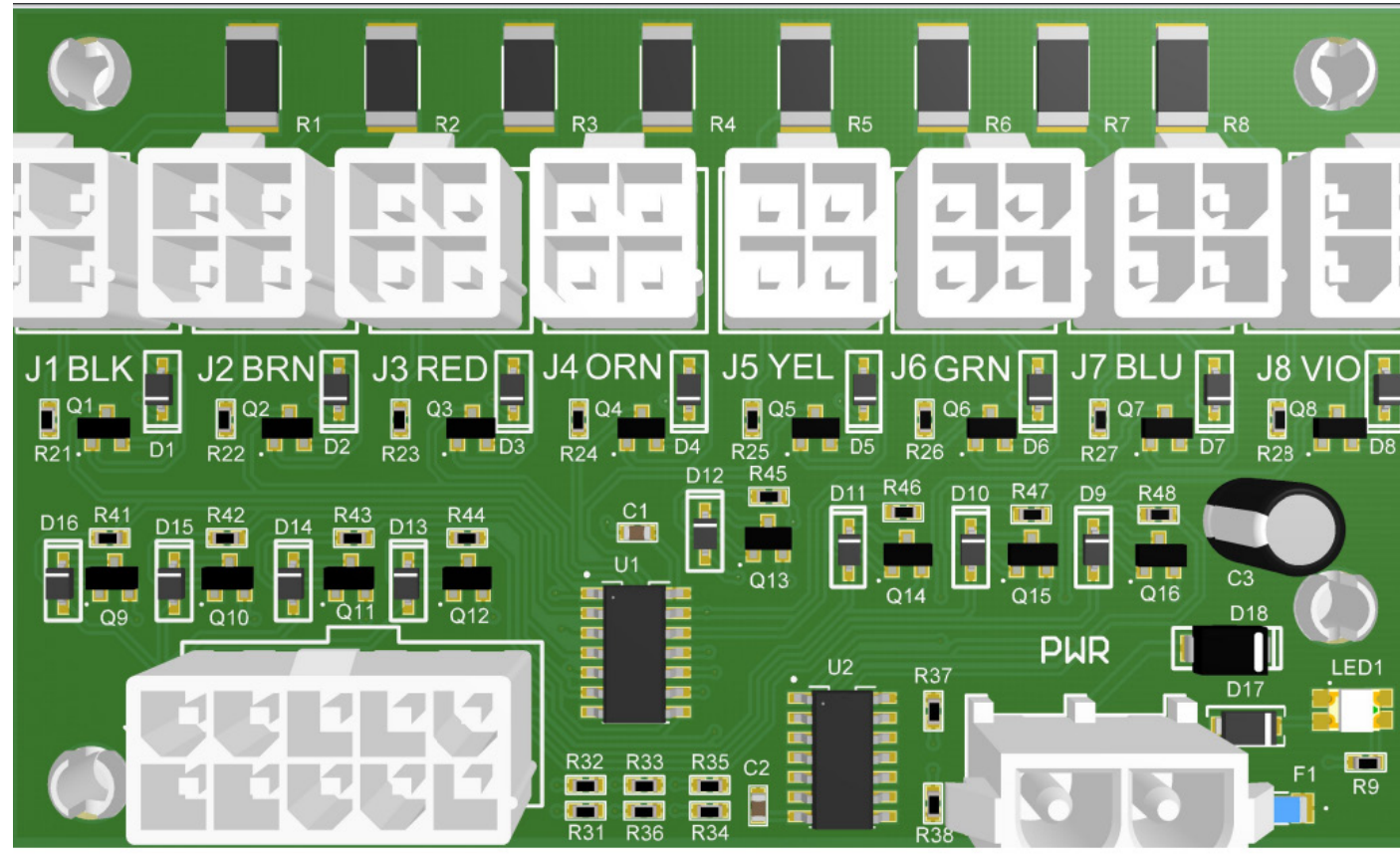


### J100 Power Input

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



**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

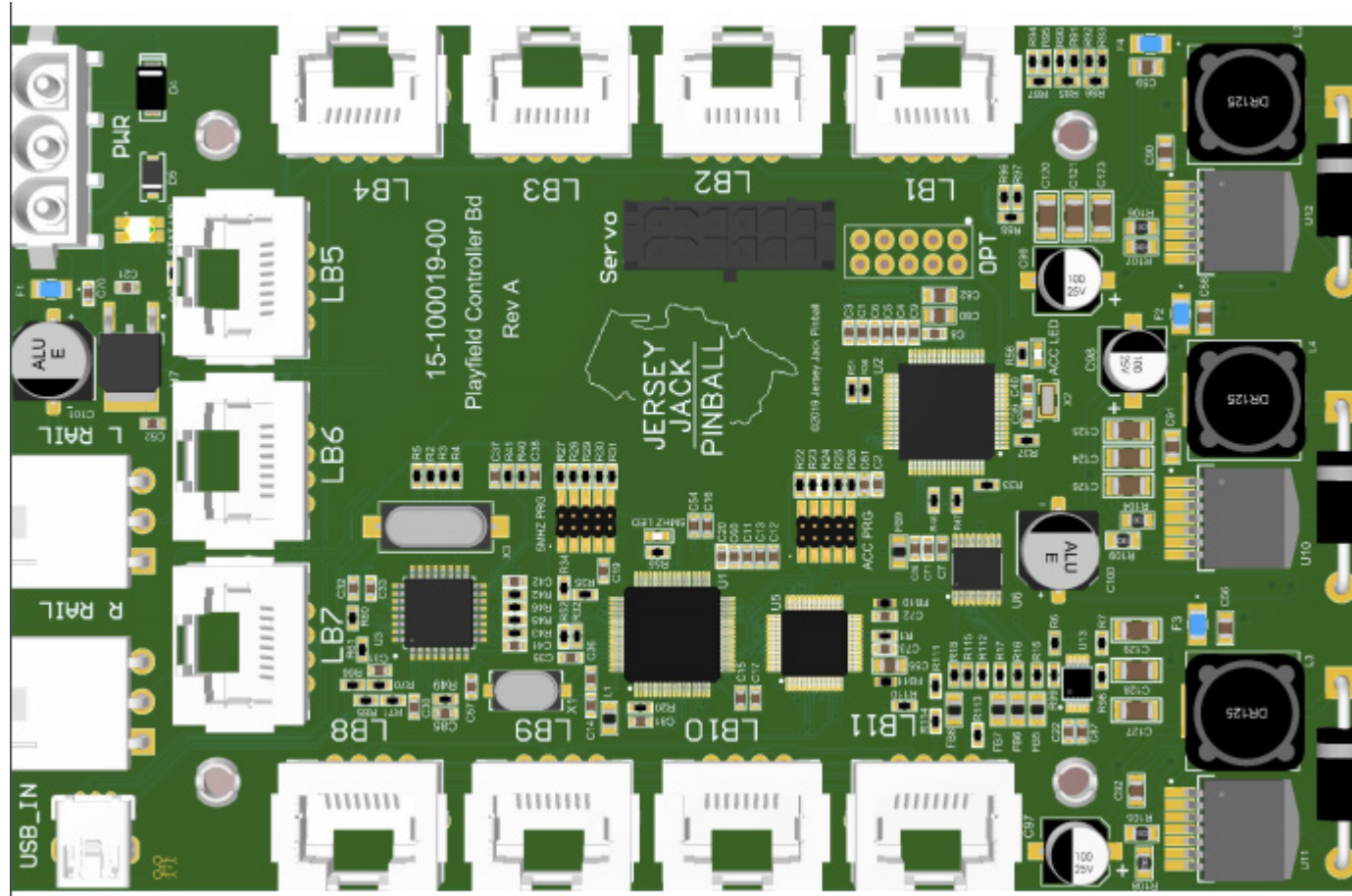
**Power Input**

**Pin**

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



Playfield Controller Board  
15-100019-00



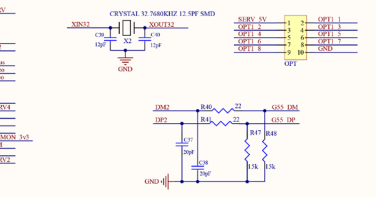
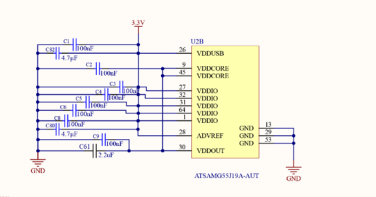
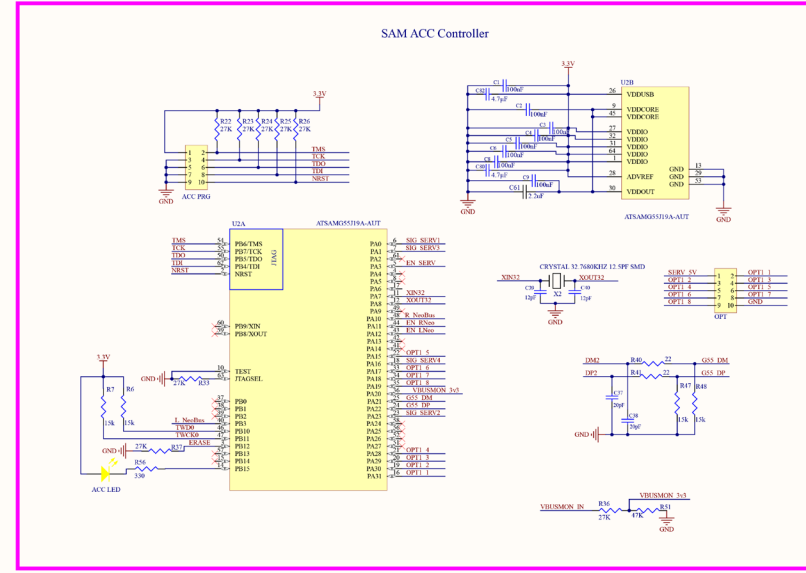
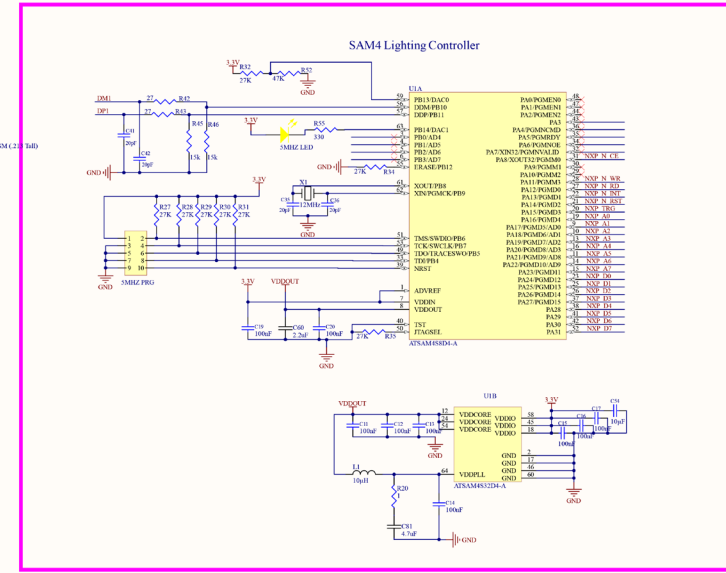
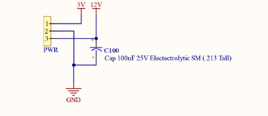
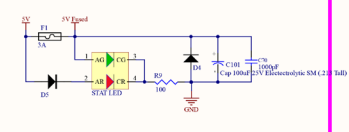
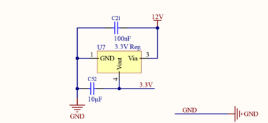
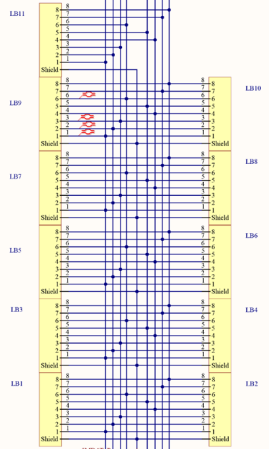
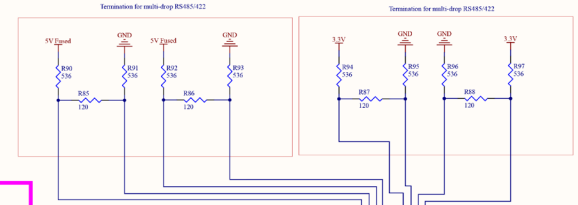
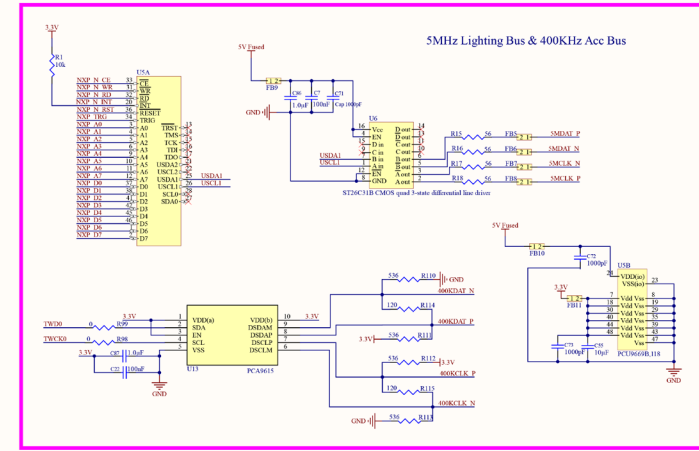
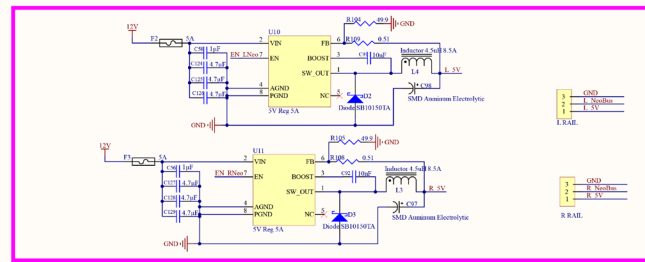
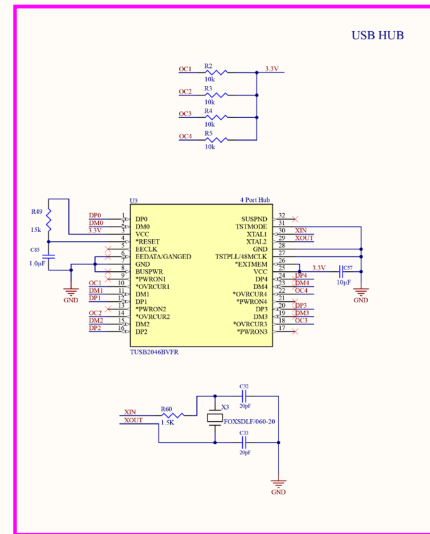
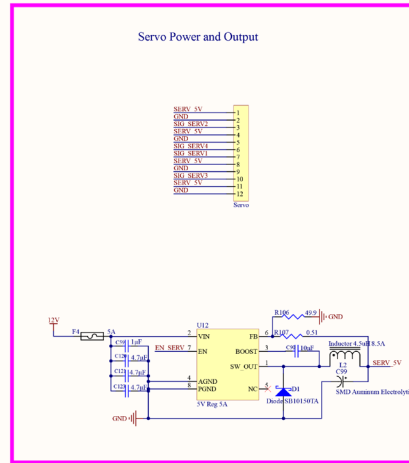
Power Input

Pin

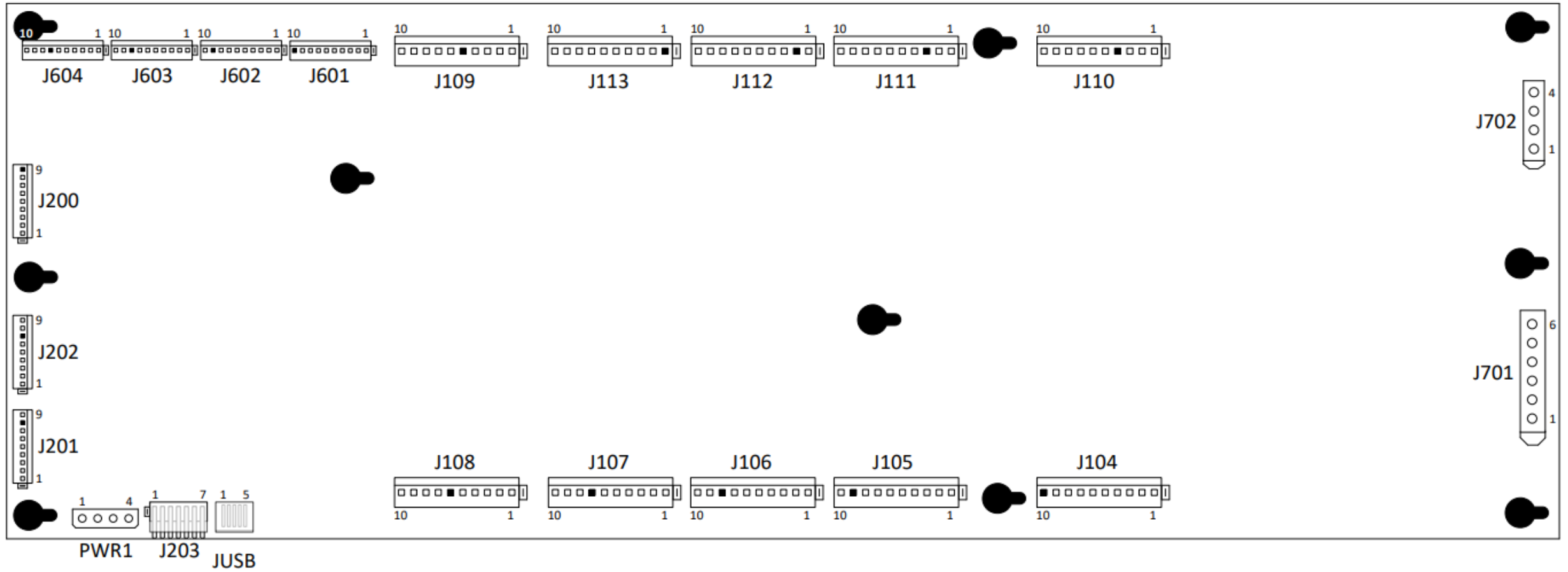
- 1 Red +5VDC from ATX Power Supply
- 2 Yellow +12 VDC from ATX Power Supply
- 3 Black Ground from ATX Power Supply



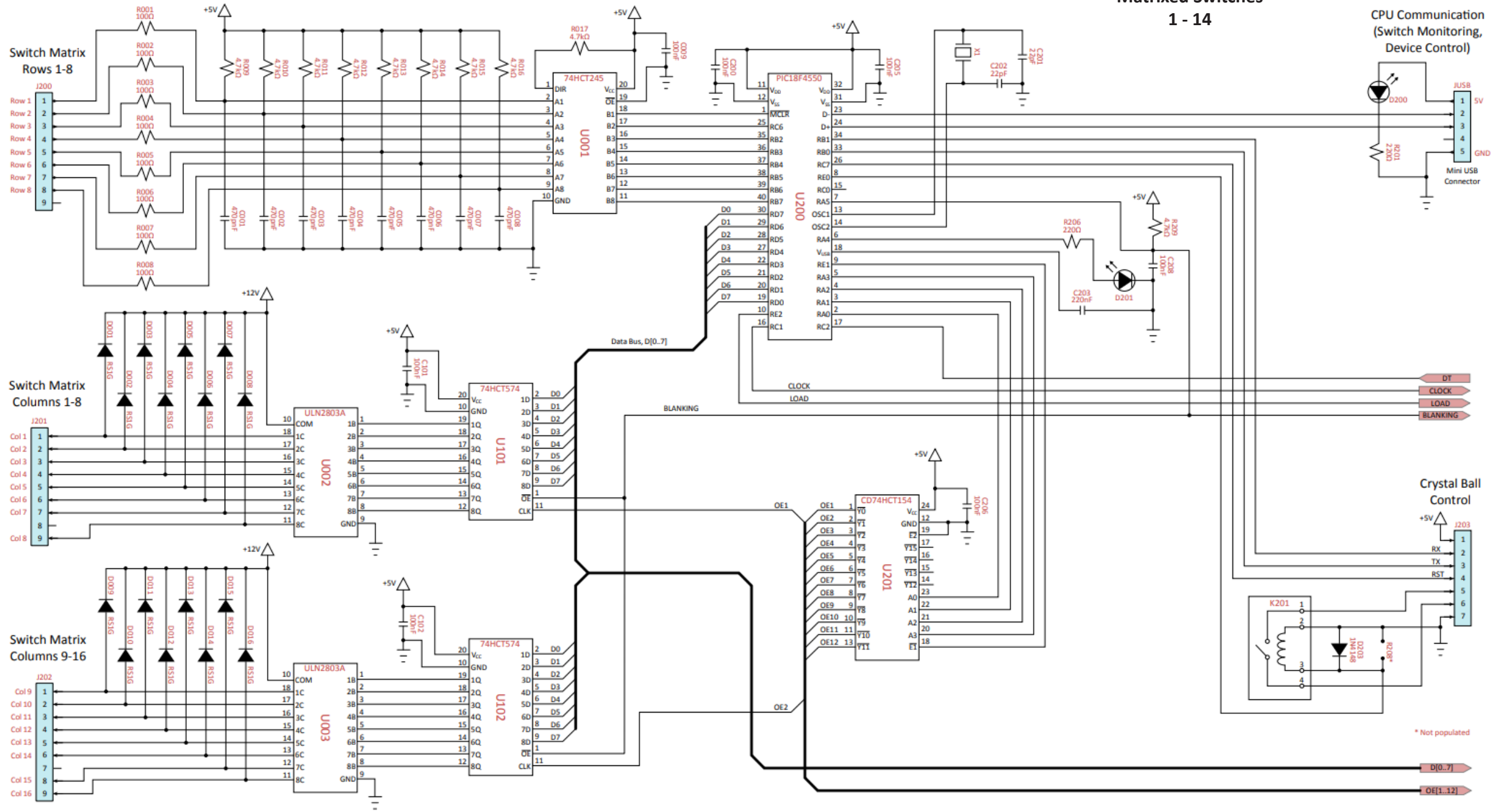
# Playfield Controller Board 15-100019-00



I/O PCB ASSY.  
15-004001-01

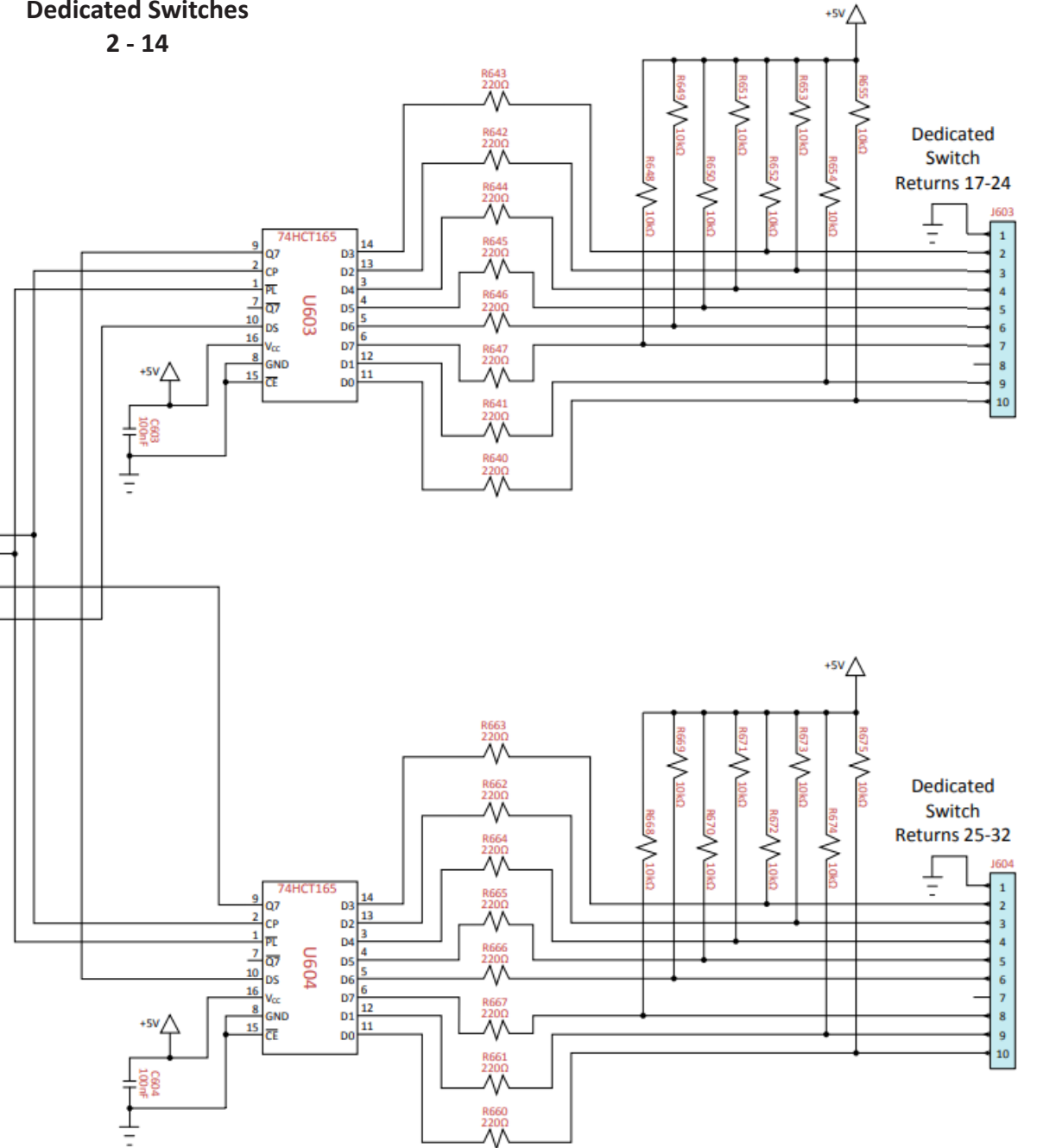
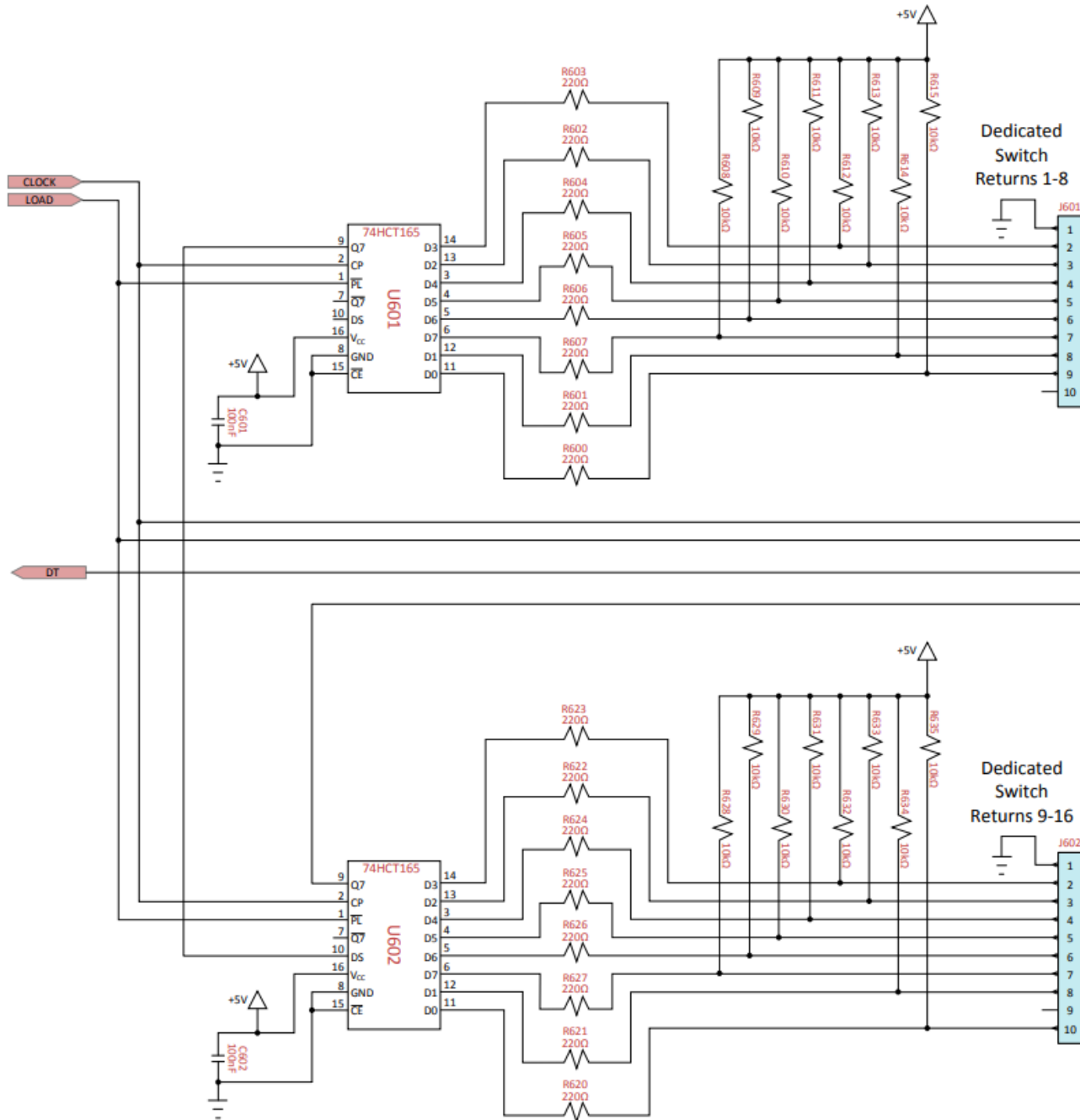


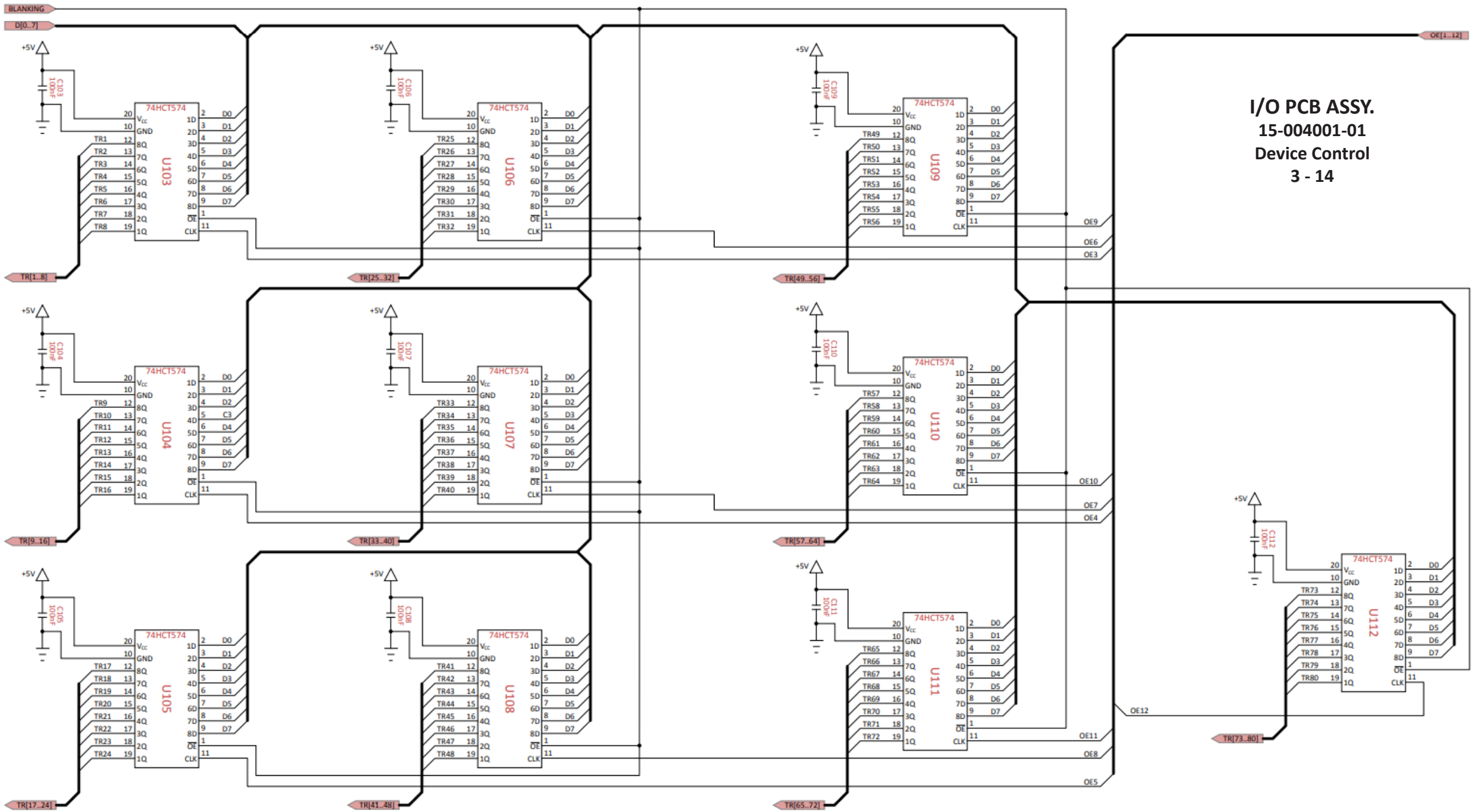
I/O PCB ASSY.  
15-004001-01  
Matrixed Switches  
1 - 14



\* Not populated

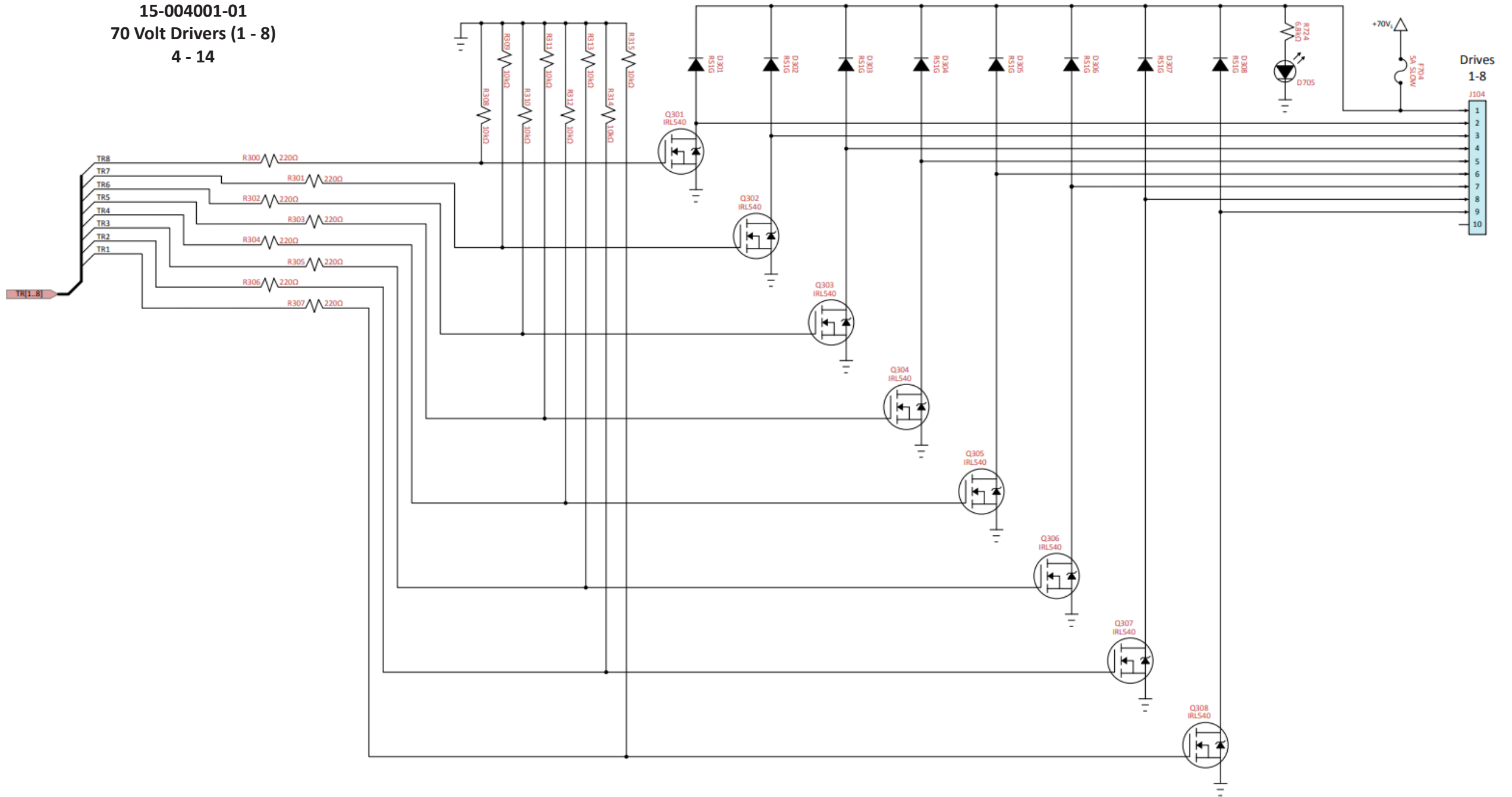
I/O PCB ASSY.  
15-004001-01  
Dedicated Switches  
2 - 14



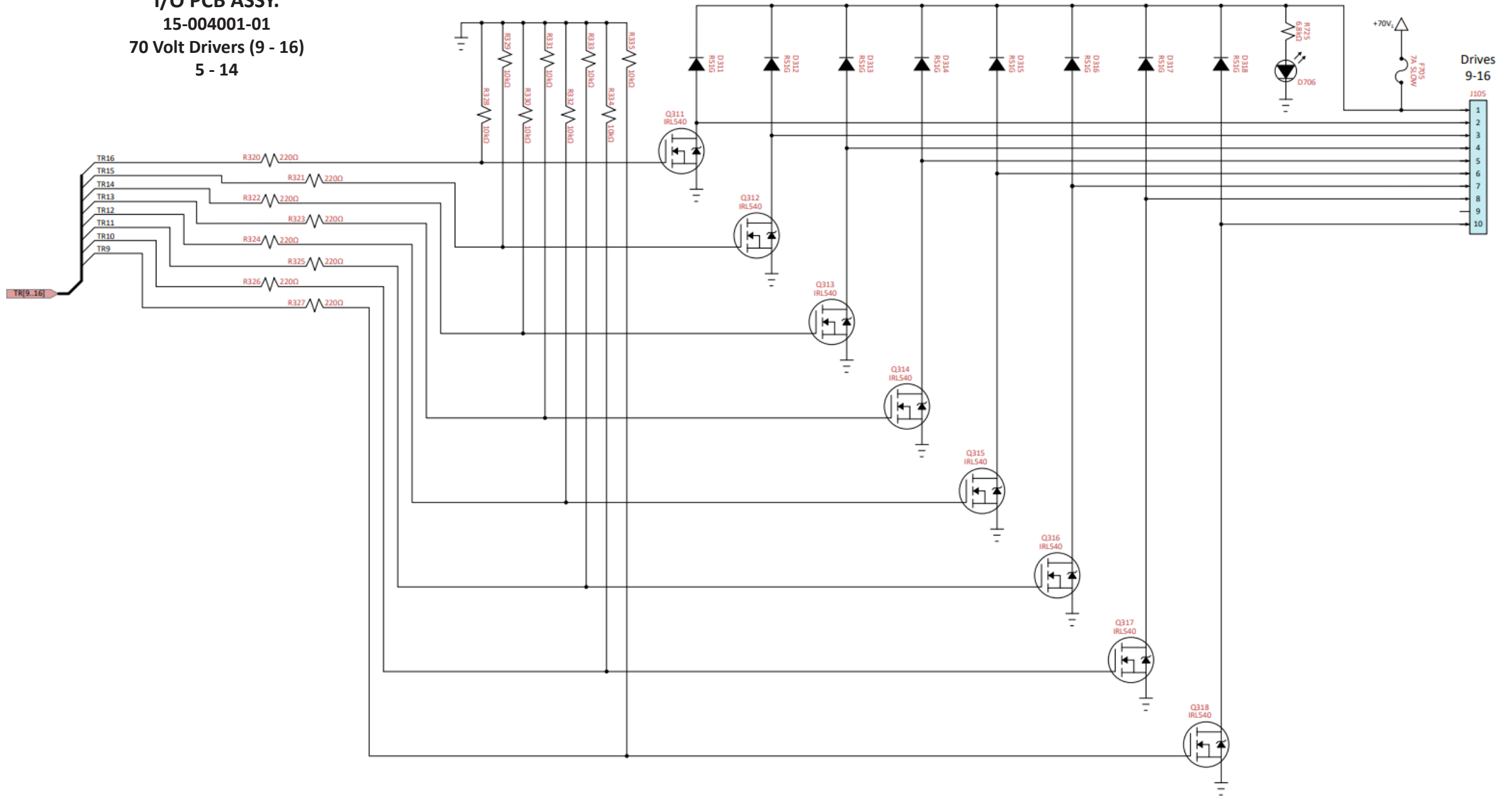


**I/O PCB ASSY.**  
**15-004001-01**  
**Device Control**  
**3 - 14**

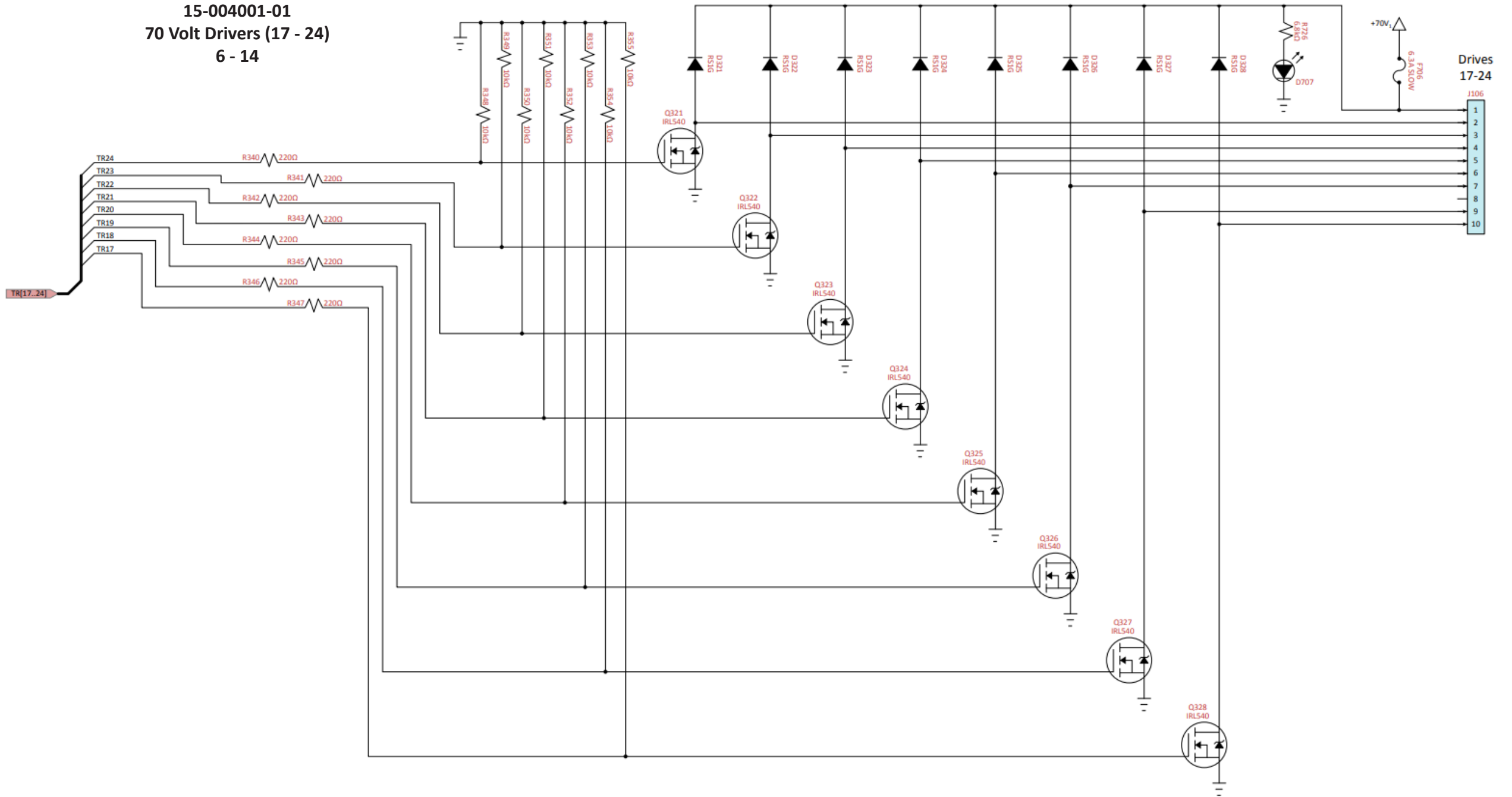
I/O PCB ASSY.  
15-004001-01  
70 Volt Drivers (1 - 8)  
4 - 14



**I/O PCB ASSY.**  
**15-004001-01**  
**70 Volt Drivers (9 - 16)**  
**5 - 14**

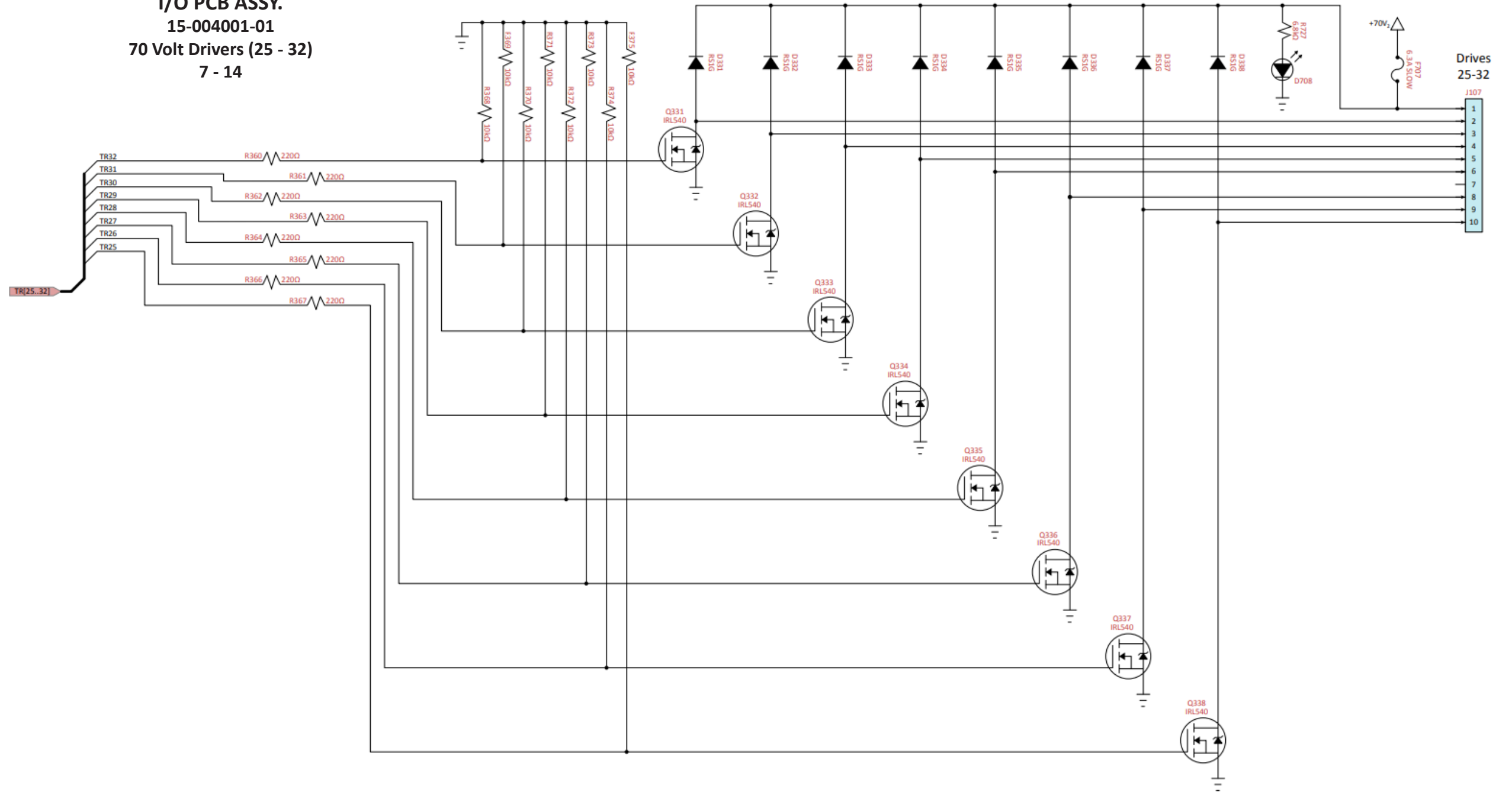


**I/O PCB ASSY.**  
**15-004001-01**  
**70 Volt Drivers (17 - 24)**  
**6 - 14**

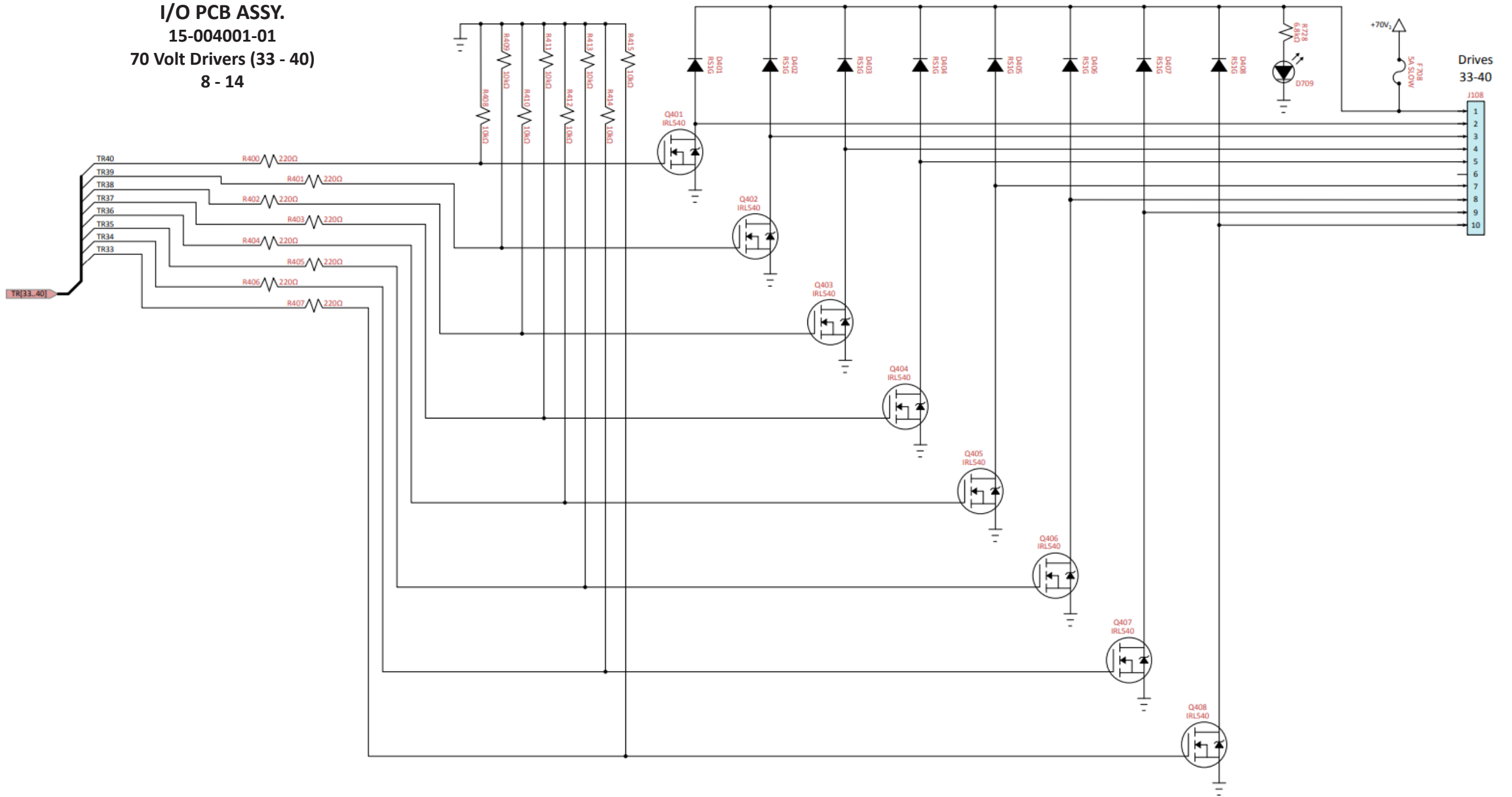




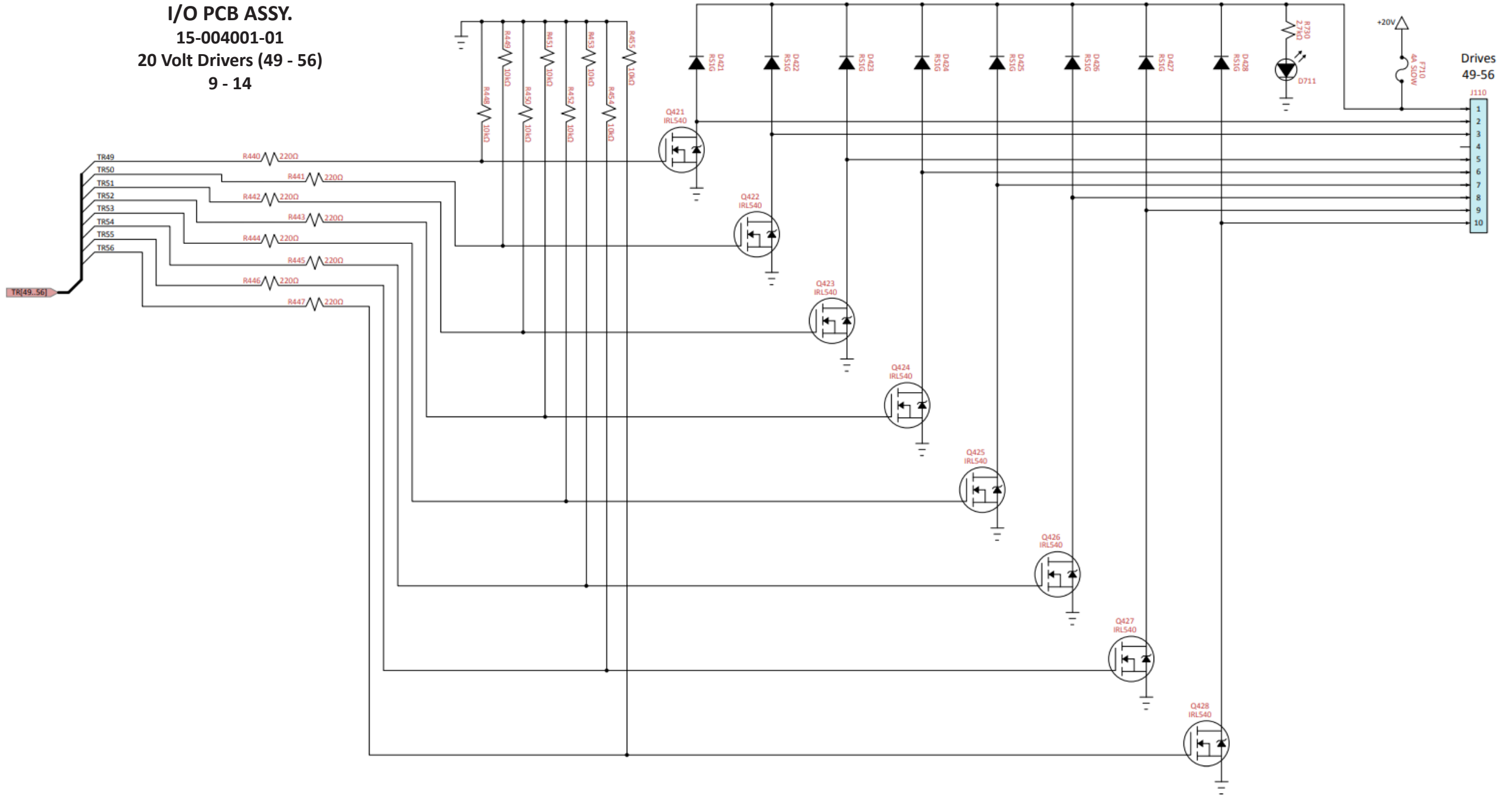
**I/O PCB ASSY.**  
**15-004001-01**  
**70 Volt Drivers (25 - 32)**  
**7 - 14**



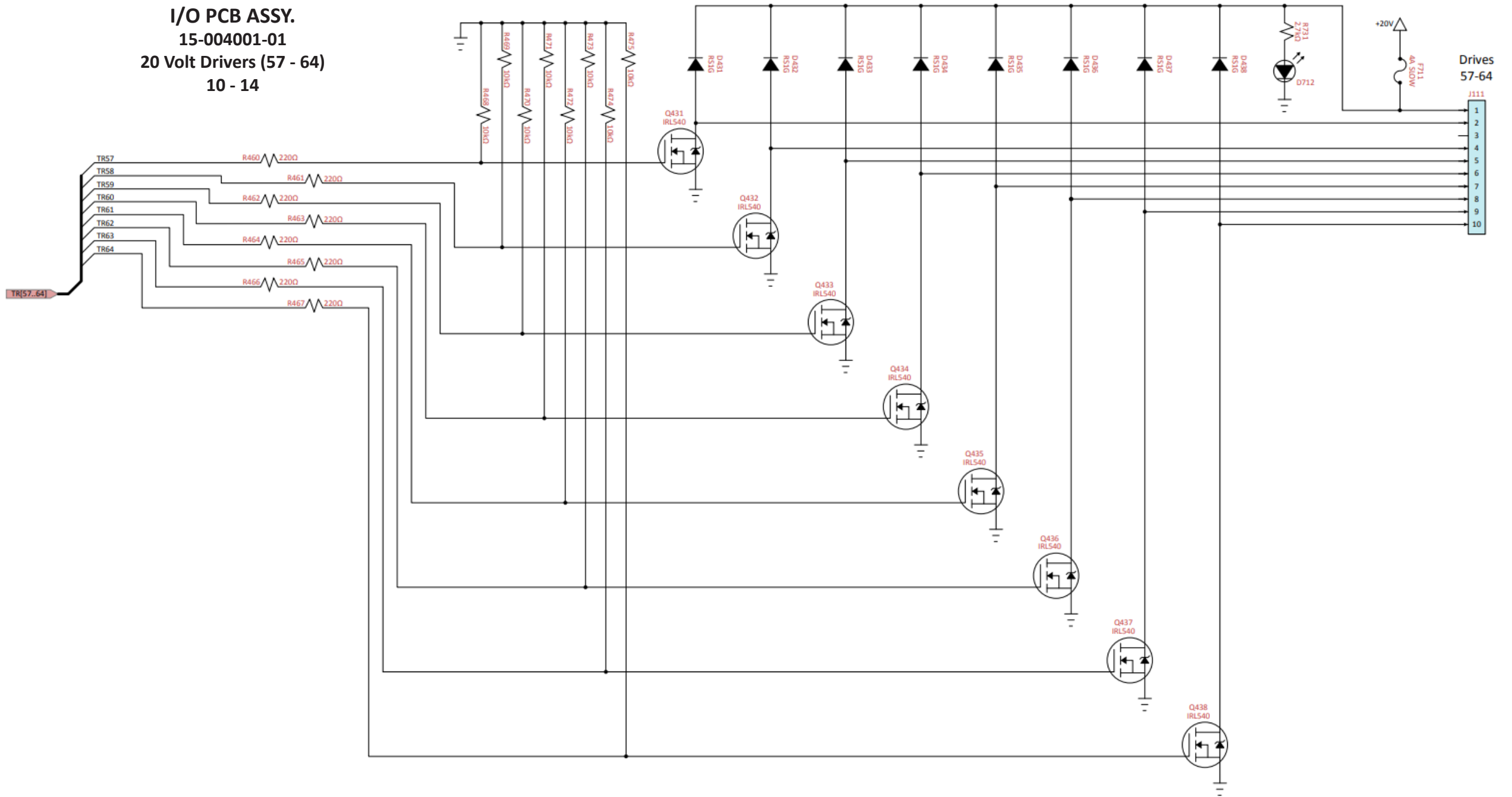
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**15-004001-01**  
**70 Volt Drivers (33 - 40)**  
**8 - 14**



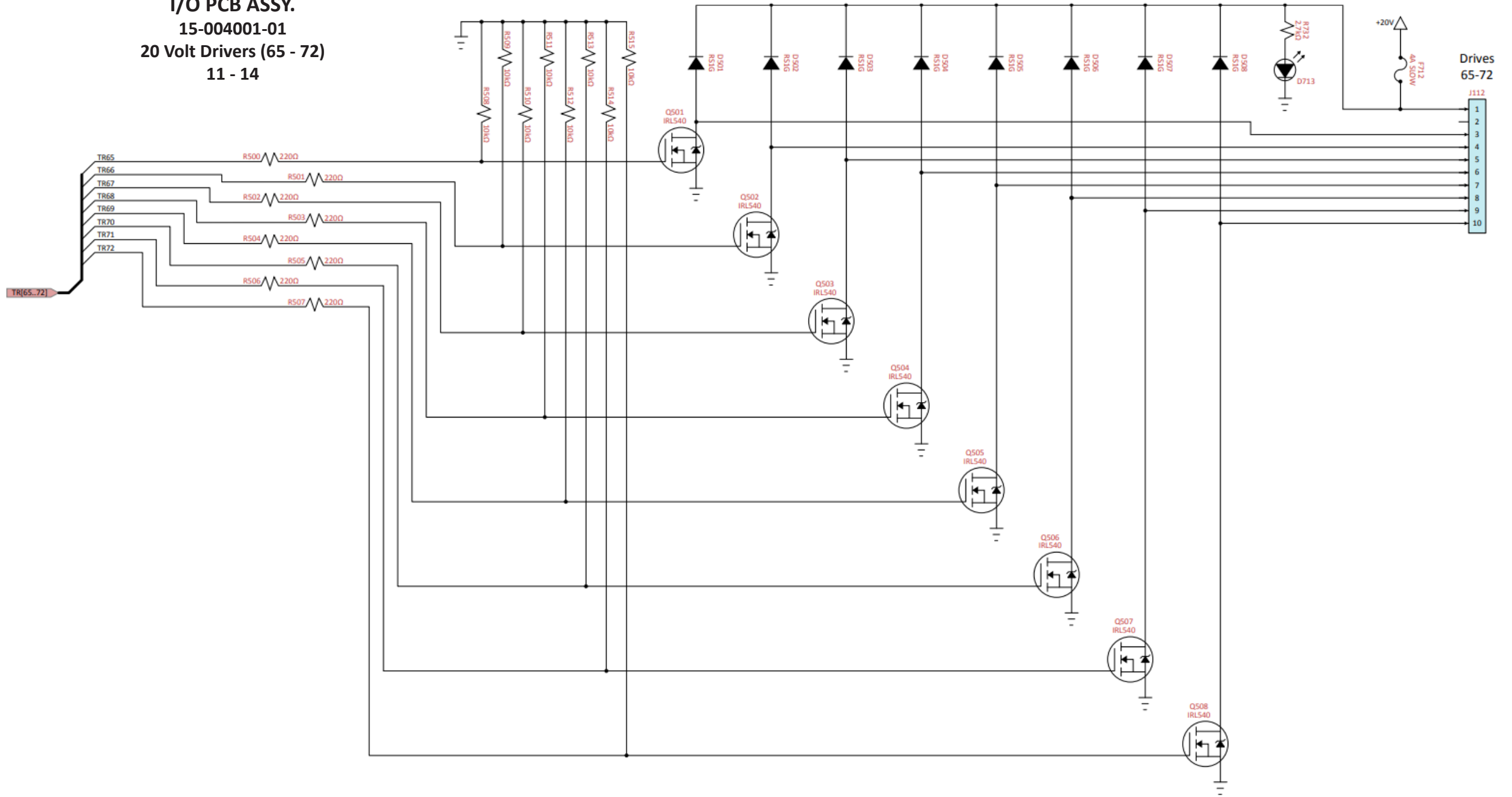
**I/O PCB ASSY.**  
**15-004001-01**  
**20 Volt Drivers (49 - 56)**  
**9 - 14**



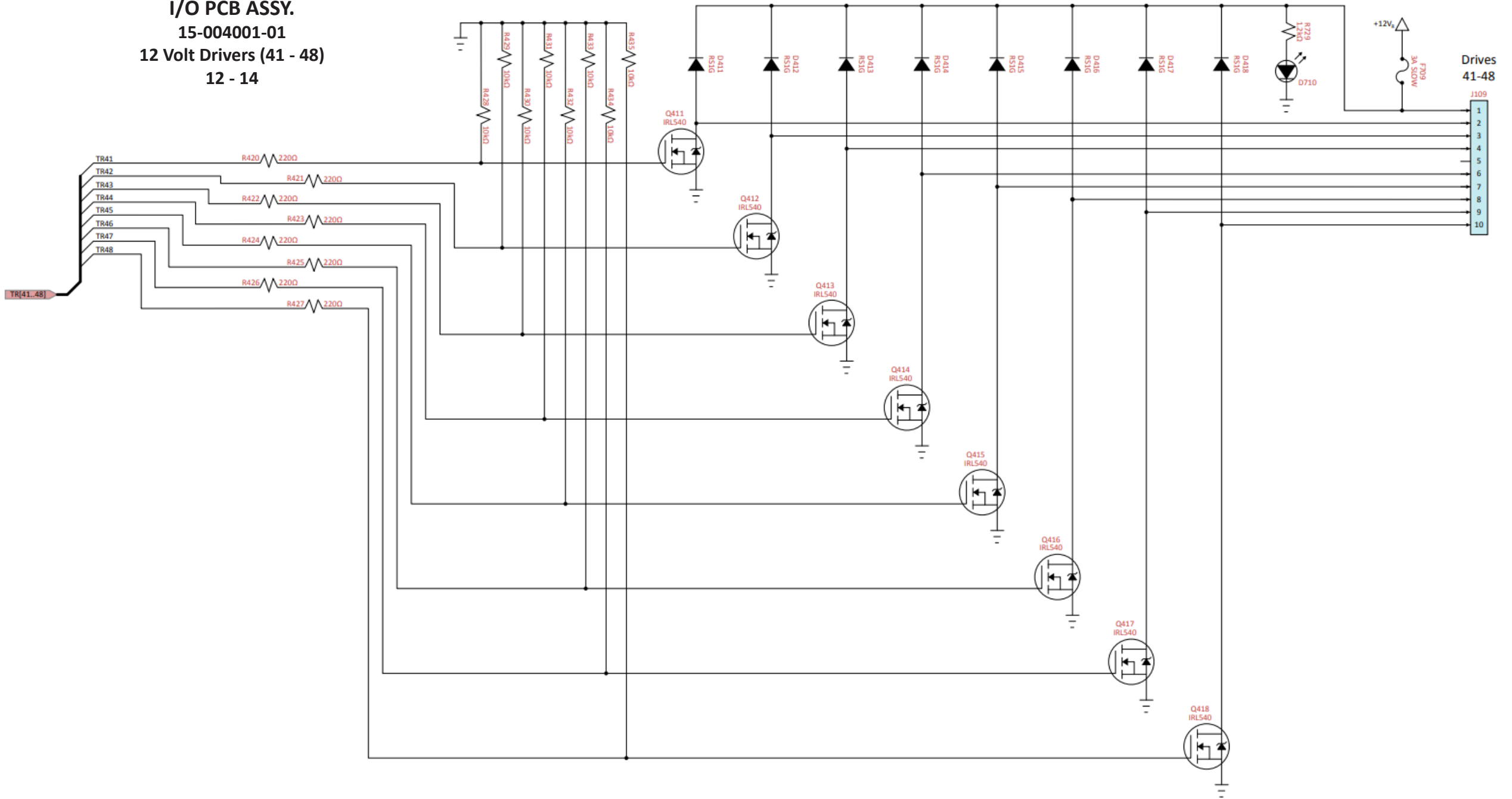
**I/O PCB ASSY.**  
**15-004001-01**  
**20 Volt Drivers (57 - 64)**  
**10 - 14**



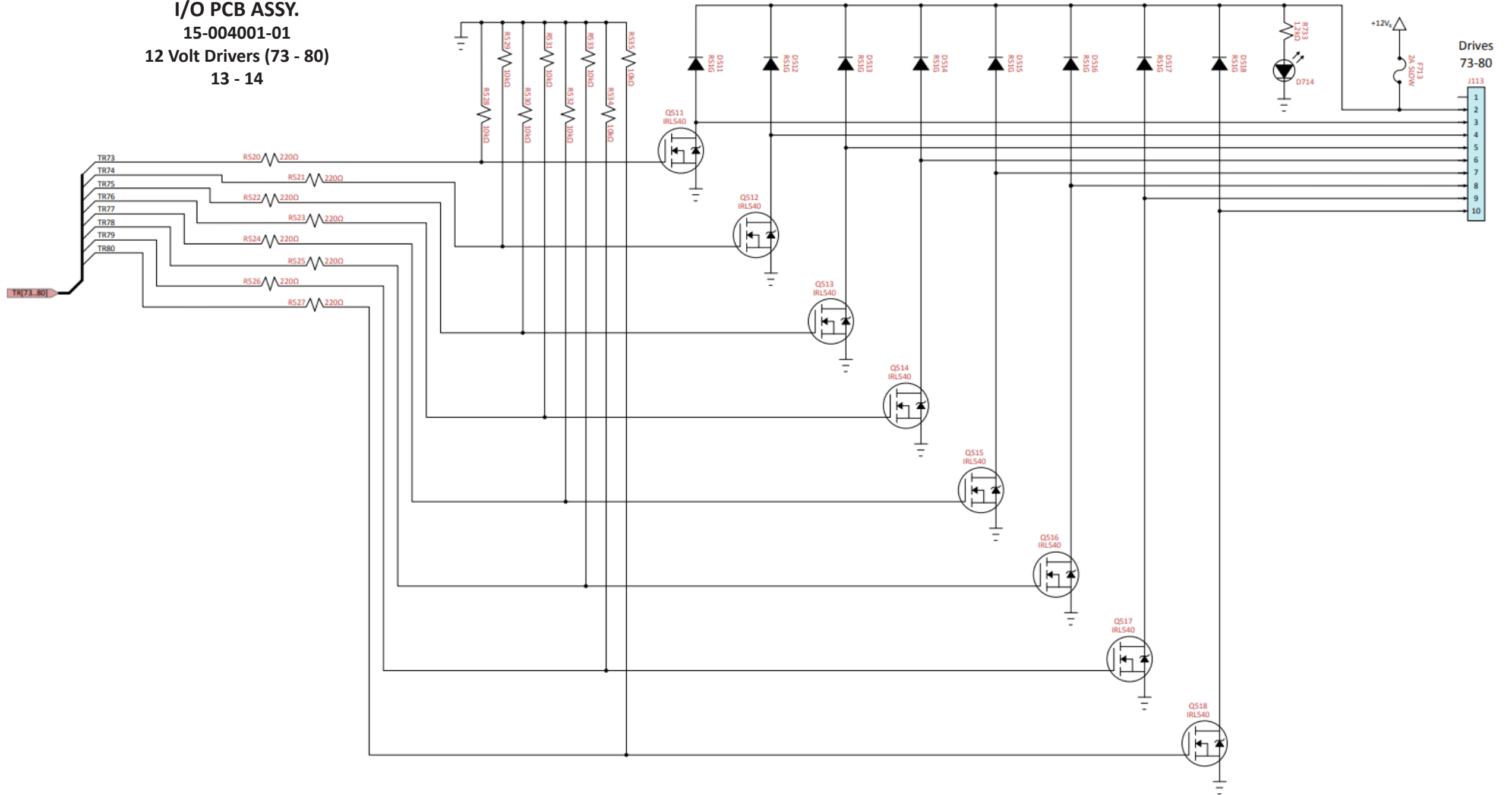
**I/O PCB ASSY.**  
**15-004001-01**  
**20 Volt Drivers (65 - 72)**  
**11 - 14**

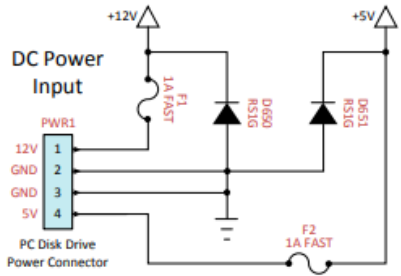


**I/O PCB ASSY.**  
**15-004001-01**  
**12 Volt Drivers (41 - 48)**  
**12 - 14**

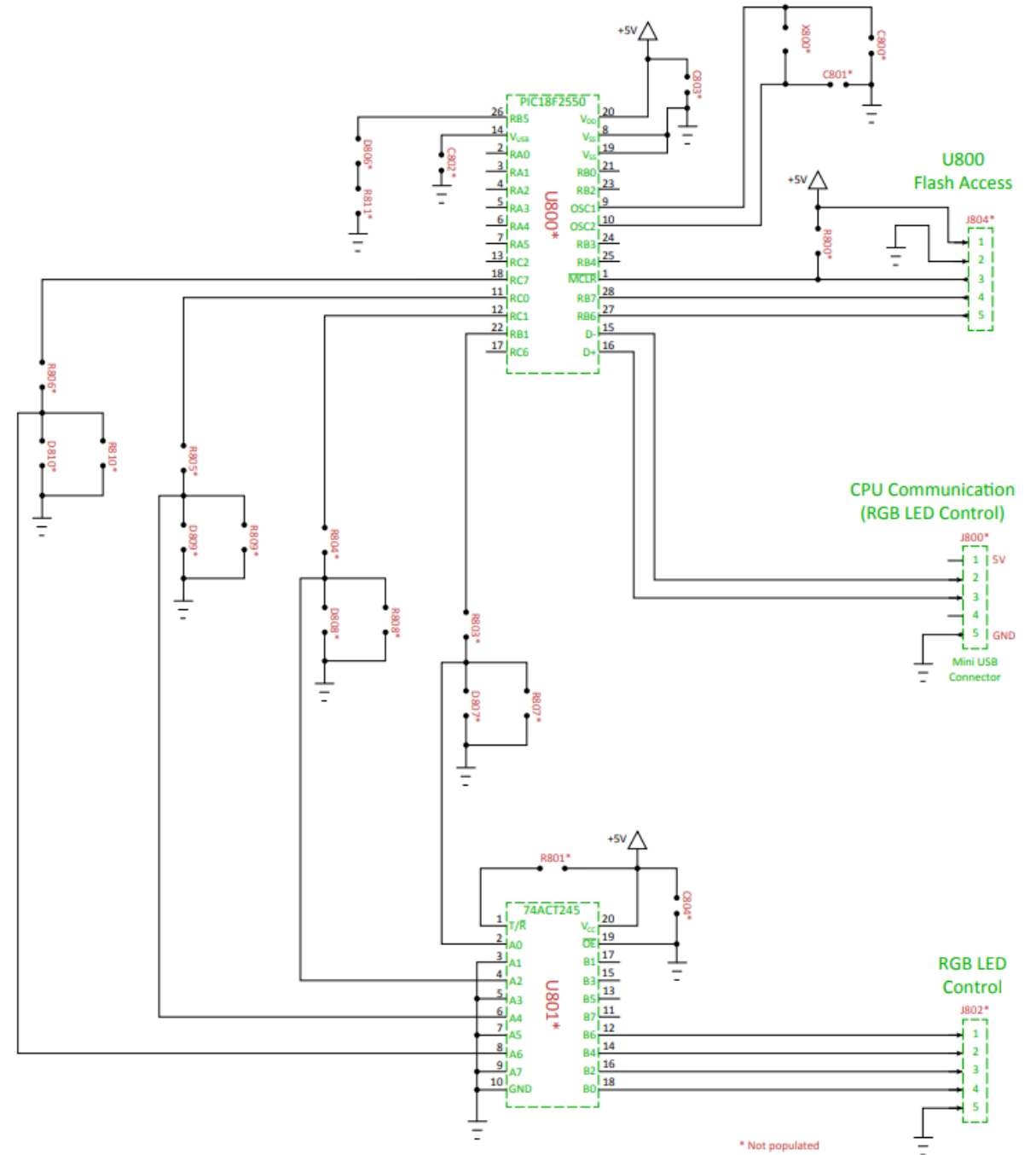
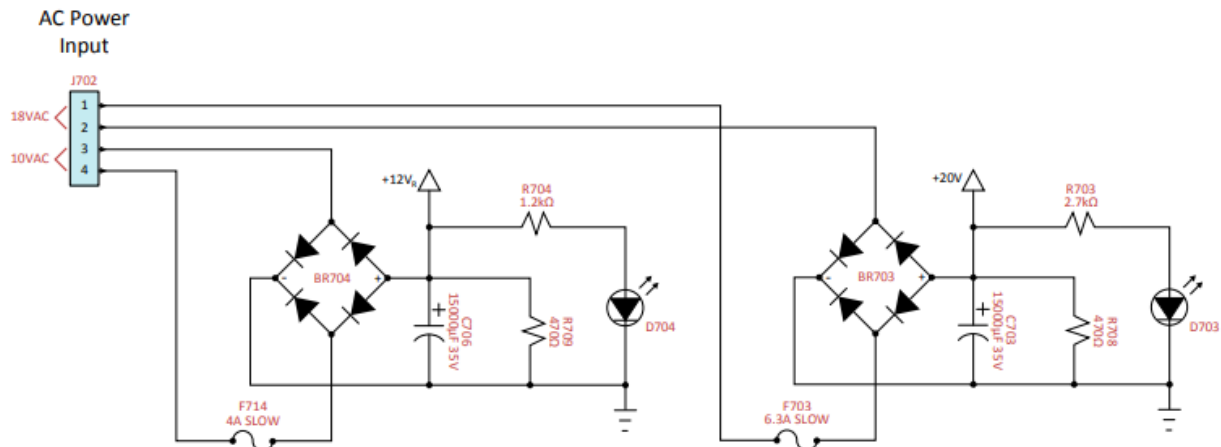
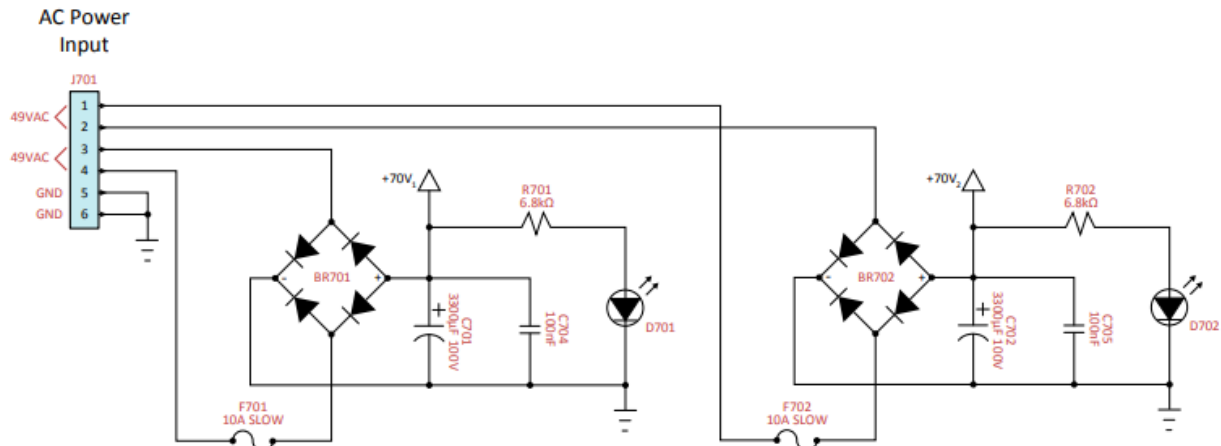


I/O PCB ASSY.  
15-004001-01  
12 Volt Drivers (73 - 80)  
13 - 14



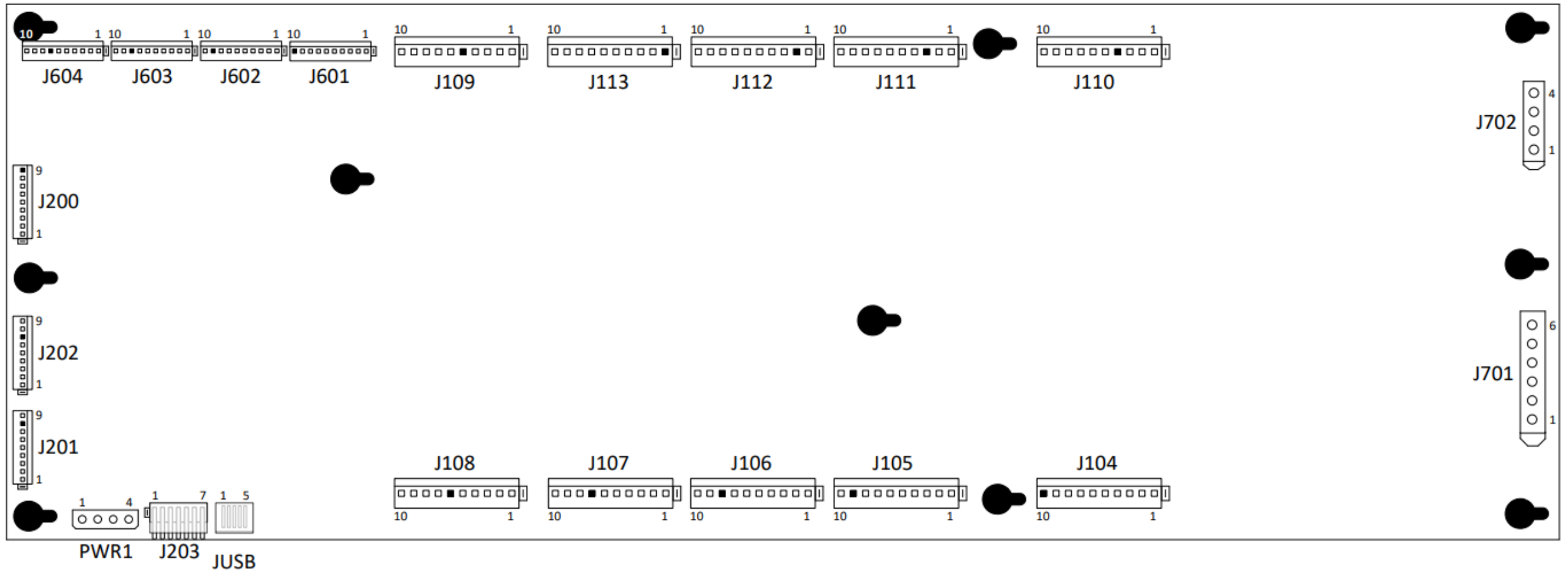


**I/O PCB ASSY.**  
15-004001-01  
Power  
14 - 14





I/O PCB ASSY.  
15-004001-01



**J104 70 Volt Coil Drives (1 - 8)**

PIN	Color	Function
1	BROWN	+ 70 VDC Supply to Coils Below
2	BRN-VIO	Not Used
3	BRN-BLU	Knocker
4	BRN-GRN	Not Used
5	BRN-YEL	Not Used
6	BRN-ORN	Not Used
7	BRN-RED	Not Used
8	BRN-GRY	Center Scoop VUK
9	BRN-BLK	Not Used
10	KEY	

**J105 70 Volt Coil Drives (9 - 16)**

PIN	Color	Function
1	RED	+ 70 VDC Supply to Coils Below
2	RED-VIO	Not Used
3	RED-BLU	Not Used
4	RED-GRN	Auto Launch
5	RED-YEL	Trough VUK
6	RED-ORN	Right Flipper Hold
7	RED-GRY	Right Flipper Power
8	RED-BRN	Left Flipper Hold
9	KEY	
10	RED-BLK	Left Flipper Power

**J106 70 Volt Coil Drives (17 - 24)**

PIN	Color	Function
1	ORANGE	+ 70 VDC Supply to Coils Below
2	ORN-VIO	Right Ramp Diverter
3	ORN-BLU	Not Used
4	ORN-GRN	Not Used
5	ORN-YEL	Not Used
6	ORN-GRY	Not Used
7	ORN-RED	Upper Right Flipper Hold
8	KEY	
9	ORN-BRN	Upper Right Flipper Power
10	ORN-BLK	Loop Magnet

**J107 70 Volt Coil Drives (25 - 32)**

PIN		
1	TAN	+ 70 VDC Supply to Coils Below
2	TAN-VIO	Not Used
3	TAN-BLU	Left Pop Bumper
4	TAN-GRN	Not Used
5	TAN-YEL	Not Used
6	TAN-ORN	Upper Playfield Flipper Hold
7	KEY	
8	TAN-RED	Upper Playfield Flipper Power
9	TAN-BRN	Left Ramp Diverter Hold
10	TAN-BLK	Left Ramp Diverter Power

**J108 70 Volt Coil Drives (33 - 40)**

PIN		
1	PINK	+ 70 VDC Supply to Coils Below
2	PNK-VIO	Upper Playfield VUK
3	PNK-BLU	Not Used
4	PNK-GRN	Not Used
5	PNK-YEL	Not Used
6	KEY	
7	PNK-ORN	Bottom Pop Bumper
8	PNK-RED	Right Pop Bumper
9	PNK-BRN	Lock Up Release Right
10	PNK-BLK	Lock Up Release Left

**J109 12 Volt Coil Drives (41 - 48)**

PIN		
1	YELLOW	+ 70 VDC Supply to Coils Below
2	YEL-BLK	Not Used
3	YEL-BRN	Not Used
4	YEL-RED	Not Used
5	KEY	
6	YEL-ORN	Not Used
7	YEL-GRY	Not Used
8	YEL-GRN	Not Used
9	YEL-BLU	Not Used
10	YEL-VIO	Not Used

**J110 20 Volt Coil Drives (49 - 56)**

PIN		
1	PLUM	+ 20 VDC Supply to Coils Below
2	PLM-BLK	Not Used
3	PLM-BRN	Not Used
4	KEY	
5	PLM-RED	Not Used
6	PLM-ORN	Not Used
7	PLM-YEL	Not Used
8	PLM-GRN	Not Used
9	PLM-BLU	Not Used
10	PLM-GRY	Not Used

**J111 20 Volt Coil Drives (57 - 64)**

PIN		
1	BLUE	+ 20 VDC Supply to Coils Below
2	BLU-BLK	Right Slingshot
3	KEY	
4	BLU-BRN	Left Slingshot
5	BLU-RED	Not Used
6	BLU-ORN	Not Used
7	BLU-YEL	Not Used
8	BLU-GRN	Not Used
9	BLU-GRY	Not Used
10	BLU-VIO	Not Used

**J112 20 Volt Coil Drives (65 - 72)**

PIN		
1	VIOLET	+ 20 VDC Supply to Coils Below
2	KEY	
3	VIO-BLK	Not Used
4	VIO-BRN	Not Used
5	VIO-RED	Not Used
6	VIO-ORN	Not Used
7	VIO-YEL	Not Used
8	VIO-GRN	Not Used
9	VIO-BLU	Not Used
10	VIO-GRY	Not Used

**J113 12 Volt Coil Drives (73 - 80)**

PIN		
1	KEY	
2	LIGHT BLUE	+ 20 VDC Supply to Coils Below
3	LT BLU-BLK	Shaker
4	LT BLU-BRN	Not Used
5	LT BLU-RED	Ticket Mech Motor Drive
6	LT BLU-ORN	Not Used
7	LT BLU-YEL	Not Used
8	LT BLU-GRN	Not Used
9	LT BLU-GRY	Start Button Light
10	LT BLU-VIO	Flash Bulb Topper

**J200 Matrix Switch Rows**

PIN		
1	WHT-BLK	Row 1 to Playfield Switches
2	WHT-BRN	Row 2 to Playfield Switches
3	WHT-RED	Row 3 to Playfield Switches
4	WHT-ORN	Row 4 to Playfield Switches
5	WHT-YEL	Row 5 to Playfield Switches
6	WHT-GRN	Row 6 to Playfield Switches
7	WHT-BLU	Row 7 to Playfield Switches
8	WHT-VIO	Row 8 to Playfield Switches
9	KEY	

**J201 Matrix Switch Columns (1 - 8)**

PIN		
1	GRN-BLK	Column 1 to Playfield Switches
2	GRN-BRN	Column 2 to Playfield Switches
3	GRN-RED	Column 3 to Playfield Switches
4	GRN-ORN	Column 4 to Playfield Switches
5	GRN-YEL	Column 5 to Playfield Switches
6	GRN-GRY	Column 6 to Playfield Switches
7	GRN-BLU	Column 7 to Playfield Switches
8	KEY	
9	GRN-VIO	Column 8 to Playfield Switches

**J202 Matrix Switch Columns (9 - 16)**

PIN		
1	GRY-BLK	Not Used
2	GRY-BRN	Column 10 to Playfield Switches
3	GRY-RED	Not Used
4	GRY-ORN	Not Used
5	GRY-YEL	Column 13 to Playfield Switches
6	GRY-GRN	Column 14 to Playfield Switches
7	KEY	
8	GRY-BLU	Not Used
9	GRY-VIO	Not Used

**J203 Serial Communications**

PIN	
1	Not Used
2	Not Used
3	Not Used
4	Not Used
5	Not Used
6	Not Used
7	Not Used

**J601 Dedicated Switches (1 - 8)**

PIN		
1	BLACK	Dedicated Switch Common
2	BLK-YEL	Not Used
3	BLK-GRN	Not Used
4	BLK-ORN	Upper Playfield Flipper EOS
5	BLK-RED	Upper Right Flipper EOS
6	BLK-BRN	Right Flipper EOS
7	BLK-GRY	Left Flipper EOS
8	BLK-BLU	Not Used
9	BLK-VIO	Not Used
10	KEY	

**J602 Dedicated Switches (6 - 16)**

PIN		
1	BLACK	Dedicated Switch Common
2	YEL-GRY	Enter / Menu Button
3	YEL-GRN	Up / Volume Button
4	YEL-ORN	Right Flipper Switch Upper
5	YEL-RED	Right Flipper Switch Lower
6	YEL-BRN	Not Used
7	YEL-BLK	Left Flipper Switch Lower
8	YEL-BLU	Down / Volume Button
9	KEY	
10	YEL-VIO	Escape / Service Credit Button

**J603 Dedicated Switches (17 - 24)**

PIN		
1	BLACK	Dedicated Switch Common
2	BLU-YEL	5th Coin Slot Switch
3	BLU-GRN	Ticket Mech Notch Switch
4	BLU-ORN	4th Coin Slot Switch
5	BLU-RED	Center Dollar Bill Acceptor
6	BLU-BRN	Right Coin Switch
7	BLU-BLK	Left Coin Switch
8	KEY	
9	BLU-GRY	Not Used
10	BLU-VIO	Not Used

**J604 Dedicated Switches (25 - 32)**

PIN		
1	BLACK	Dedicated Switch Common
2	VIO-YEL	Action Button
3	VIO-GRN	Headphone Panel Volume Up
4	VIO-ORN	Bluetooth
5	VIO-RED	Plumb Bob Tilt
6	VIO-BRN	Coin Door Open Switch
7	KEY	
8	VIO-BLK	Start Button
9	VIO-BLU	Headphone Panel Volume Up
10	VIO-GRY	Headphone Panel Jack Sense

**J701 AC Power Input High**

PIN		
1	RED	49 VAC From Transformer
2	RED	49 VAC From Transformer
3	BLUE	49 VAC From Transformer
4	BLUE	49 VAC From Transformer
5	GREEN	Chassis Ground
6	GREEN	Chassis Ground

**J702 AC Power Input Low**

PIN		
1	YELLOW	18 VAC From Transformer
2	YELLOW	18 VAC From Transformer
3	GRAY	10 VAC From Transformer
4	GRAY	10 VAC From Transformer

**J800 CPU Communication**

Not Used / Unpopulated

**J802 RGB LED Control**

Not Used / Unpopulated

**J804 Flash Programing Access**

Not Used / Unpopulated

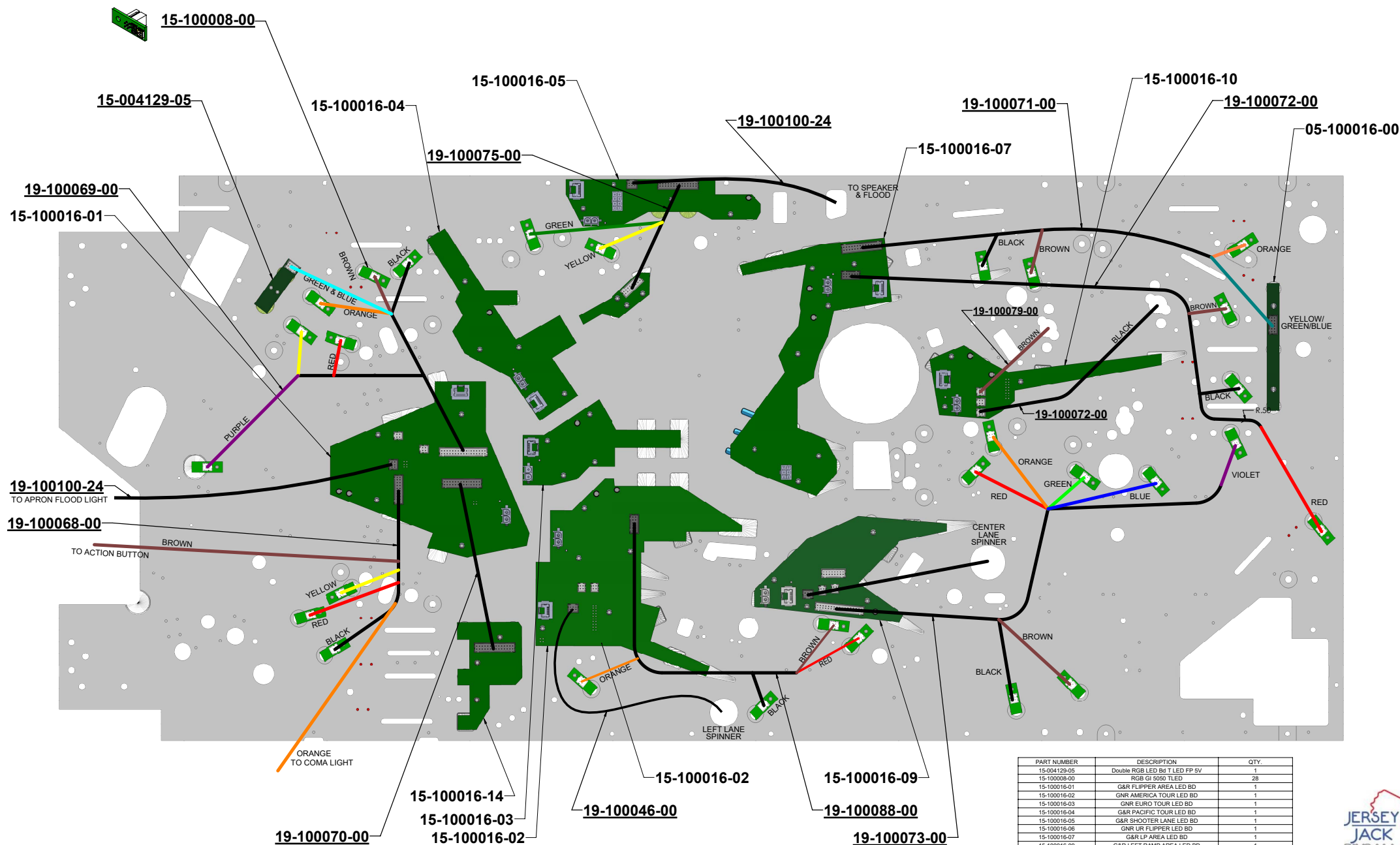
**JUSB CPU Communications**

Mini USB Cable to CPU USB Connector

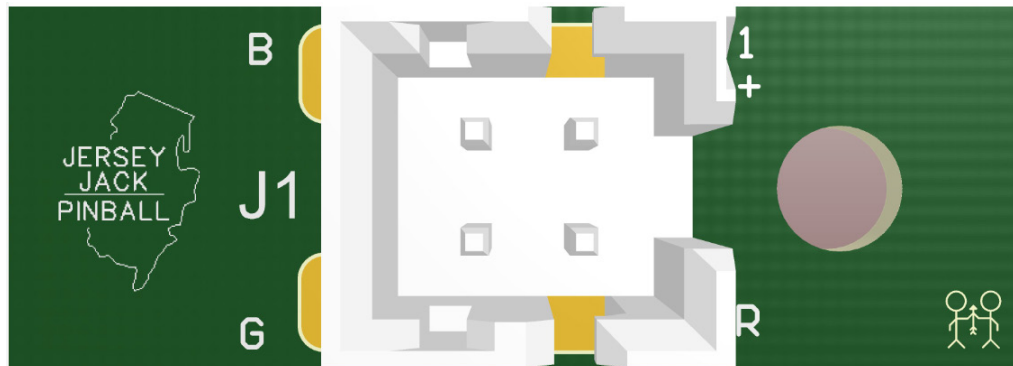
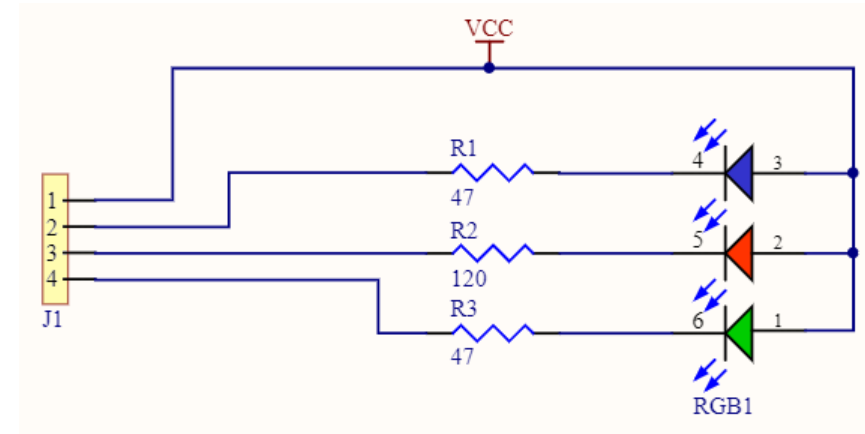
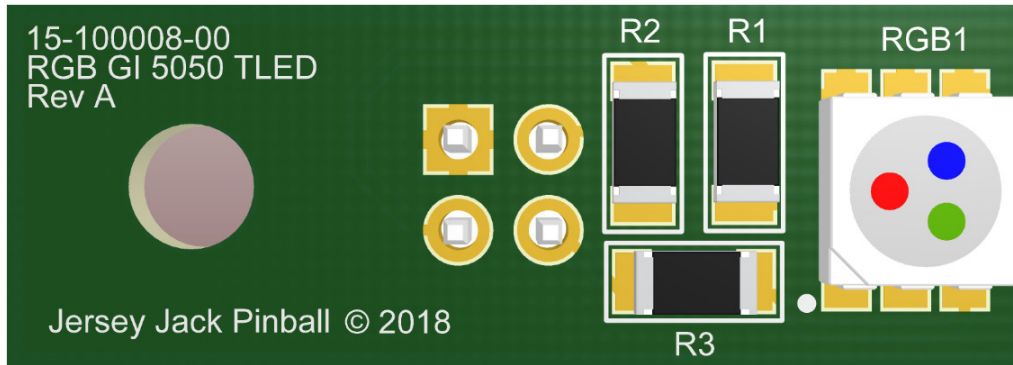
**PWR1 DC Power Input**

PIN		
1	YELLOW	+12 VDC From ATX Power Supply
2	BLACK	Ground From ATX Power Supply
3	BLACK	Ground From ATX Power Supply
4	RED	+5 VDC From ATX Power Supply

# LED Boards and Cables



**Single RGB Board**  
**15-100008-00**  
**15-100008-01 (No Connector)**

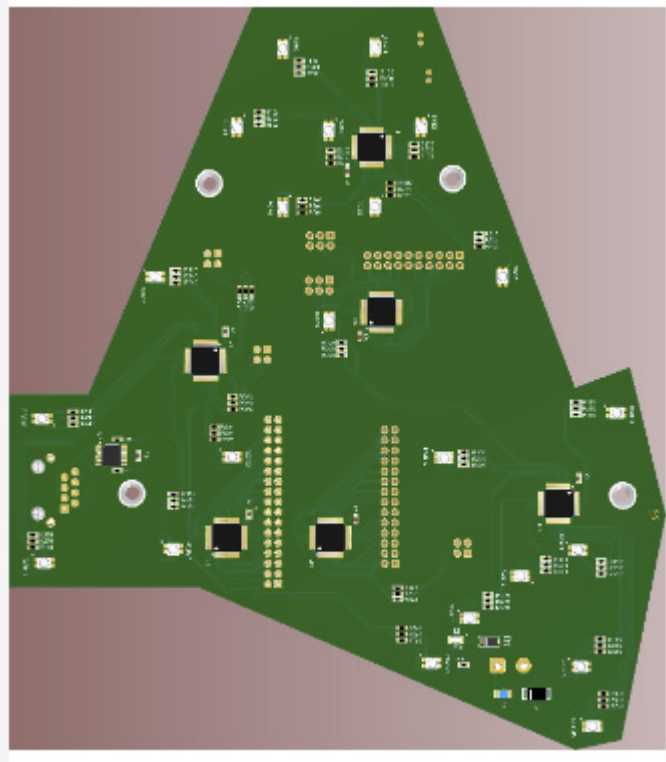


**J1**

Pin

- 1 +5VDC from a Main RGB LED Board
- 2 Blue Return to a Main RGB Board
- 3 Red Return to a Main RGB Board
- 4 Green Return to a Main RGB Board

# Flipper Area RGB LED Board 15-100016-01

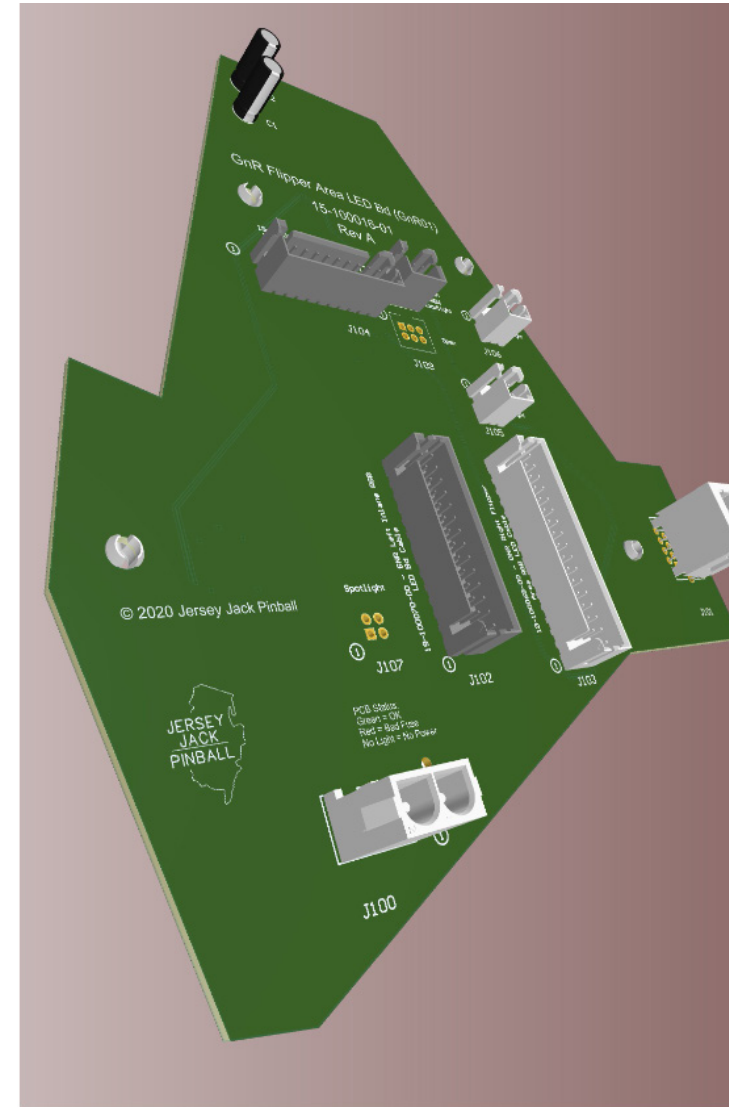


### J100 Power Input

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

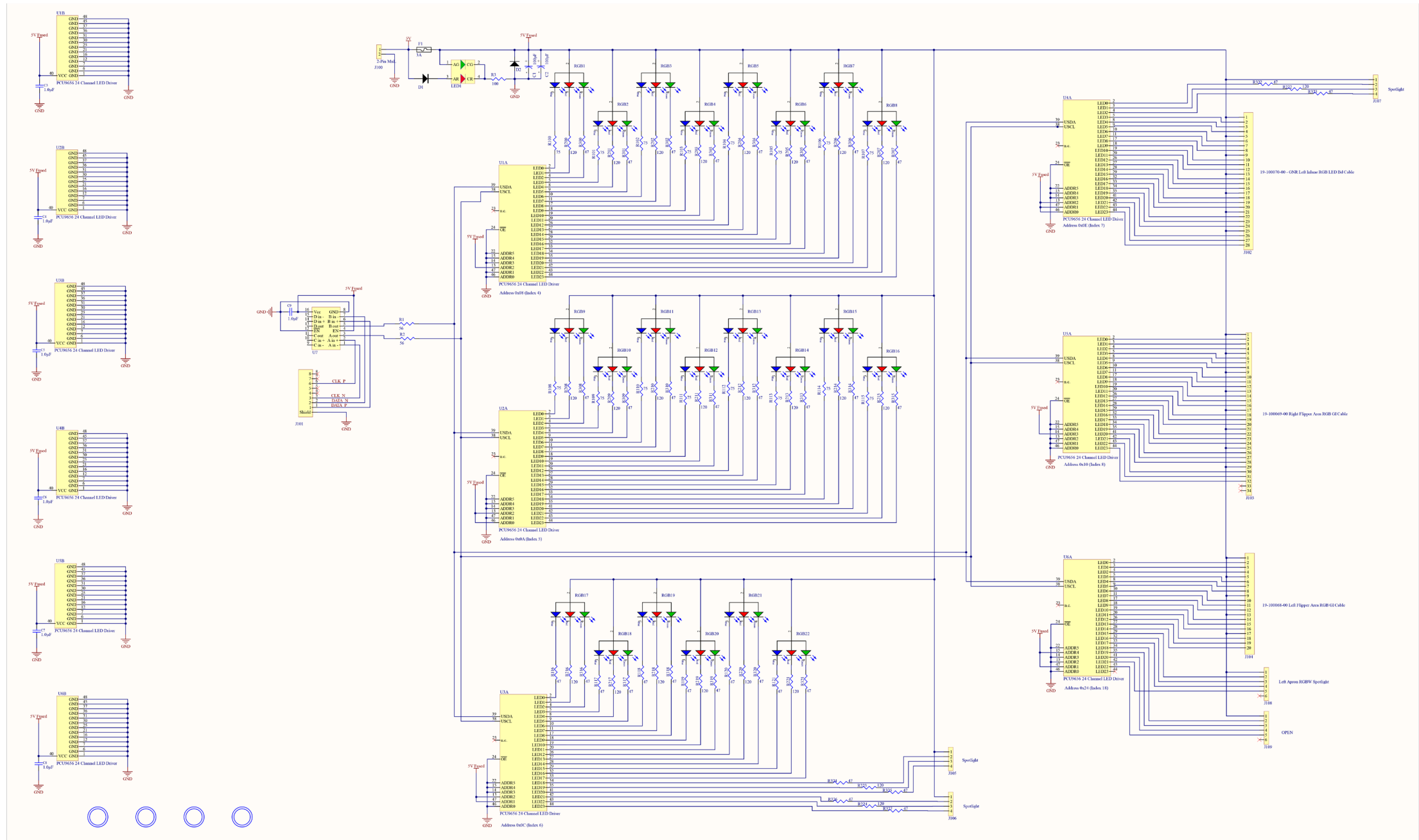
### J101 I2C Communications Input

Cat5 or Higher Ethernet Cable



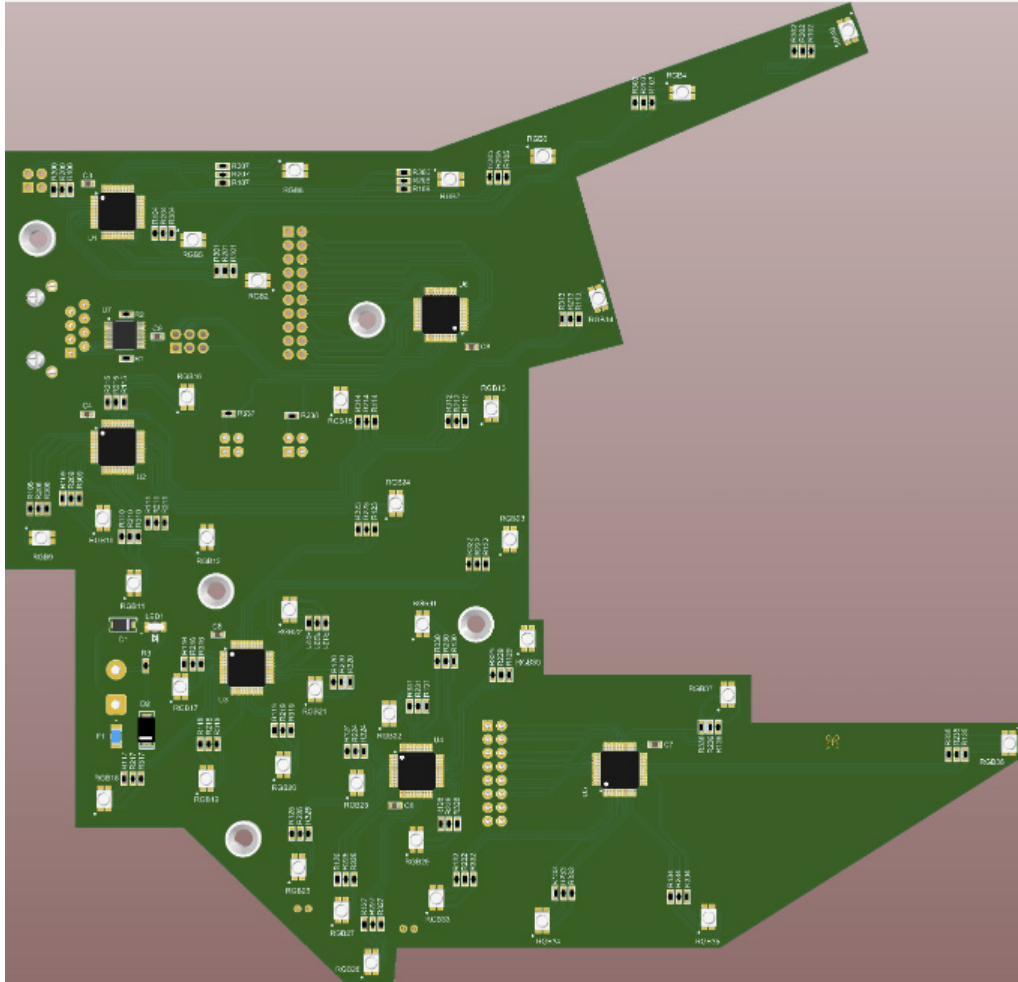
# Flipper Area RGB LED Board

## 15-100016-01





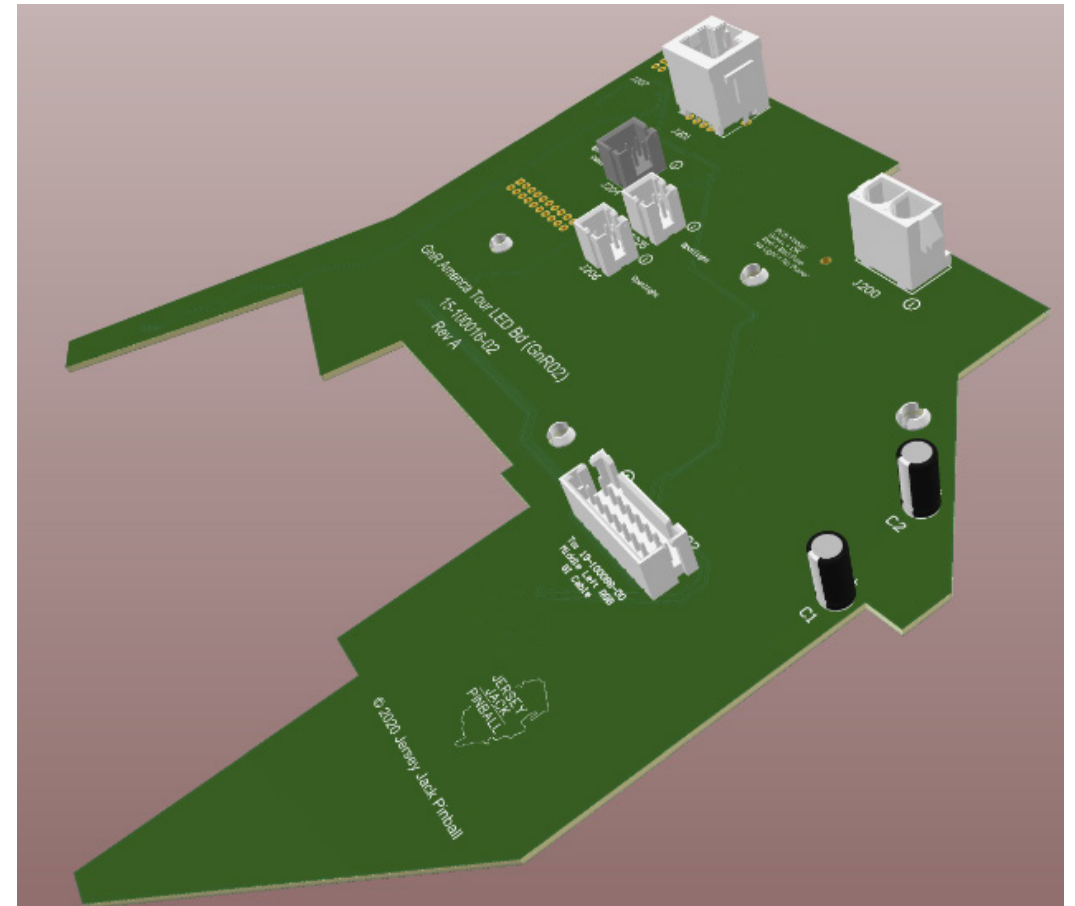
## American Tour RGB LED Board 15-100016-02



### J200 Power Input

Pin

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

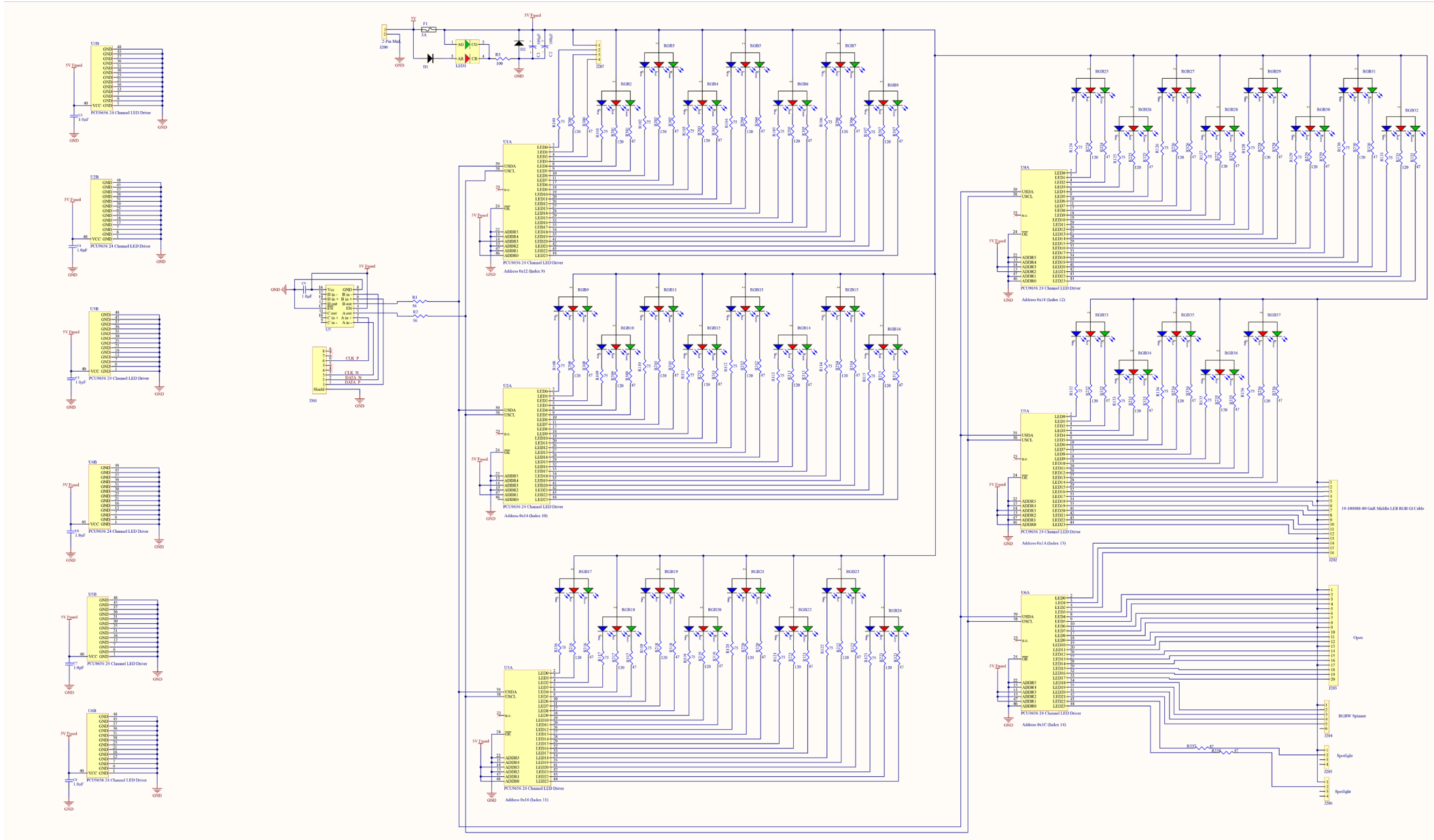


### J201 I2C Communications Input

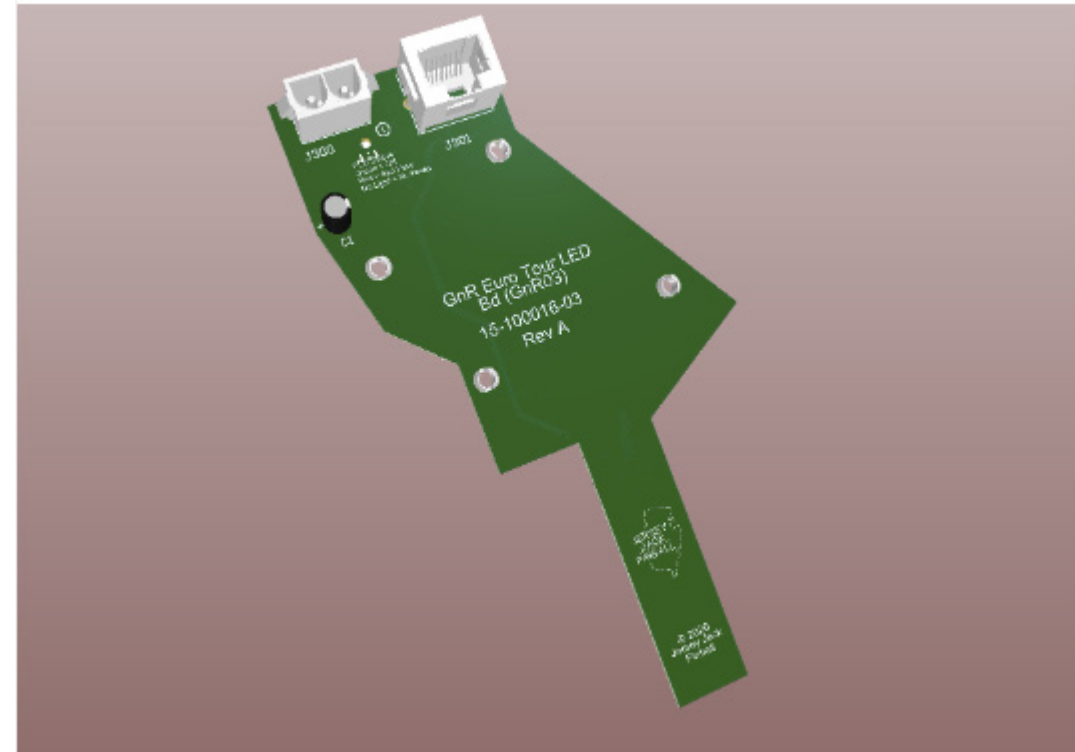
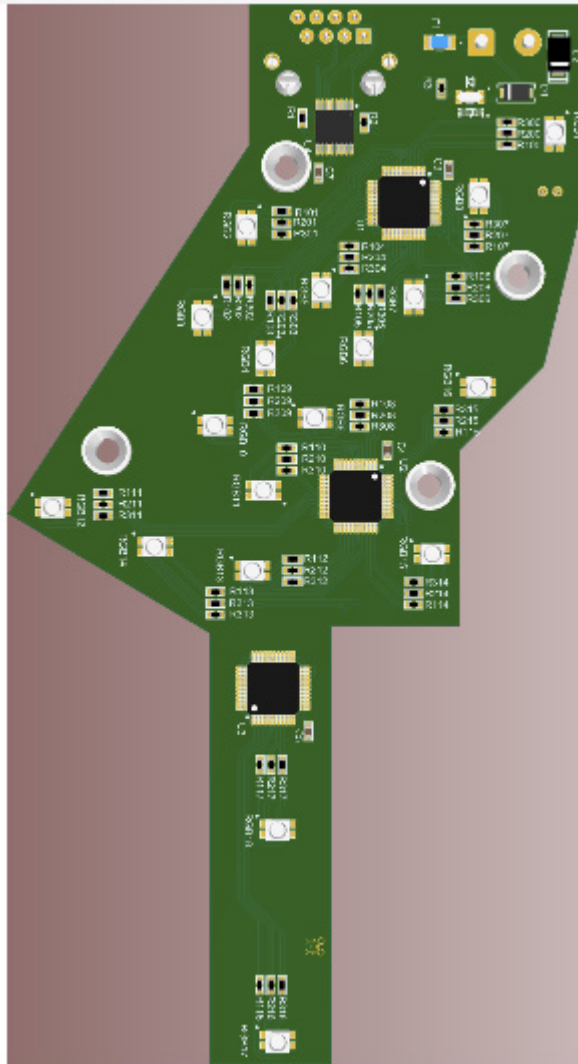
Cat5 or Higher Ethernet Cable

# American Tour RGB LED Board

## 15-100016-02



**Euro Tour RGB LED Board**  
15-100016-03



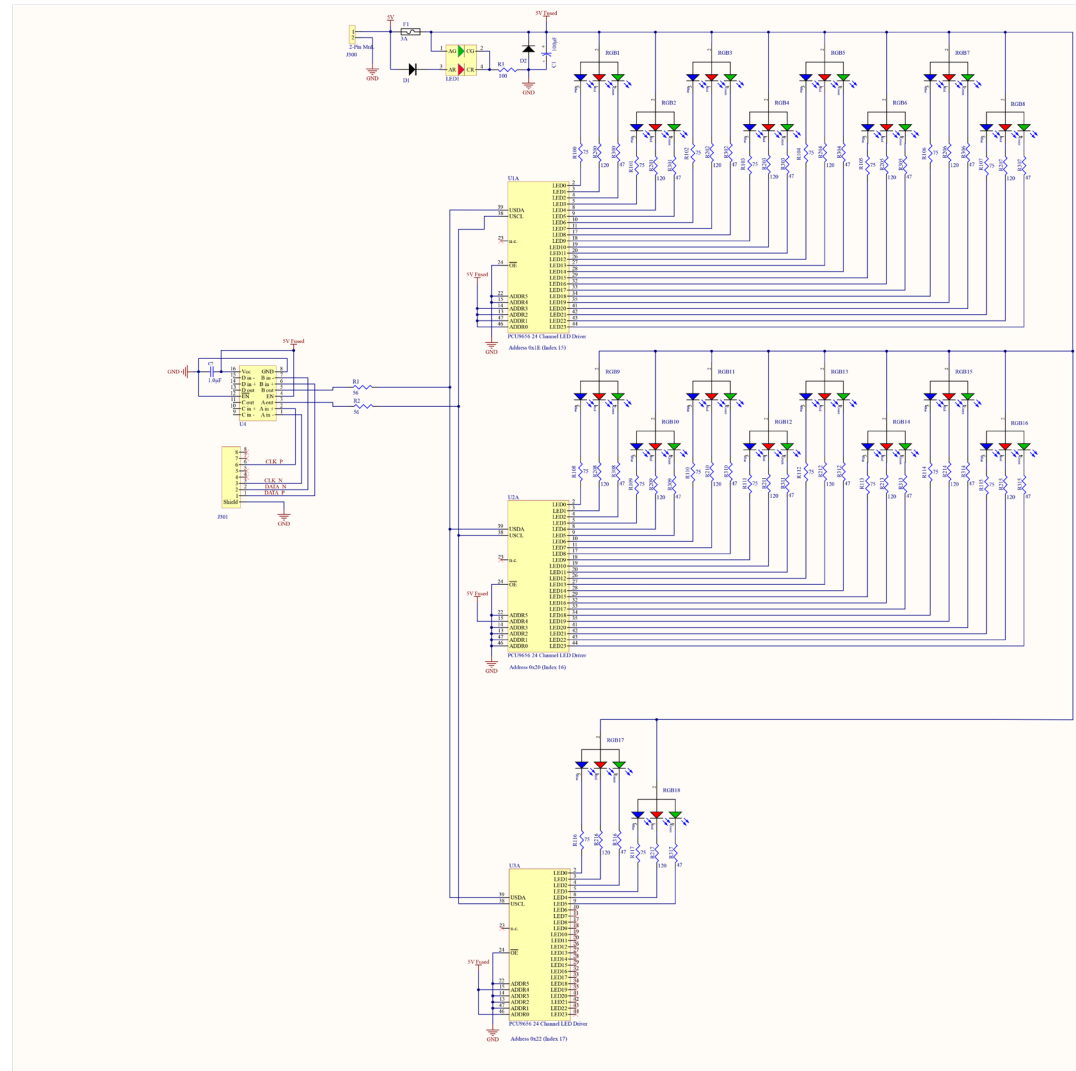
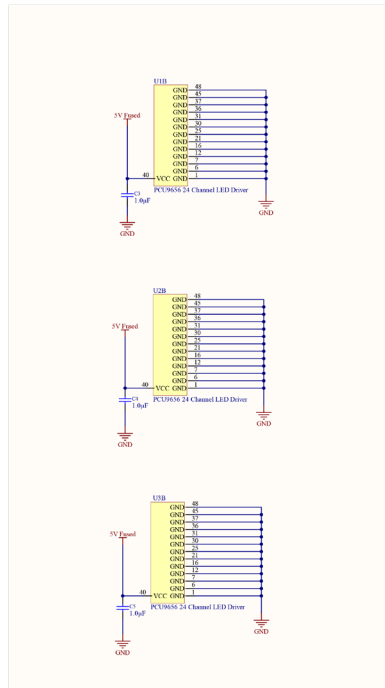
**J300 Power Input**

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

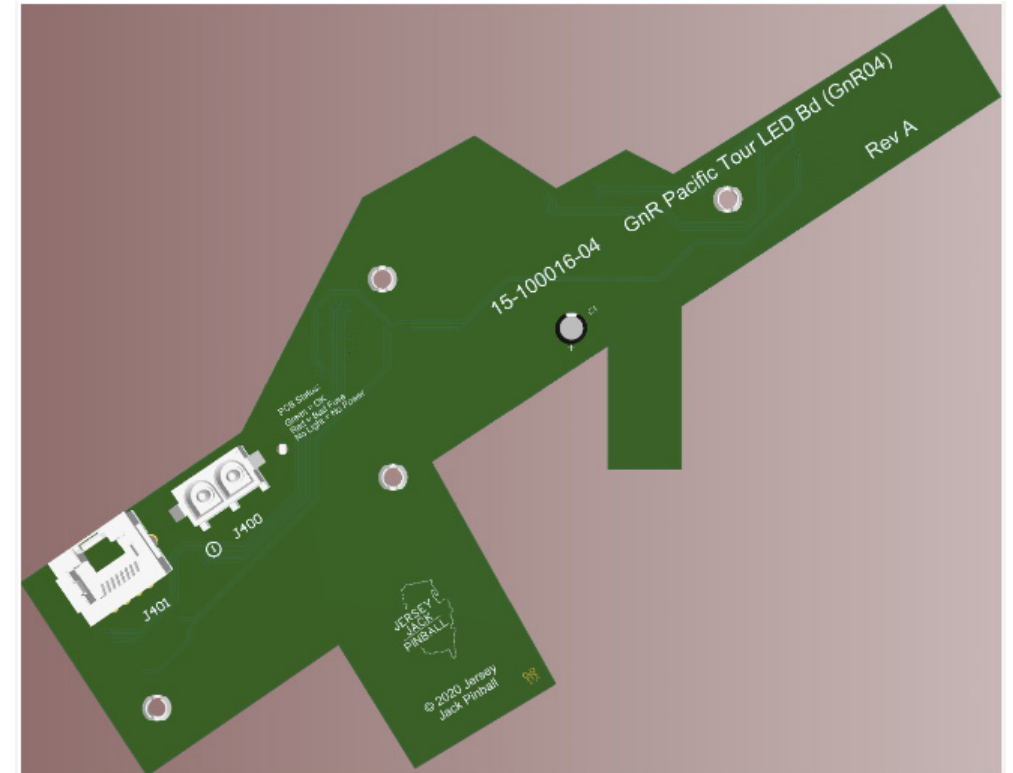
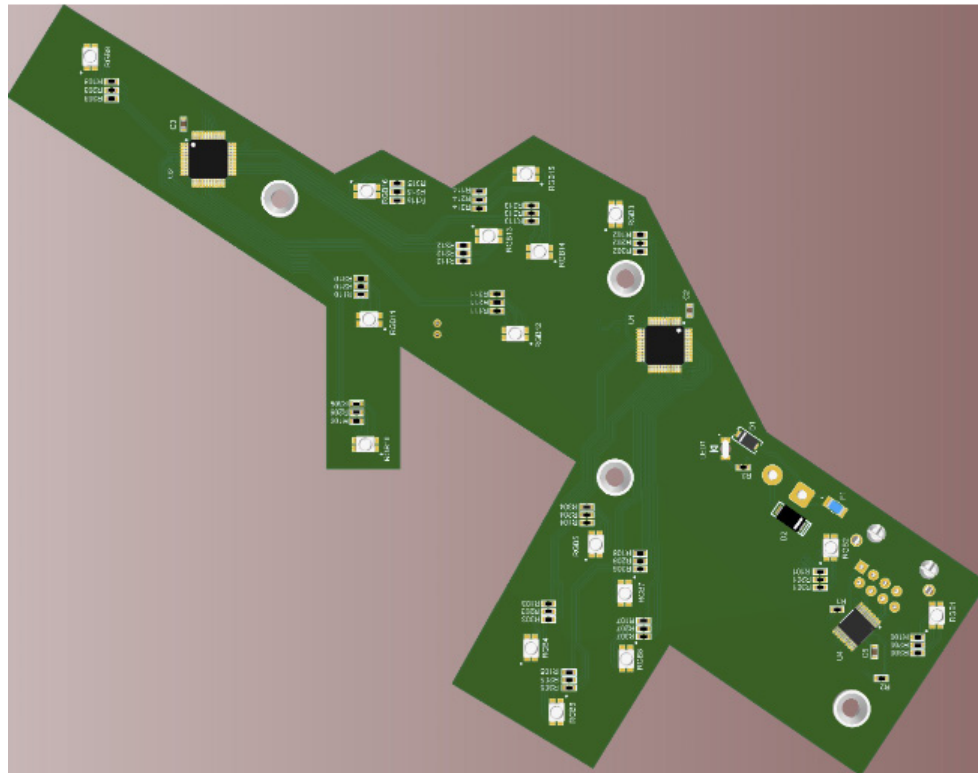
**J301 I2C Communications Input**

Cat5 or Higher Ethernet Cable

# Euro Tour RGB LED Board 15-100016-03



Pacific Tour RGB LED Board  
15-100016-04



**J400 Power Input**

Pin

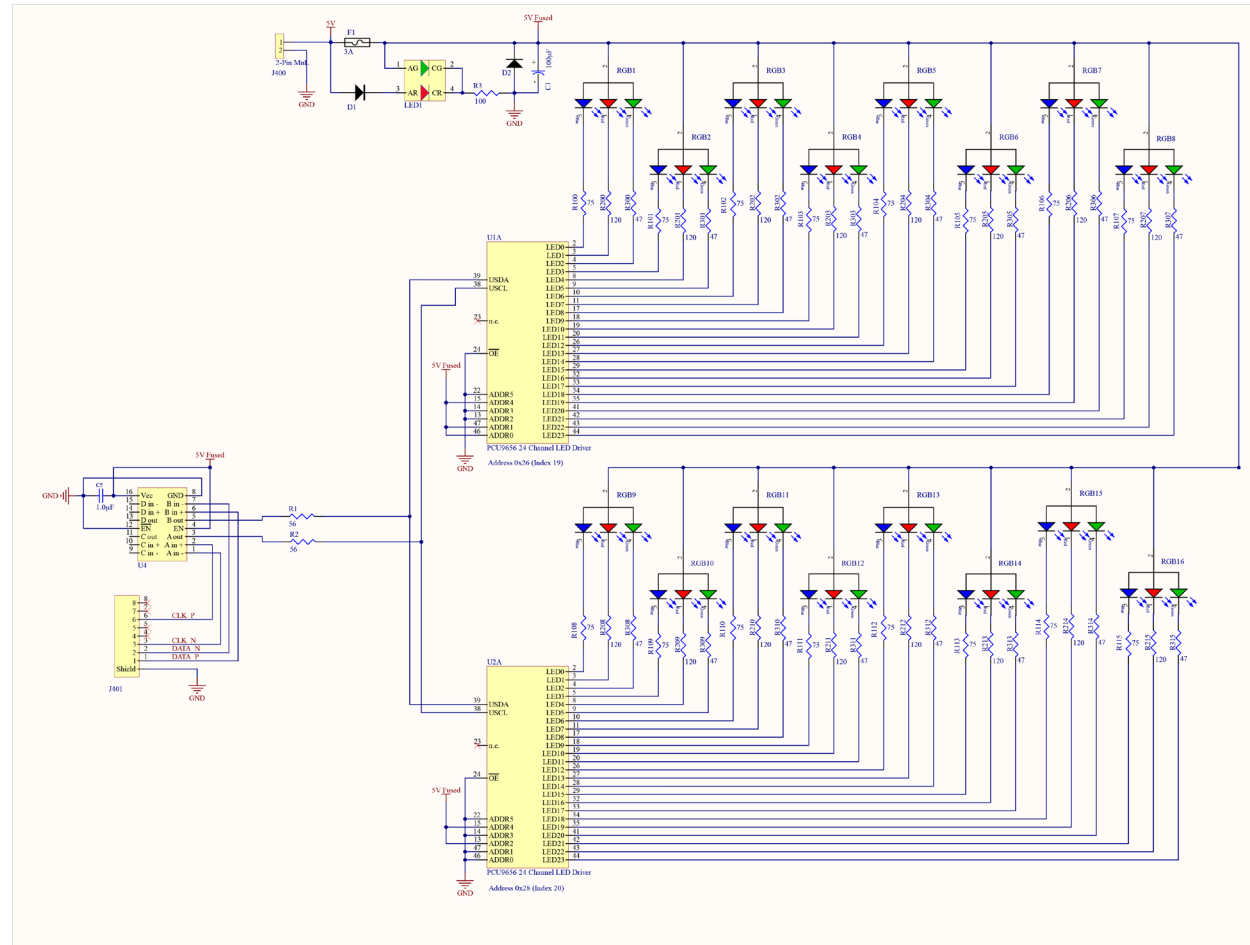
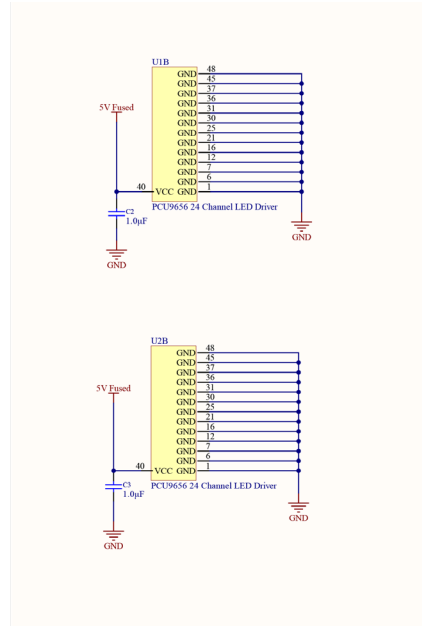
- 1 Red +5VDC from ATX Power Supply
- 2 Black Ground from ATX Power Supply

**J401 I2C Communications Input**

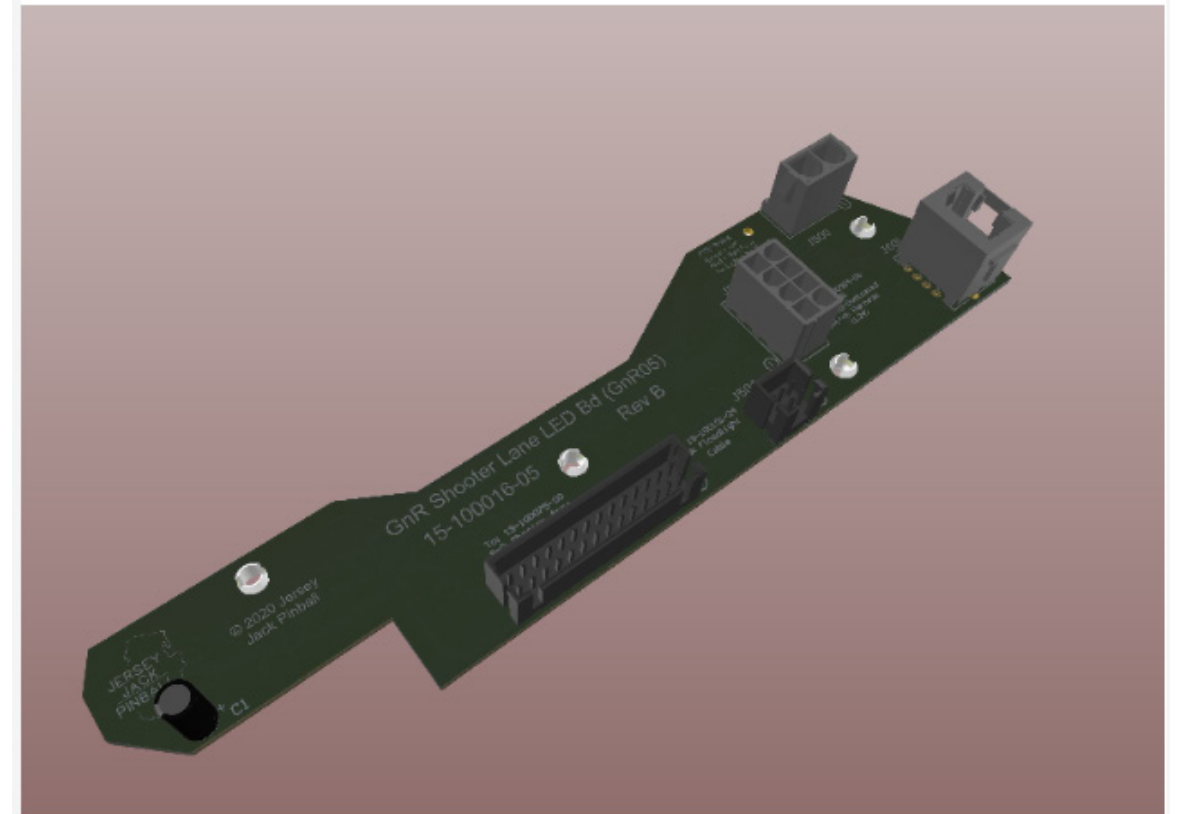
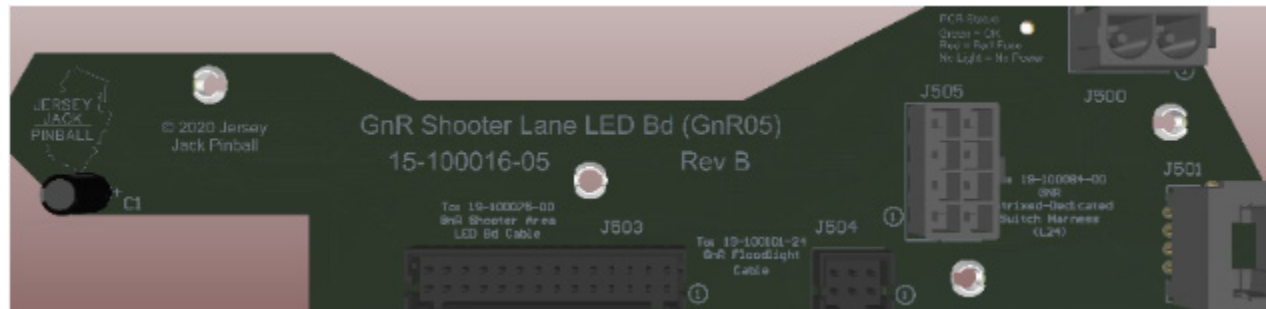
Cat5 or Higher Ethernet Cable

# Pacific Tour RGB LED Board

## 15-100016-04



## Shooter Lane RGB LED Board 15-100016-05



### J500 Power Input

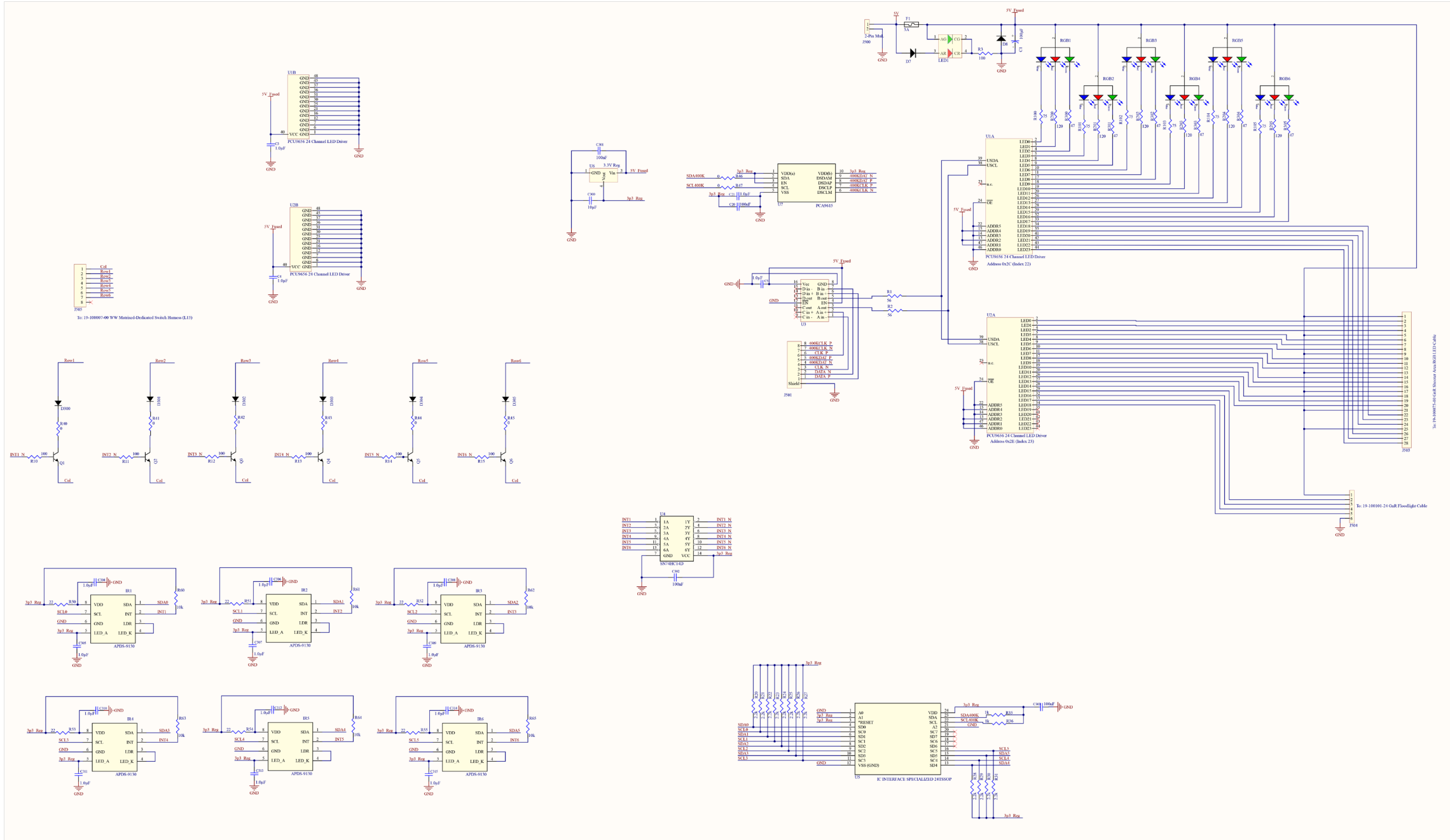
- |     |       |                              |
|-----|-------|------------------------------|
| Pin |       |                              |
| 1   | Red   | +5VDC from ATX Power Supply  |
| 2   | Black | Ground from ATX Power Supply |

### J501 I2C Communications Input

Cat5 or Higher Ethernet Cable

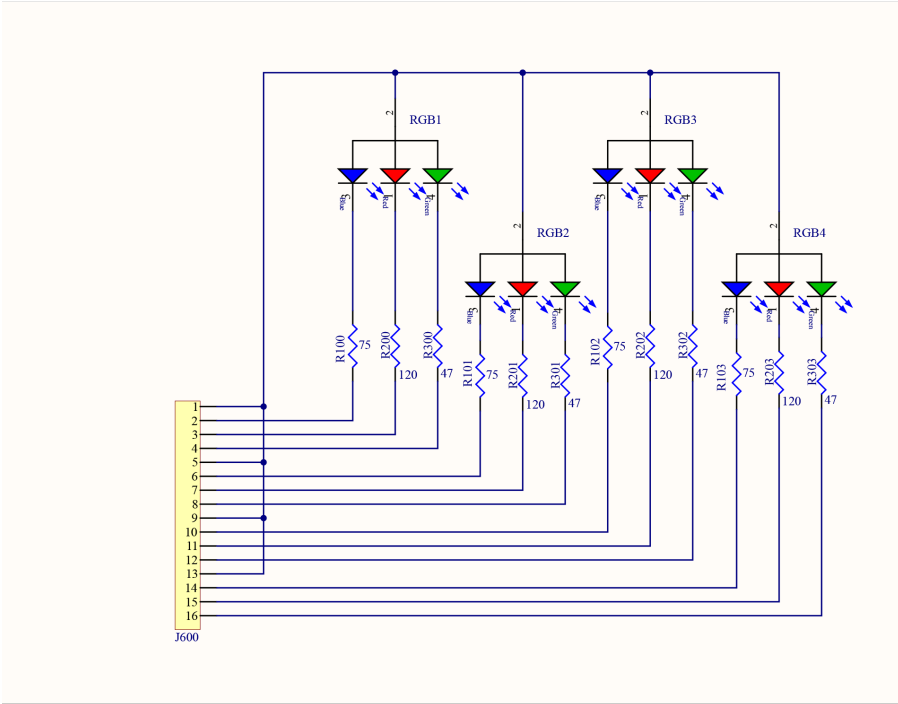
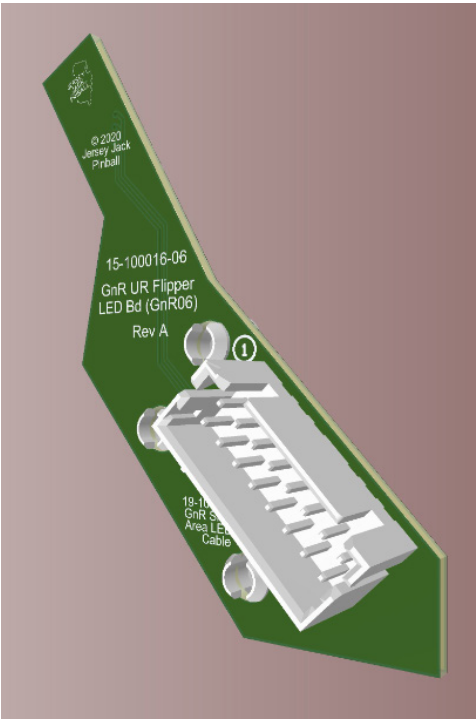
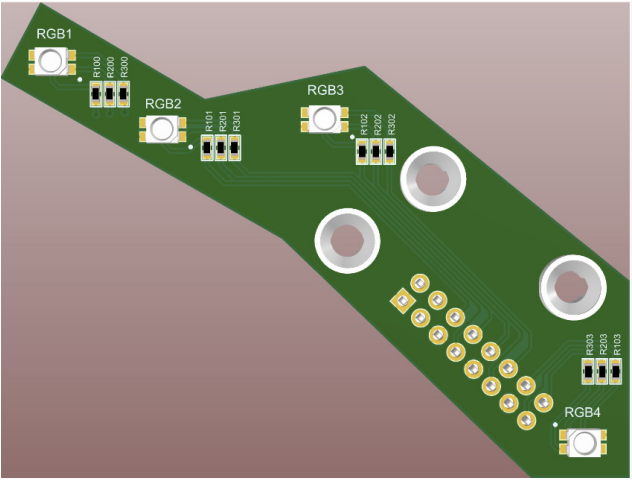
# Shooter Lane RGB LED Board

## 15-100016-05

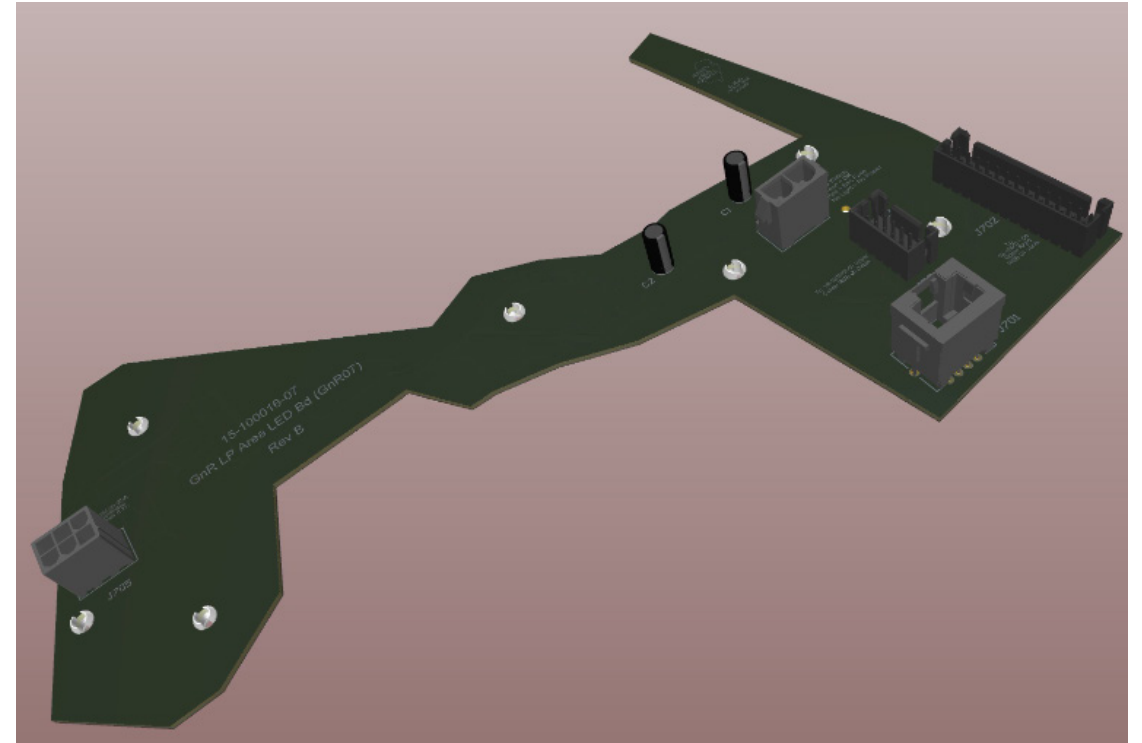
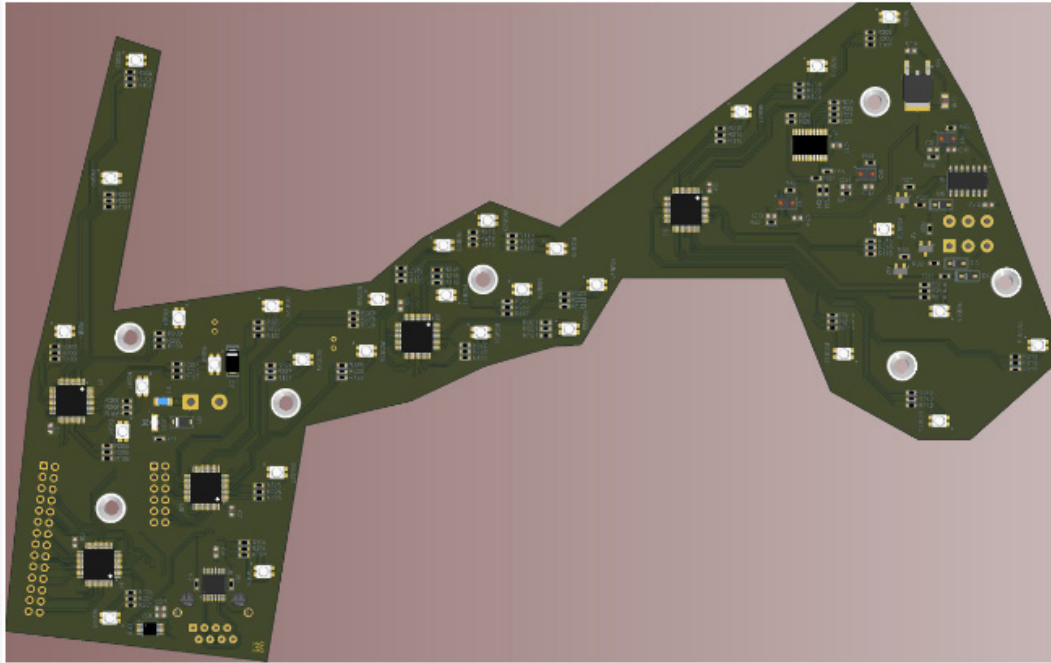




# UR Flipper RGB LED Board 15-100016-06



**LP Area RGB LED Board**  
**15-100016-07**



**J700 Power Input**

Pin

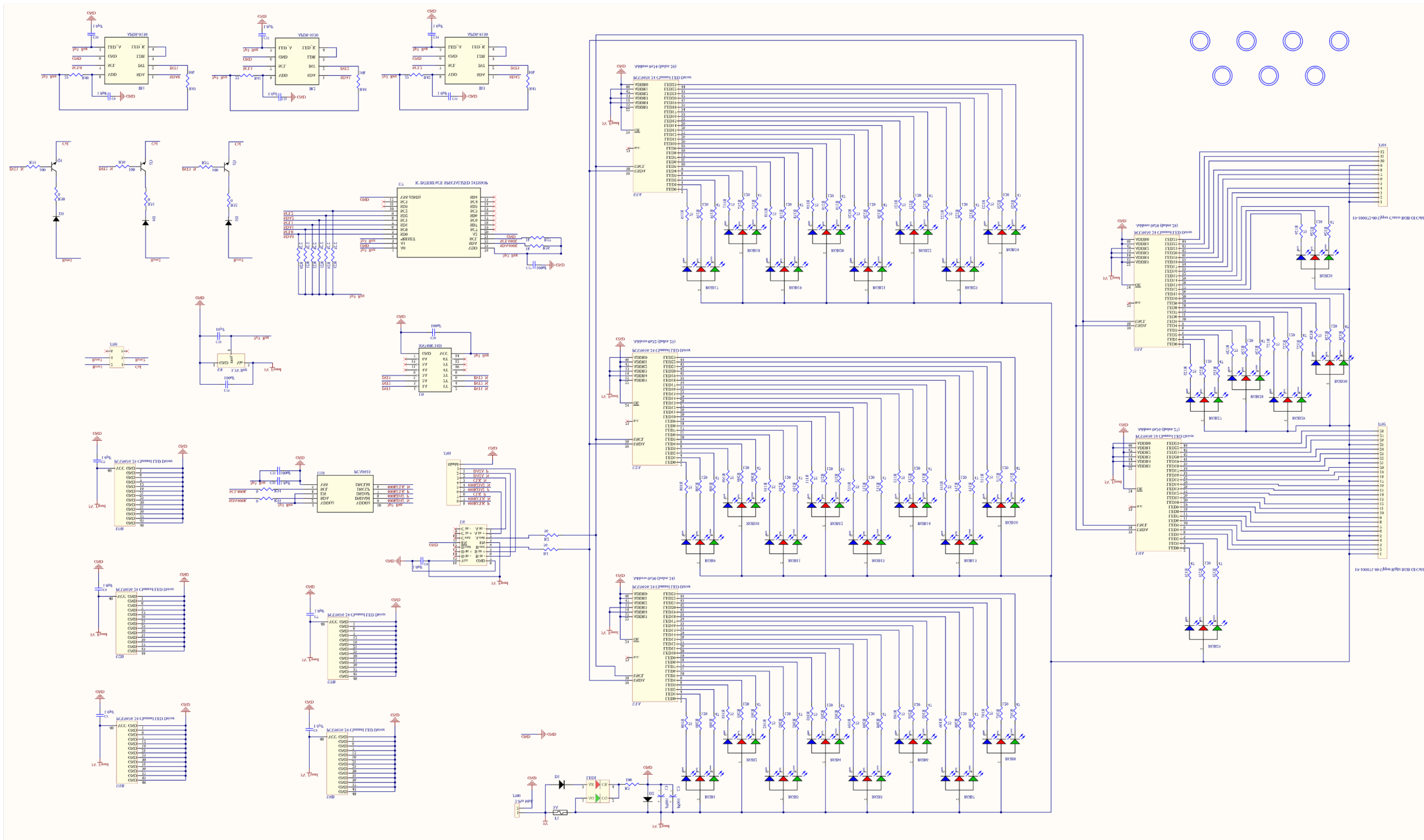
- |   |       |                              |
|---|-------|------------------------------|
| 1 | Red   | +5VDC from ATX Power Supply  |
| 2 | Black | Ground from ATX Power Supply |

**J701 I2C Communications Input**

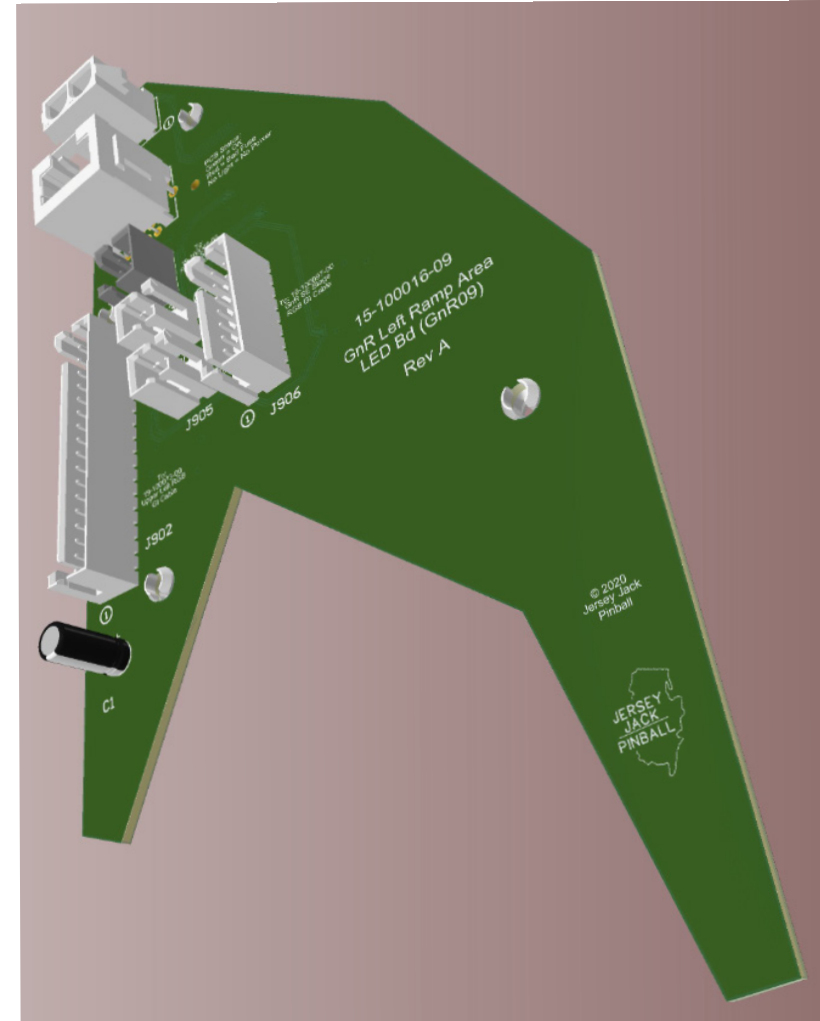
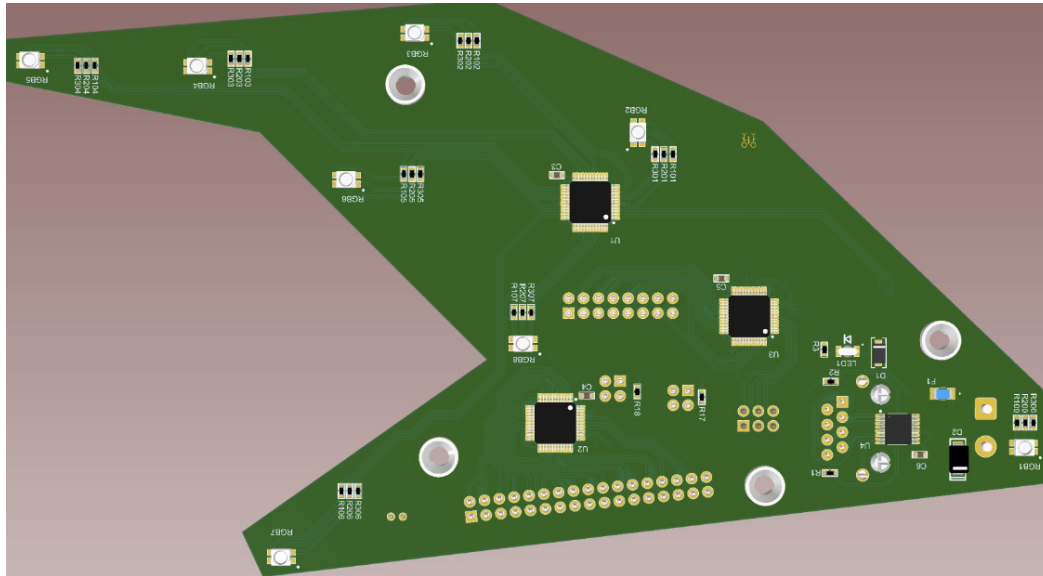
Cat5 or Higher Ethernet Cable

# LP Area RGB LED Board

## 15-100016-07



**Left Ramp Area RGB LED Board  
15-100016-09**



**J7900 Power Input**

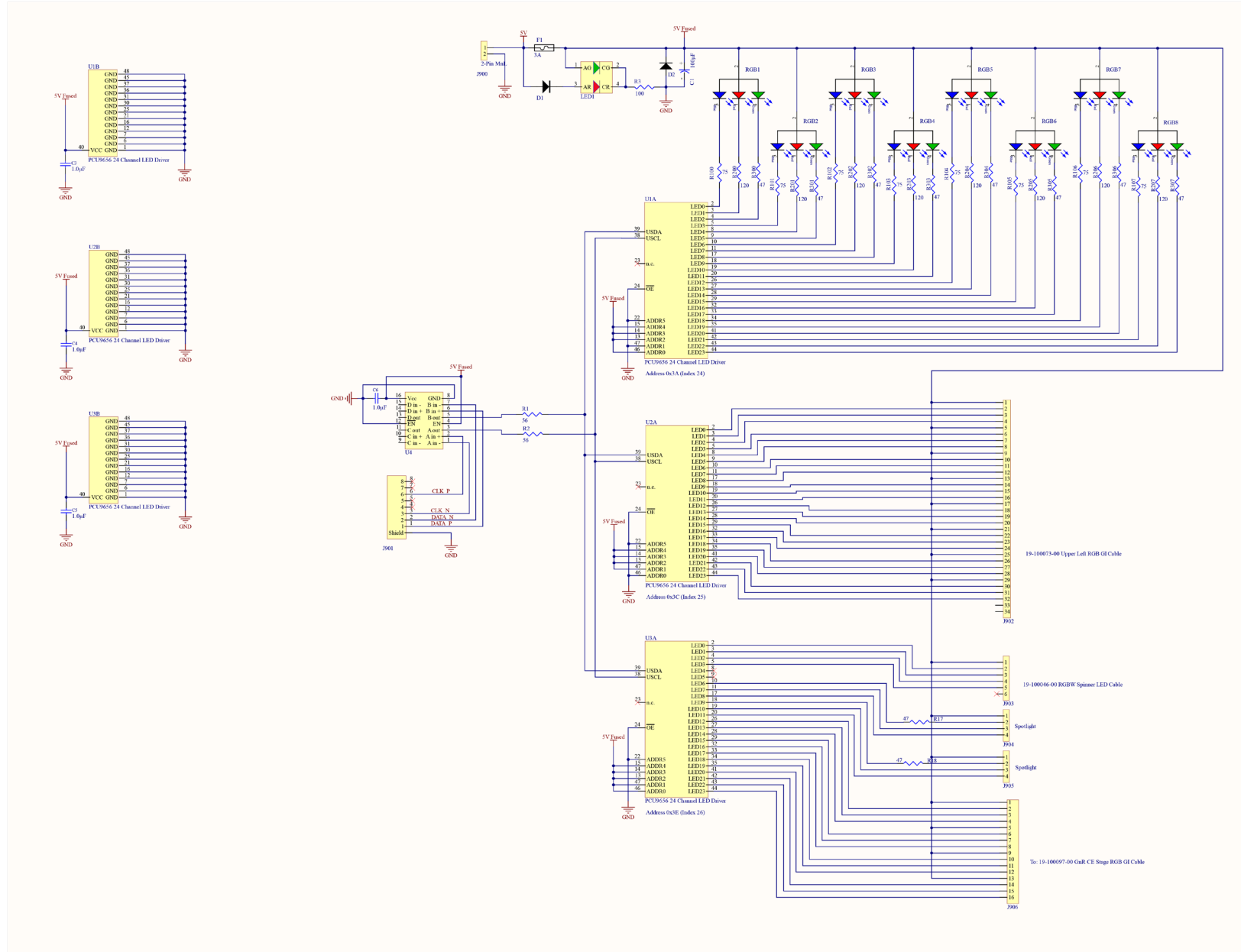
- | Pin |       |                              |
|-----|-------|------------------------------|
| 1   | Red   | +5VDC from ATX Power Supply  |
| 2   | Black | Ground from ATX Power Supply |

**J901 I2C Communications Input**

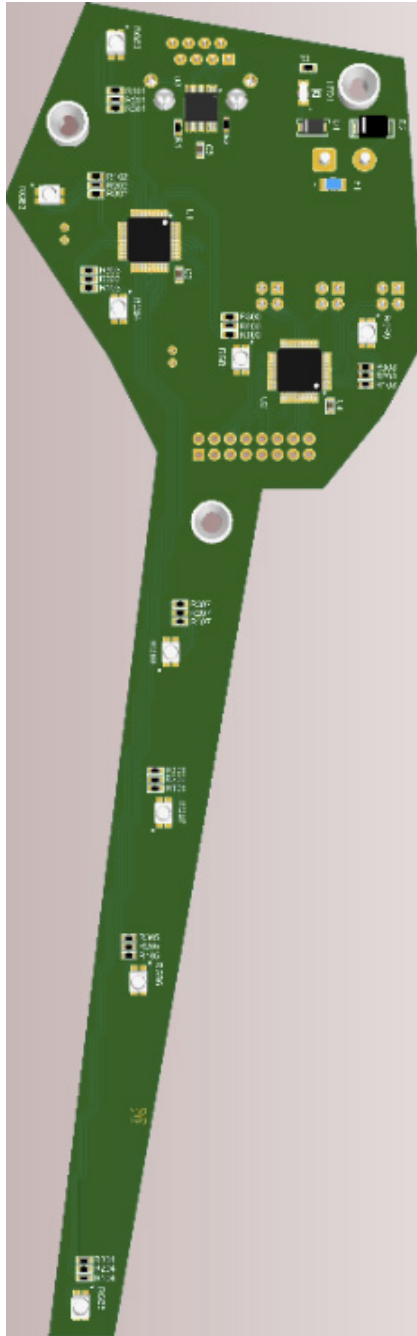
Cat5 or Higher Ethernet Cable

# Left Ramp Area RGB LED Board

## 15-100016-09



## Drums Area RGB LED Board 15-100016-10



### J1000 Power Input

Pin

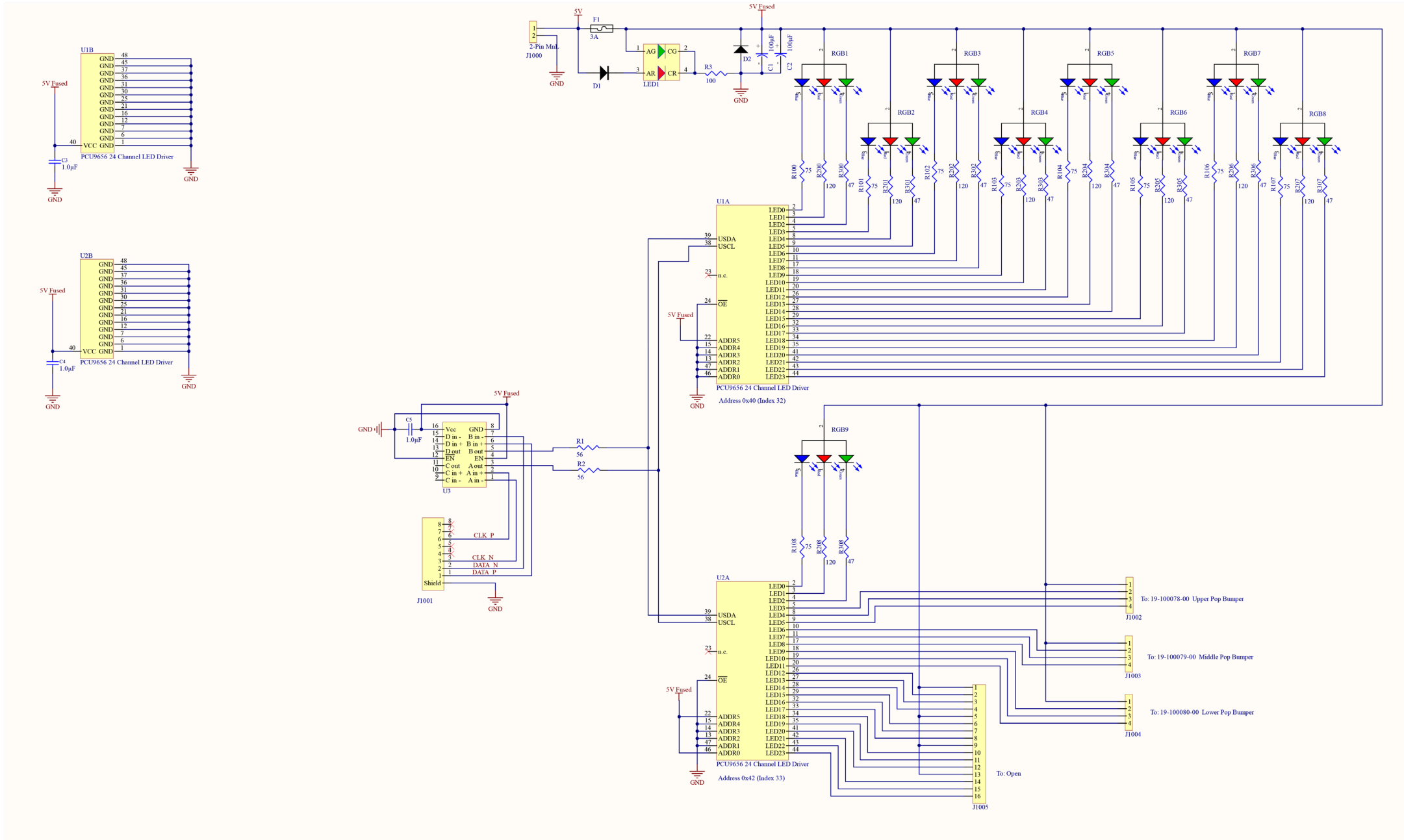
- 1 Red +5VDC from ATX Power Supply
- 2 Black Ground from ATX Power Supply

### J1001 I2C Communications Input

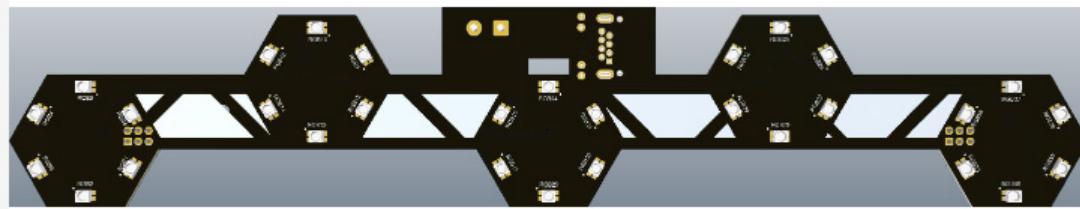
Cat5 or Higher Ethernet Cable

# Drums Area RGB LED Board

## 15-100016-10



## Lighting Truss LED Board 15-100016-13



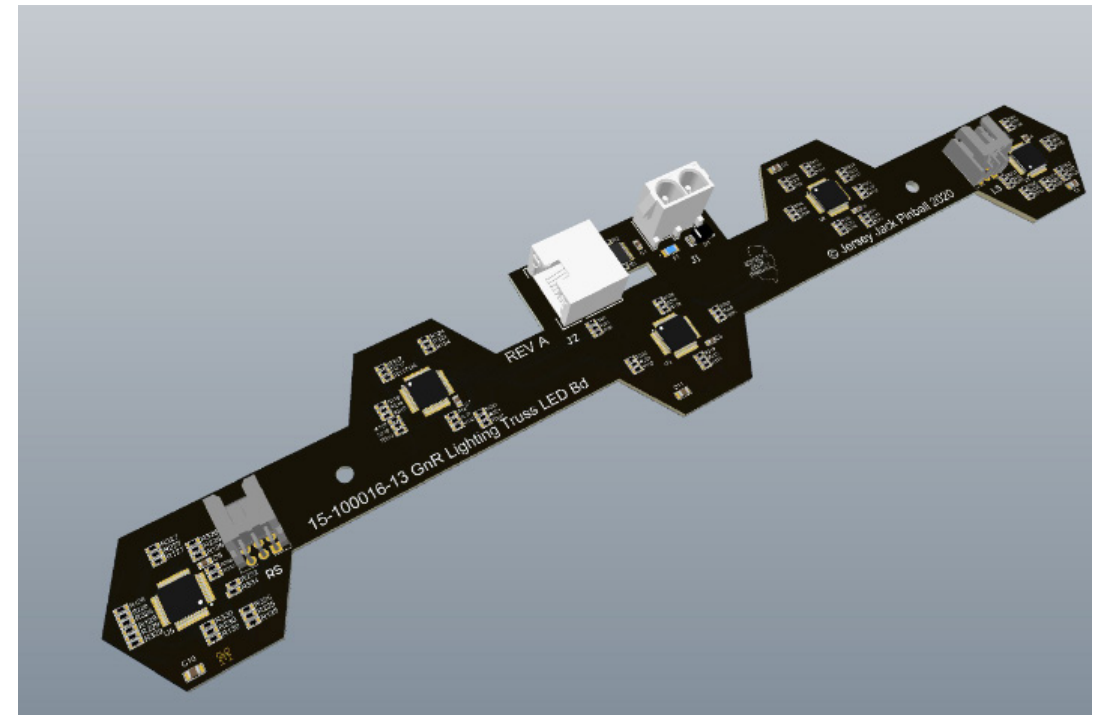
### J1 Power Input

Pin

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

### J2 I2C Communications Input

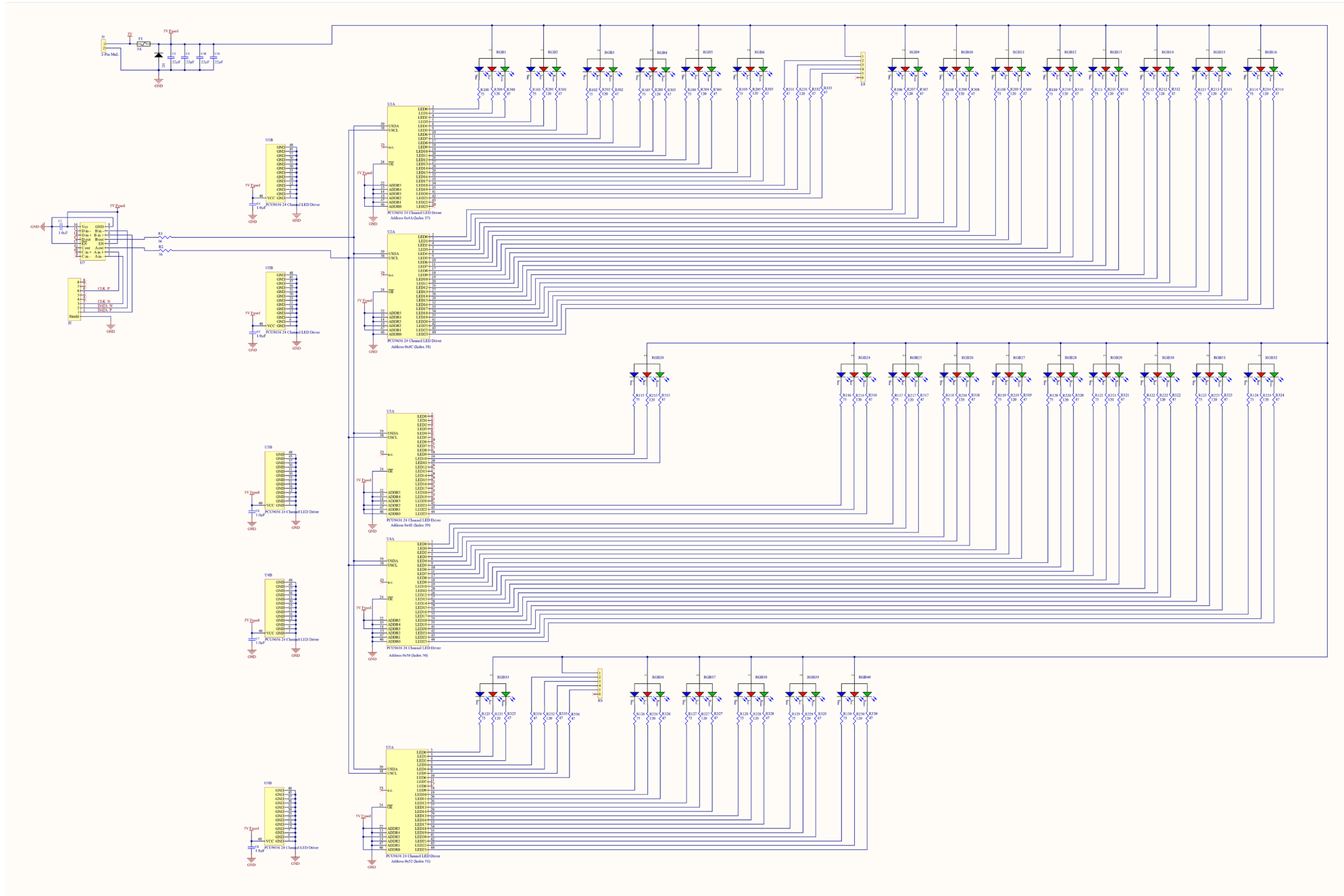
Cat5 or Higher Ethernet Cable



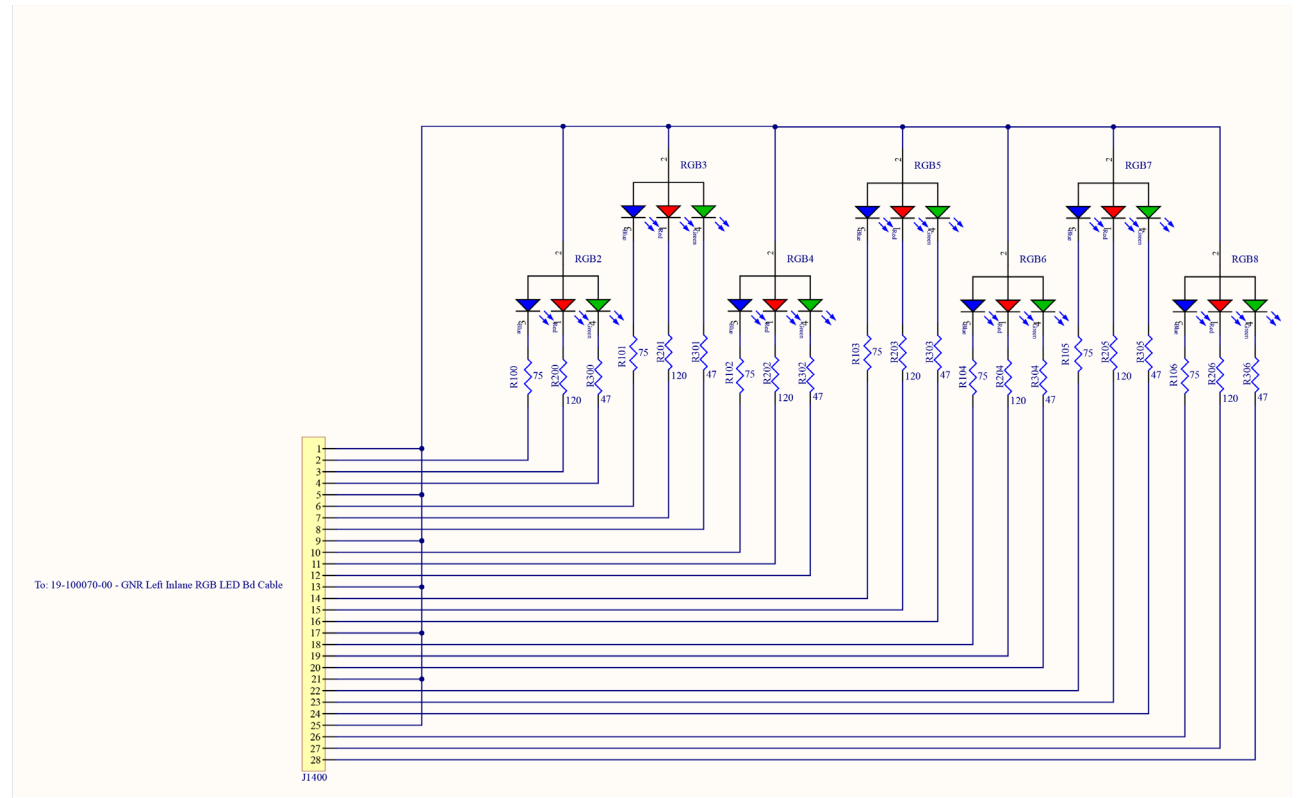
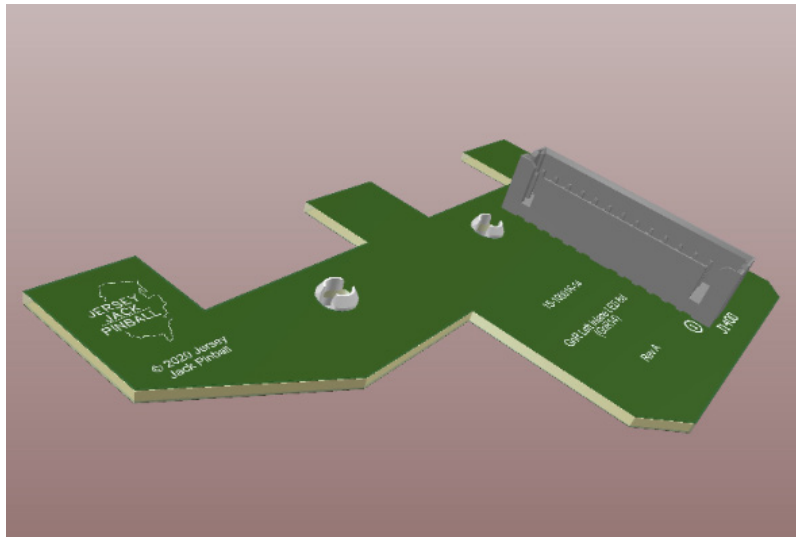
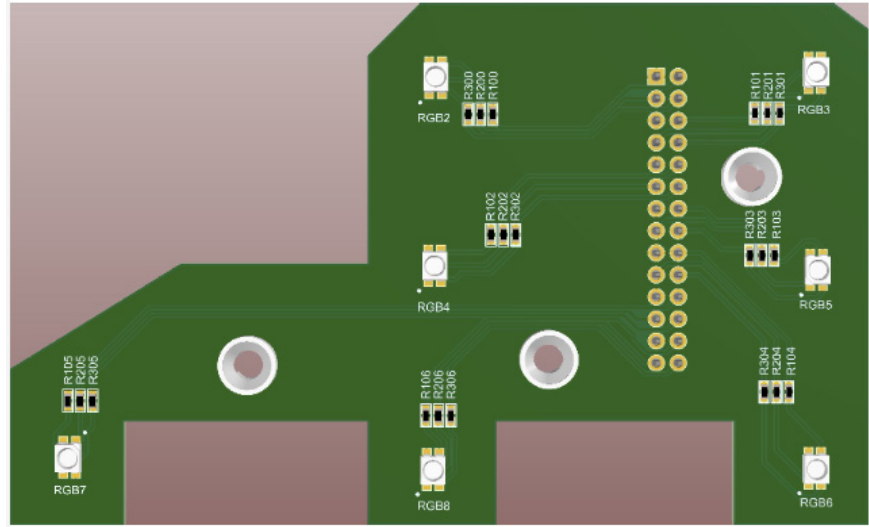


# Lighting Truss LED Board

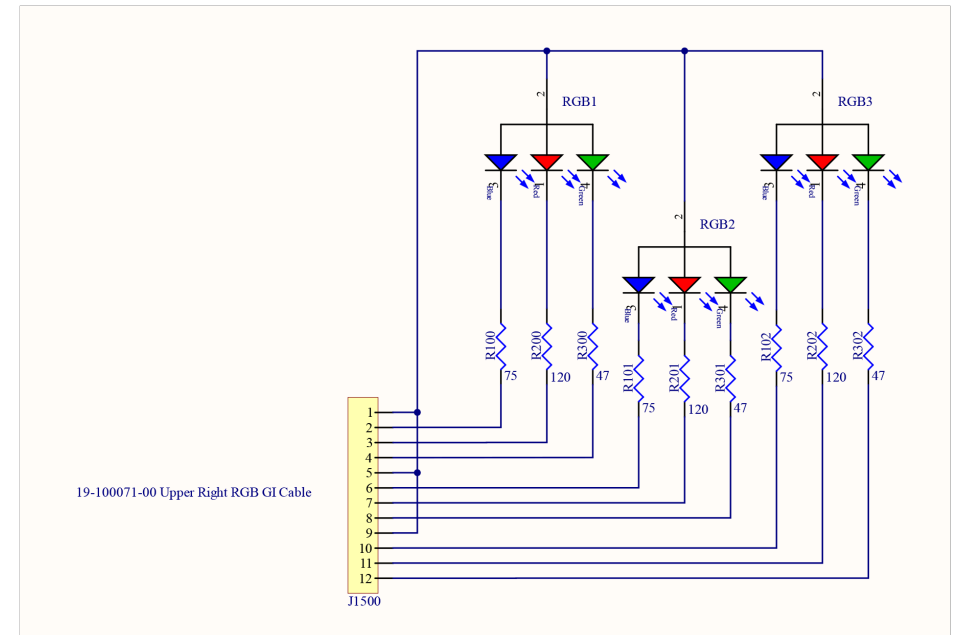
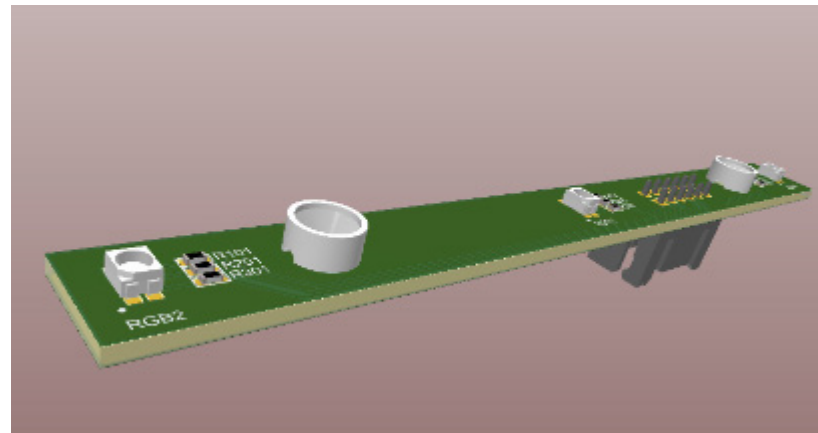
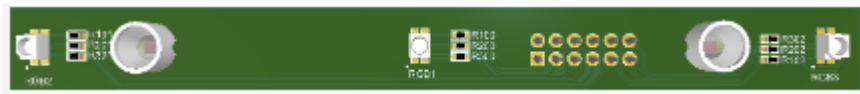
## 15-100016-13



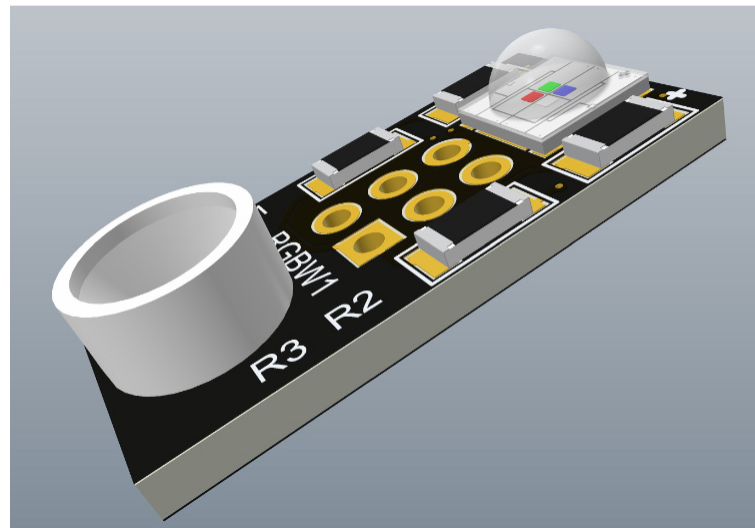
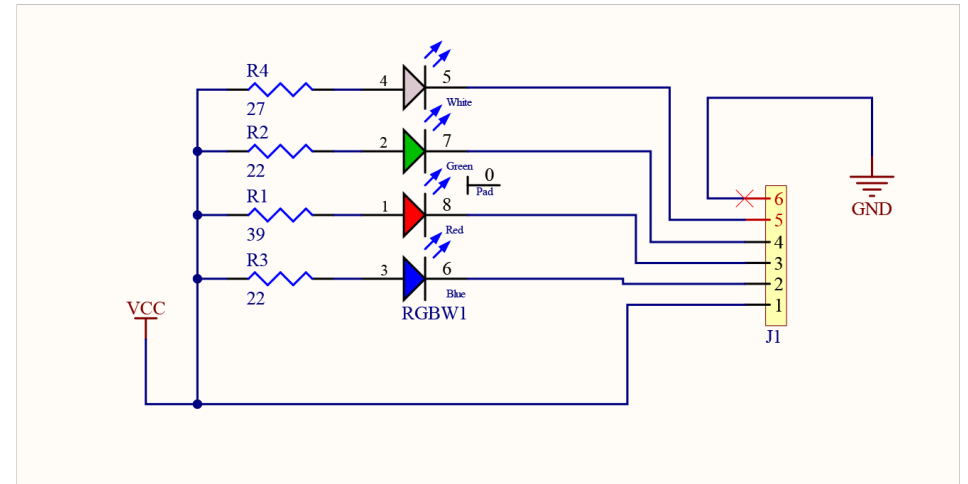
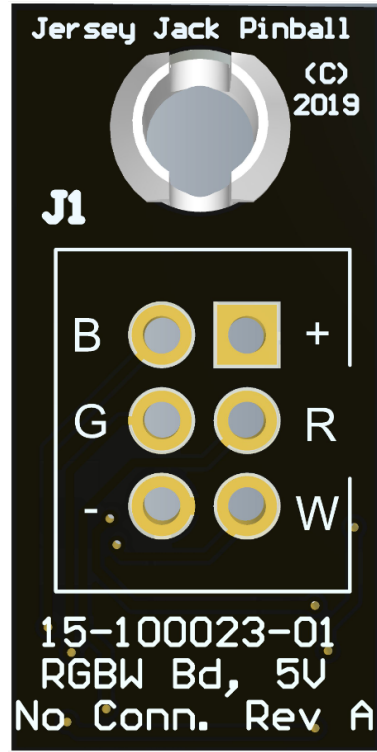
### Left Inlane RGB LED Board 15-100016-14



## AXL Lane Area RGB LED Board 15-100016-15



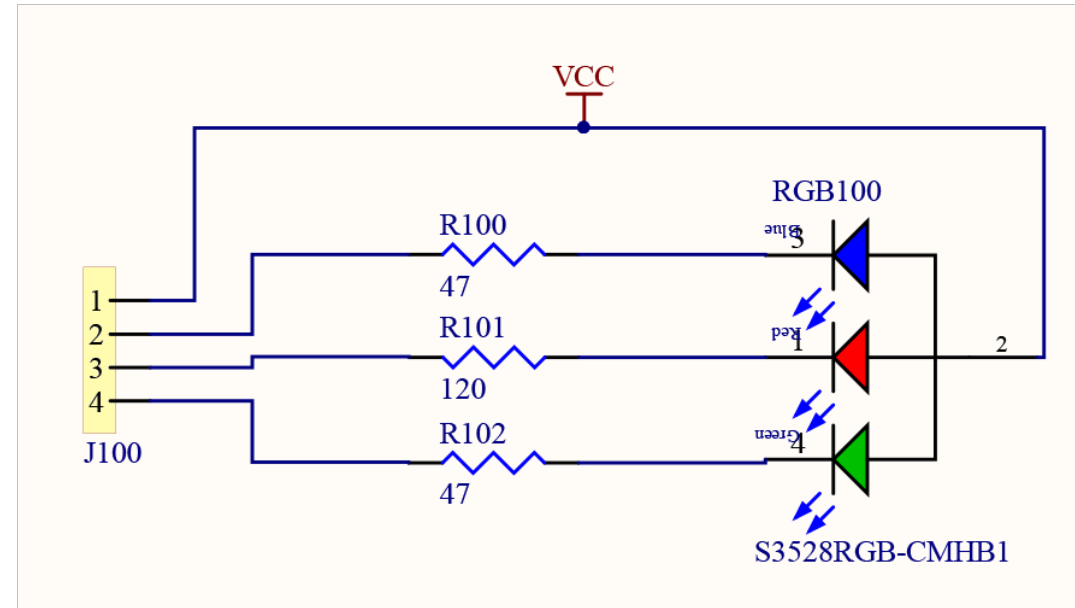
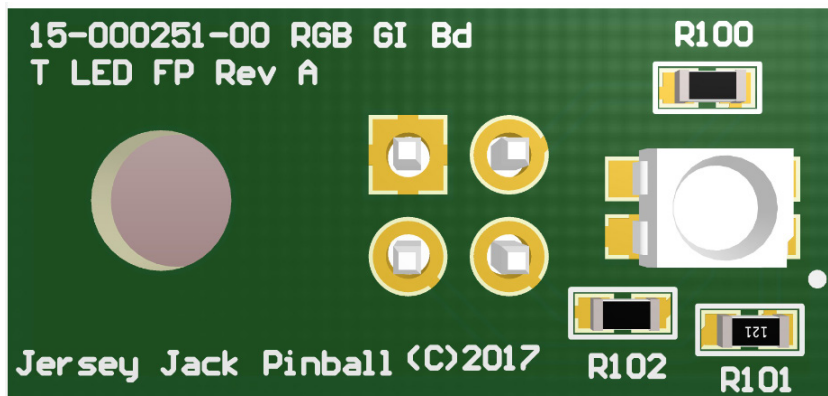
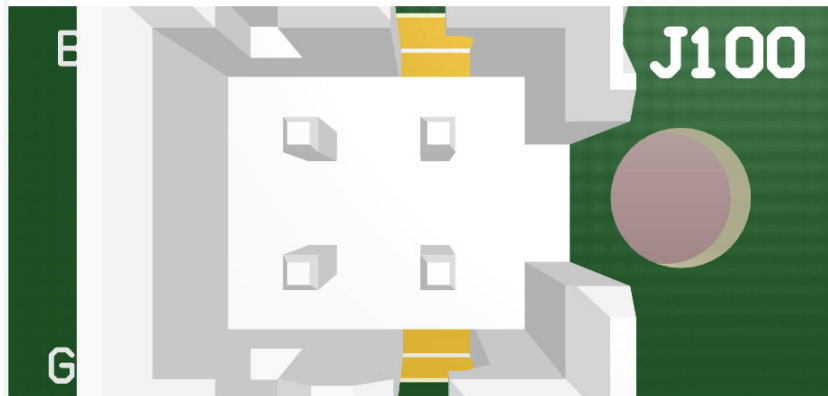
RGBW PCB No Connector Assembly  
15-100023-01



- + +5VDC from a Main RGB LED Board
- B Blue Return to a Main RGB Board
- R Red Return to a Main RGB Board
- G Green Return to a Main RGB Board
- W White Return to a Main RGB Board



RGB GI PCB Assembly  
15-004251-05

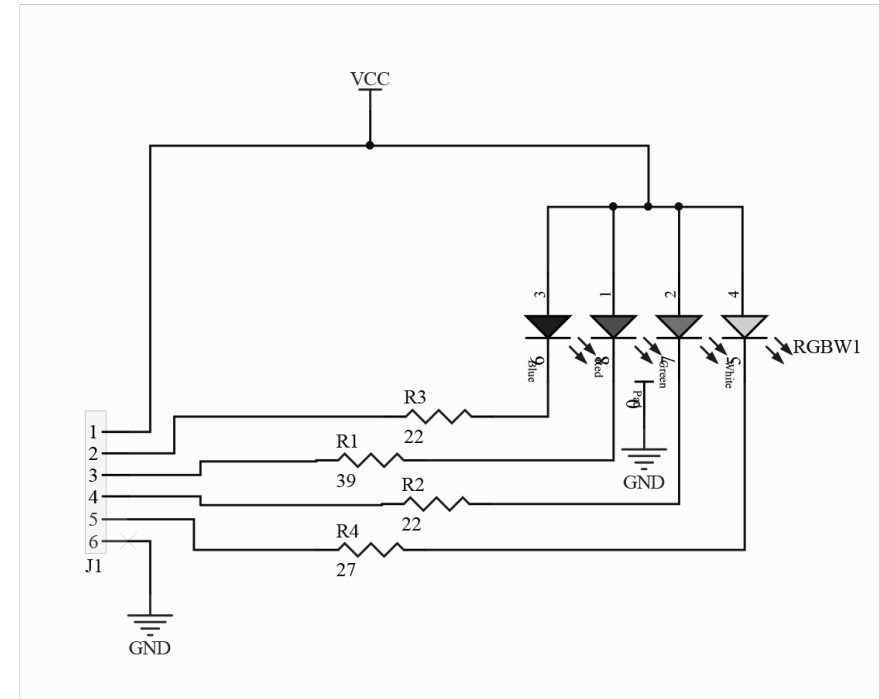
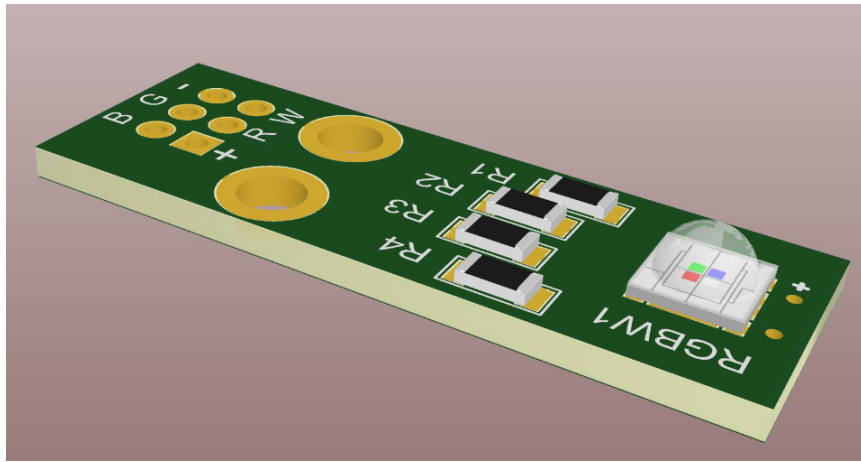


J100

Pin

- 1 +5VDC from a Main RGB LED Board
- 2 Blue Return to a Main RGB Board
- 3 Red Return to a Main RGB Board
- 4 Green Return to a Main RGB Board

Single RGBW LED Board No Connector  
15-004328-00

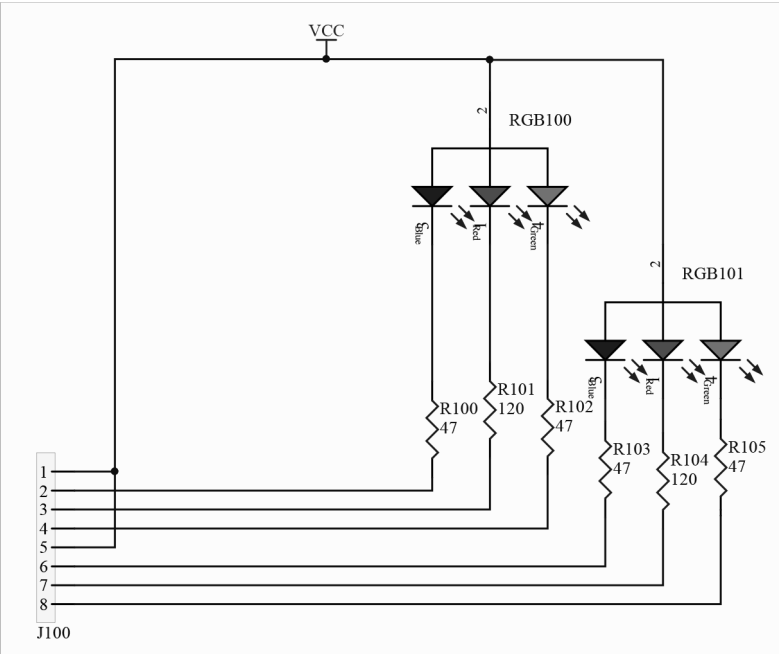
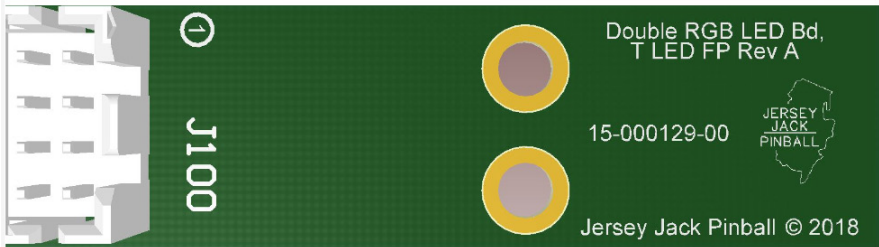
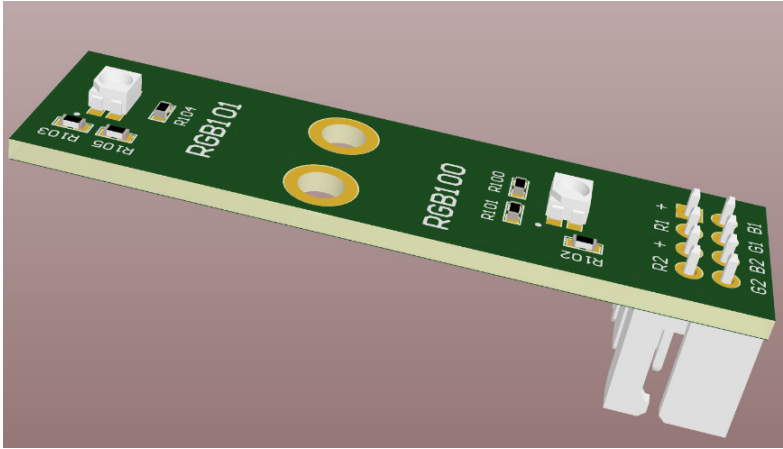


J1

Pin

- 1 +5VDC from a Main RGB LED Board
- 2 Blue Return to a Main RGB Board
- 3 Red Return to a Main RGB Board
- 4 Green Return to a Main RGB Board
- 5 White Return to a Main RGB Board

**Double RGB LED Board**  
**15-004129-05**




**J100**


- Pin**
- 1 +5VDC from a Main RGB LED Board
  - 2 Blue Return to a Main RGB Board
  - 3 Red Return to a Main RGB Board
  - 4 Green Return to a Main RGB Board
  - 5 +5VDC From a Main RGB LED Board
  - 6 Blue Return to a Main LED Board
  - 7 Red Return to a Main LED Board
  - 8 Green Return to a Main LED Board



# MATRIX SWITCH WIRING TABLE

	Column 1 J201-1	Column 2 J201-2	Column 3 J201-3	Column 4 J201-4	Column 5 J201-5	Column 6 J201-6	Column 7 J201-7	Column 8 J201-9	Column 9 J202-1	Column 10 J202-2	Column 11 J202-3	Column 12 J202-4	Column 13 J202-5	Column 14 J202-6	Column 15 J202-8	Column 16 J202-9
	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
<b>Row 1 J200-1</b>	6 - Ball Trough #5	Right Orbit Hi	Bumper Target	Left Ramp Left Target	Upper Playfield Rubber	Left Ramp Enter	Right Ramp Left Target	Right Ramp Made Sensor	Not Used	Center Spinner	Not Used	Not Used	Shooter Lane 1 (Bottom)	Left Guitar Lock (Bottom)	Not Used	Not Used
WHT BLK	1	9	17	25	33	41	49	57	65	73	81	89	97	105	113	121
<b>Row 2 J200-2</b>	6 - Ball Trough #4	Right Top Lanes	Bumper Rubber	Left Ramp Right Target	Upper Playfield Standup	Left Top Lane	Right Ramp Right Target	Center Scoop VUK	Not Used	Inner Loop Enter	Not Used	Not Used	Shooter Lane 2	Left Guitar Lock (Middle)	Not Used	Not Used
WHT BRN	2	10	18	26	34	42	50	58	66	74	82	90	98	106	114	122
<b>Row 3 J200-3</b>	6 - Ball Trough #3	Right Ramp Enter	Keyboard Insert Left	Left Outlane	Lock Up Enter	Left Bumper	Right Inlane	Shooter Lane Target	Not Used	Upper Playfield Hole	Not Used	Not Used	Shooter Lane 3	Left Guitar Lock (Top)	Not Used	Not Used
WHT RED	3	11	19	27	35	43	51	59	67	75	83	91	99	107	115	123
<b>Row 4 J200-4</b>	6 - Ball Trough #2	Right Bumper	Keyboard Insert Middle	Left Inlane Left	Not Used	Left Orbit Hi	Right Sling Hi	Not Used	Not Used	Wheel CW 2	Not Used	Not Used	Shooter Lane 4	Not Used	Not Used	Not Used
WHT ORN	4	12	20	28	36	44	52	60	68	76	84	92	100	108	116	124
<b>Row 5 J200-5</b>	6 - Ball Trough #1 (Right)	Bottom Bumper	Keyboard Insert Right	Left Inlane Right	Not Used	Jam Target	Right Sling Lo	Not Used	Not Used	Wheel CW 1	Not Used	Not Used	Shooter Lane 5	Not Used	Not Used	Not Used
WHT YEL	5	13	21	29	37	45	53	61	69	77	85	93	101	109	117	125
<b>Row 6 J200-6</b>	6 - Ball Trough Jam	Center Top Lanes	Not Used	Left Sling Hi	Not Used	Light Coma Standup	Right Outlane	Not Used	Not Used	Upper Playfield VUK	Not Used	Not Used	Shooter Lane 6 (Top)	Right Guitar Lock (Top)	Not Used	Not Used
WHT GRN	6	14	22	30	38	46	54	62	70	78	86	94	102	110	118	126
<b>Row 7 J200-7</b>	6 - Ball Trough #6 (Left)	Right Orbit Lo	Not used	Left Sling Lo	Not Used	Left Ramp Made	Shooter Lane	Not Used	Not Used	Coma Lockup (CE Only)	Not Used	Not Used	Not Used	Right Guitar Lock (Middle)	Not Used	Not Used
WHT BLU	7	15	23	31	39	47	55	63	71	79	87	95	103	111	119	127
<b>Row 8 J200-8</b>	Not Used	Right Ramp Made Target	Not used	Not Used	Not Used	Inner Loop Made	Not Used	Not Used	Not Used	Left Orbit Spinner	Not Used	Not Used	Not Used	Right Guitar Lock (Bottom)	Not Used	Not Used
WHT VIO	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128

 Opto Switch

 Reflective Opto

# 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 VIO
J601-1	Left Flipper EOS	Right Flipper EOS	Upper Right Flipper EOS	Upper Playfield Flipper EOS	Not Used	Not Used	Not Used	Not Used
BLK	1	2	3	4	5	6	7	8

	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 VIO
J602-1	Left Flipper Switch Lower	Not Used	Right Flipper Switch Lower	Right Flipper Switch Upper	Enter / Menu Button	Up / Volume Button	Down / Volume Button	Escape / Service Credit Button
BLK	9	10	11	12	13	14	15	16

	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 VIO
J603-1	Left Coin Switch	Right Coin Switch	Center Dollar Bill Acceptor	4th Coin Slot Switch	5th Coin Slot Switch	Ticket Mech Notch Switch	Not Used	Not Used
BLK	17	18	19	20	21	22	23	24

	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 GRY
J604-1	Start Button	Coin Door Open	Plumb Bob Tilt	Bluetooth	Action Button	Headphone Panel Volume Down	Headphone Panel Volume Up	Headphone Panel Jack Sense
BLK	25	26	27	28	29	30	31	32

# 70 VOLT COIL TABLE

70V Power	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	
<b>F704</b>	BRN	BLK	BRN	GRY	BRN	RED	BRN	ORN	BRN	YEL	BRN	GRN	BRN	BLU	BRN	VIO
<b>J104-1</b>	Not Used		Center Scoop VUK		Not Used		Not Used		Not Used		Not Used		Knocker		Not Used	
BRN	1		2		3		4		5		6		7		8	
70V Power	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	
<b>F705</b>	RED	BLK	RED	BRN	RED	GRY	RED	ORN	RED	YEL	RED	GRN	RED	BLU	RED	VIO
<b>J105-1</b>	Left Flipper Power		Left Flipper Hold		Right Flipper Power		Right Flipper Hold		Trough VUK		Auto Launch		Not Used		Not Used	
RED	9		10		11		12		13		14		15		16	
70V Power	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	
<b>F706</b>	ORN	BLK	ORN	BRN	ORN	RED	ORN	GRY	ORN	YEL	ORN	GRN	ORN	BLU	ORN	VIO
<b>J603-1</b>	Loop Magnet		Upper Right Flipper Power		Upper Right Flipper Hold		Not Used		Not Used		Not Used		Not Used		Right Ramp Diverter	
ORN	17		18		19		20		21		22		23		24	
70V Power	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	
<b>F707</b>	TAN	BLK	TAN	BRN	TAN	RED	TAN	ORN	TAN	YEL	TAN	GRN	TAN	BLU	TAN	VIO
<b>J107-1</b>	Left Ramp Diverter Power		Left Ramp Diverter Hold		Upper Playfield Flipper Power		Upper Playfield Flipper Hold		Not Used		Not Used		Left Pop Bumper		Not Used	
TAN	25		26		27		28		29		30		31		32	
70V Power	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	
<b>F708</b>	PNK	BLK	PNK	BRN	PNK	RED	PNK	ORN	PNK	YEL	PNK	GRN	PNK	BLU	PNK	VIO
<b>J108-1</b>	Lock Up Release Left		Lock Up Release Right		Right Pop Bumper		Bottom Pop Bumper		Not used		Not Used		Not Used		Upper Playfield VUK	
PNK	33		34		35		36		37		38		39		40	

# 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 PLM	Not Used 49	Not Used 50	Not Used 51	Not Used 52	Not Used 53	Not Used 54	Not Used 55	Not Used 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 RED	BLU ORN	BLU YEL	BLU GRN	BLU GRY	BLU VIO
J111-1 BLU	Right Slingshot 57	Left Slingshot 58	Not Used 59	Not Used 60	Not Used 61	Not Used 62	Not Used 63	Not Used 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	Not Used 65	Not Used 66	Not Used 67	Not Used 68	Not Used 69	Not Used 70	Not Used 71	Not Used 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 YEL	Not Used 41	Not Used 42	Not Used 43	Not Used 44	Not Used 45	Not Used 46	Not Used 47	Not Used 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 LT BLU	Shaker Motor 73	Not Used 74	Ticket Mech Motor Drive 75	Not Used 76	Not Used 77	Not Used 78	Start Button Light 79	Flash Bulb Topper 80

# GNR FUSED POWER STREAM

