

THE WALKING DEAD®

REMASTERED

SERVICE AND OPERATION MANUAL



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WARNING

IMPORTANT HEALTH WARNING: PHOTSENSITIVE SEIZURES - A very small percentage of people may experience a seizure when exposed to certain visual images, including flashing lights or patterns. Even people with no history of seizures of epilepsy may have an undiagnosed condition that can cause "photosensitive epileptic seizures" due to certain visual images, flashing lights or patterns. Symptoms can include lightheadedness, altered vision, eye or face twitching, jerking or shaking of arms or legs, disorientation, confusion, momentary loss of awareness, and loss of consciousness or convulsions that can lead to injury from falling down or striking nearby objects.

IMMEDIATELY STOP PLAYING AND CONSULT A DOCTOR IF YOU EXPERIENCE ANY OF THESE SYMPTOMS.

ATTENTION! IMPORTANT WARRANTY INFORMATION

The electronics system, node network architecture, mechanical devices and associated software control systems in this pinball machine are designed to work with genuine Stern Pinball accessories and devices.

Installation of non-authorized accessories, lamps, LED's, motors or other devices or modification of electro-mechanical devices may damage the system and may void your warranty.

Stern Pinball machines are assembled in Elk Grove Village, Illinois, USA. Stern Pinball has inspected each game element to ensure it meets our quality standards.

Each pinball machine has unique characteristics that make it a one-of-a-kind American made product. Each will have variations in appearance resulting from differences in the machine's particular wood parts, individual printed art and mechanical assemblies. No playfield is perfectly flat and varies depending on the season. Game play will result in playfield dimpling as the harder steel ball contacts the wood and coating; over time multiple dimples will blend to make them less noticeable. Normal plastic insert crazing (tiny stress cracks) and ghosting (small cloudy areas around insert edges) are often seen in pinball machines, due to a combination of plastic mold stress, pushing of inserts into purposely undersized holes, and heating and breaking of inserts' plastic "skin" when the playfield is sanded.

Games configured for North America operate on 60 cycle electricity only. These games will not operate in countries with 50 cycle electricity (Europe, UK, Australia).



MANUAL #780-50AM-00
THE WALKING DEAD REMASTERED LE #500-55AM-01
THE WALKING DEAD REMASTERED PREMIUM #500-55AN-01

1-800-KICKERS - service@sternpinball.com
www.sternpinball.com - facebook.com/sternpinball

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1. SETUP AND MOVING

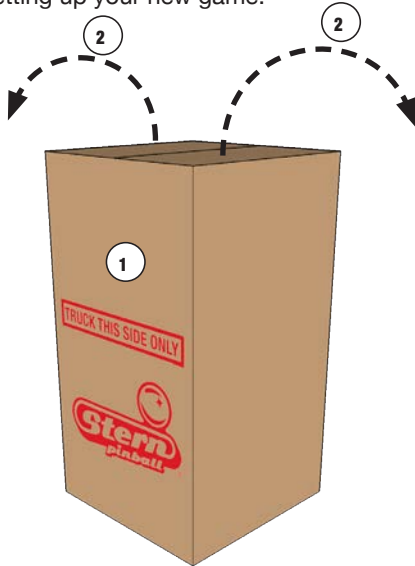
1.1 FIRST-TIME SETUP INSTRUCTIONS

Your brand new Stern Pinball Machine is carefully packed for safety and security. For your safety, exercise caution and use the correct tools and sufficient help when setting up your new game.

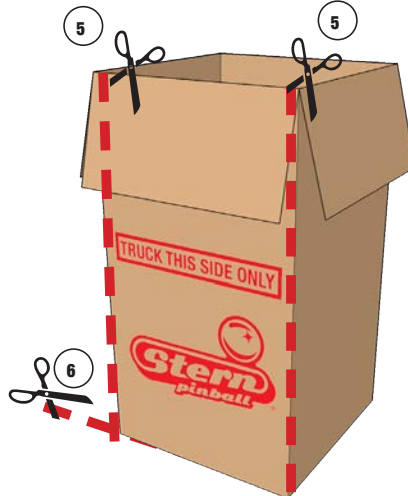
TOOLS REQUIRED

- 5/8" Socket Wrench
- Utility Knife
- Snips
- An Assistant

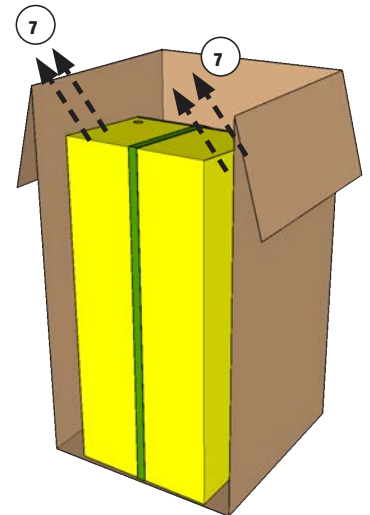
CAUTION: AT LEAST TWO (2) PEOPLE ARE REQUIRED TO MOVE AND MANEUVER THE GAME. USE PROPER MOVING EQUIPMENT AND EXTREME CARE WHILE HANDLING. STERN PINBALL MACHINES WEIGH OVER 250LBS BOXED.



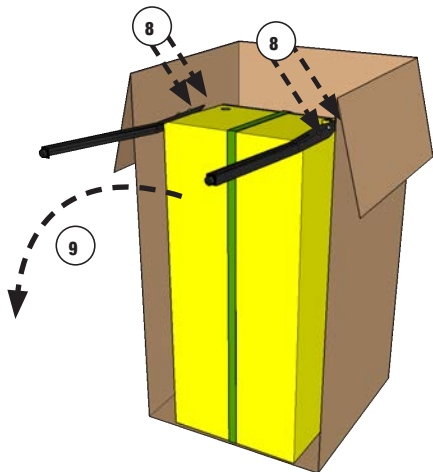
1. Locate the side labeled "TRUCK THIS SIDE ONLY". The bottom of the game faces this side.
2. Open the top box flaps by pulling hard in an upward motion on each flap. If the flaps are taped, cut the tape first, taking care to avoid the box staples.



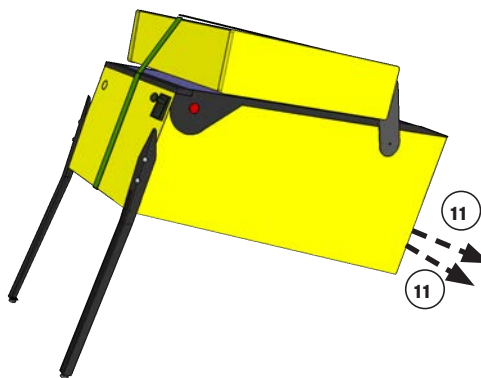
3. Remove the four (4) foam pieces and two (2) narrow box tubes which contain the four (4) identical legs with levelers.
4. DO NOT CUT STRAPPING YET. Keep backbox secured in the down position.
5. With the utility knife, carefully cut down the left and right corners of the box.



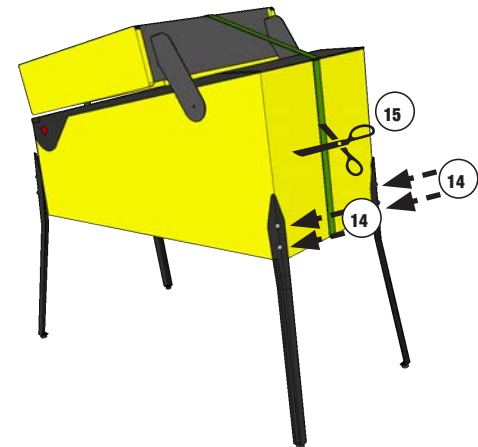
6. Let the face fall forward and remove the entire side by carefully cutting the bottom.
7. With the game still in its folded position, use a 5/8" wrench to loosen and remove the 2 leg bolts on each side of the front cabinet. Ensure the leg levelers are screwed all the way into the legs.



8. Install front legs using the bolts removed from the cabinet. Secure tightly.
9. Have someone help you carefully set the game down on the front legs.



10. Set aside the open box.
11. With a 5/8" socket wrench, loosen and remove the 2 leg bolts on each side of the rear cabinet, 4 total.



12. Using supports or two people, prop the rear of the cabinet up.
13. Ensure the rear leg levelers are screwed all the way into the legs.
14. Install rear legs using the 4 bolts removed from step 11.

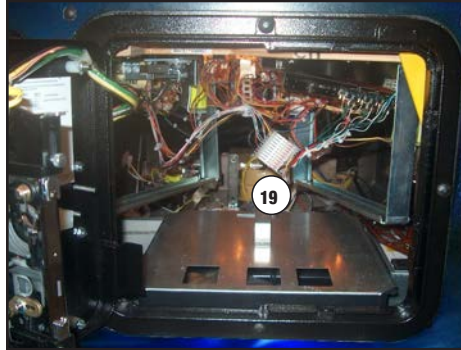


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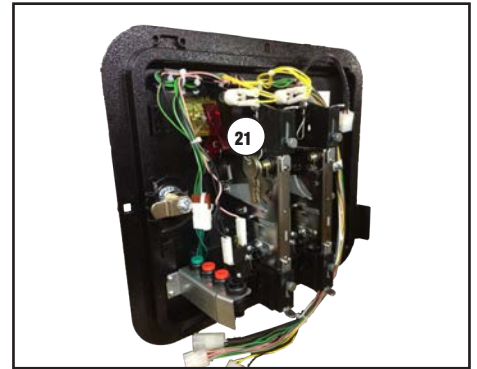
FIRST-TIME SETUP CONTINUED



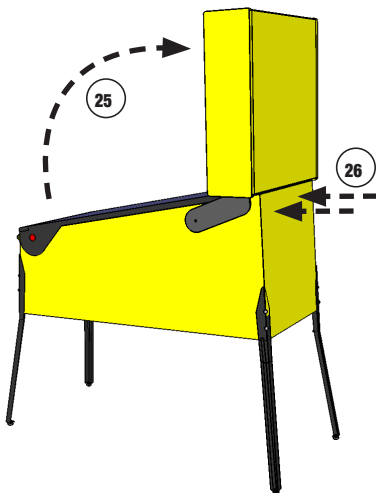
15. Cut nylon strapping and remove protective strap corner guards.
16. Locate the factory keys, either on the shooter rod or taped to the playfield glass.
17. Using snips, cut the tie-wrap securing the keys if required. One set of keys is for the front coin door, the other set of keys is for accessing components in the backbox.



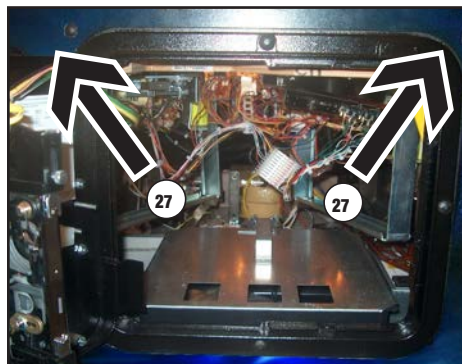
18. Open the front coin door.
19. Reach into the game and remove the retaining clip at the rear of the cash box.
20. Remove the cash box lid by sliding it toward you.



21. Store the backbox keys, if desired, on the metal hook located in the coin door.
22. Locate and remove the pinballs, plumb bob, and backbox bolts from the cash box.
23. Replace the cash box lid and retaining clip for future use.



24. Locate the two (2) backbox bolts in the cash box.
25. Carefully raise backbox to upright position while ensuring that cables are not pinched.
26. Use the 5/8" wrench to install the two (2) backbox bolts to secure the backbox as indicated on the back of the cabinet.



27. Reach inside the cabinet and lift the two latches located on either side of the coin door.
28. Remove the front top molding.



29. Remove the playfield glass by sliding it toward you and carefully place it in a safe location. Remove all playfield shipping tie downs, shipping blocks, and packing foam, and follow any game-specific unpacking instructions included in the playfield, if present.

CAUTION: PLAYFIELD GLASS IS MADE FROM HIGH-STRENGTH TEMPERED GLASS. TEMPERED GLASS IS SENSITIVE TO EXTREME TEMPERATURE SHIFTS AND CORNER NICKS, WHICH CAN CAUSE THE GLASS TO FAIL CATASTROPHICALLY. TAKE CARE TO STORE THE GLASS ON A SOFT, ROOM-TEMPERATURE SURFACE AND PREVENT THE CORNERS FROM BEING DAMAGED.



FIRST-TIME SETUP CONTINUED

30. If pinballs were already installed into the lower ball trough, remove them before lifting the playfield.
31. Grasp the lower arch between the flippers, and firmly but gently pull directly up to raise the playfield 8 to 12 inches.
32. While holding the playfield up, pull the playfield toward you until the two playfield supports are over the front edge of the cabinet.
33. Rest the playfield on the front edge of the cabinet.
34. Raise the playfield and rest it against the backbox.
35. Visually inspect all cabinet cables and connector terminations; ensure no wires or cables are pinched and that cable harnesses are not pulled tight.
36. Locate the plumb bob in the parts bag in the cash box.
37. Slide plumb bob onto the hanger wire. Note: the vertical position of the plumb bob affects tilt sensitivity - higher makes the game more sensitive to tilting.
38. Tighten the thumb screw finger-tight.
39. Install the correct number of pinballs. Refer to the decal on the lock down assembly for the correct number of pinballs.

LOCATING, LEVELING, AND FINAL SETUP

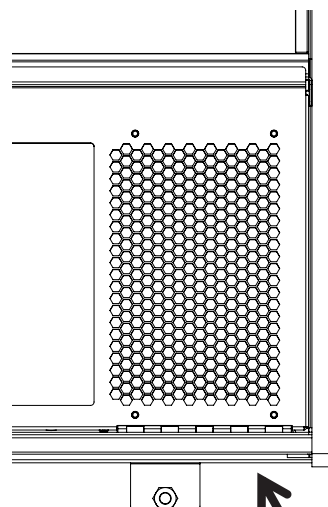
1. Select a location that is indoors, out of direct sunlight, and climate controlled. Excessive moisture/humidity can cause long-term damage to your game.
2. Adjust the front or rear levelers as necessary to position the playfield level bubble, located on the front right of the playfield next to the shooter lane, to float between the two (2) black lines. This will place the playfield at the recommended 6.5° pitch. Playfield angles greater than 6.5° can be achieved by turning out the rear leg leveler(s) for increased difficulty and faster gameplay.
3. Use a pinball to roll down the center of the playfield for side-to-side leveling, or use an external bubble level, digital level, or smartphone level app.
4. Plug into a grounded outlet and check for proper operation through DIAGNOSTICS.
5. Check the coin door: With the door closed, insert coins to verify proper operation.
6. Play game: Check for satisfactory operation and adjust game volume (push the Red Buttons inside the Coin Door).
7. If desired, perform any game diagnostics, game adjustments, and pricing settings at this time.

SPIKE PINBALL SOFTWARE UPDATE INSTRUCTIONS

1. Obtain game software update file (filename ends in ".spk") from www.sternpinball.com or from authorized Stern distributor.
2. Place game software update file (".spk") in root directory of a blank FAT32-formatted USB flash drive (NTFS Format will also work).
3. Use backbox power switch to turn off game.
4. Plug in USB flash drive to CPU board USB connector (CN9).
5. Turn on game.
6. The game will automatically begin software update.
7. Select the correct .spk update file from list.
8. Press Enter on the service switches to start update.
9. When the display indicates "Update Complete", turn off game.
10. Remove USB flash drive from CPU board.
11. Turn game on to complete the update and play pinball!
12. Detailed instructions and troubleshooting tips are available in the game manual, www.sternpinball.com and authorized Stern distributors.
13. If the game is connected to the internet, and registered to an Insider Connected account, the software can be automatically downloaded and installed.

POWER SWITCH

The game's power switch is located on the right-hand side underneath the backbox.



ON/OFF Switch

1.2 SERVICE MENU NAVIGATION

The four service buttons (inside Coin Door) have multiple functions. The buttons react differently depending on what state the game is currently in.

FUNCTIONS DURING GAME OR ATTRACT MODE

PRESS  SELECT for SERVICE MENU			
			
BACK			SELECT
Green Press to add service credit(s).	Left Red Press to decrease the volume (quieter).	Right Red Press to increase the volume (louder).	Black Press to enter the Service Menu.

FUNCTIONS DURING SERVICE MENU

PRESS  SELECT for SERVICE MENU			
			
BACK			SELECT
Green Press to go back to the last menu or exit.	Left Red Press to move highlighted option up.	Right Red Press to move highlighted option down.	Black Press to Select the current highlighted option.

FUNCTIONS WHEN MAKING ADJUSTMENTS

PRESS  SELECT for SERVICE MENU			
			
BACK			SELECT
Green Press to cancel change.	Left Red Press to decrease the current adjustment.	Right Red Press to increase the current adjustment.	Black Press to confirm / save the change.

SERVICE MENU



The first screen when entering the Service Menu contains information about your game.

- A. IP Address** - Shows the current IP Address the game is receiving from the network.
- B. Config ID** - Your game's unique identifier to the servers. This comes from the CPU and game version.
- C. Firmware Versions** - This will have two versions shown, they are for the overall software running the game.
- D. Network Status** - Shows the current Wi-Fi signal and network name, or Wired Connection.
- E. Game Title** - Shows the game title and version. This comes from the software installed.
- F. Game Code** - Shows the current software version installed.
- G. QR Code** - Scanning this QR Code will bring you directly to Insider Connected.
- H. Status Symbol** - This is a quick glance to see if the game is registered.



SERVICE MENU CONTINUED



Pressing the Select button will continue to the Main Menu. While in the Main Menu, pressing the Back/Escape button will exit back to the game.

Use the volume buttons to change the option highlighted. In the image above, Quick Adjustments is highlighted, and pressing the Select button will enter that menu.



Quick Adjustments has the more common settings that help for a quick setup of the game.

Pressing the volume buttons will move through the options here. Pressing Select on an option allows the volume buttons to change current value/setting. Save the change with the Select button, or cancel the change with the Back/Escape button.

To go back to the previous menu, press the Back/Escape button.

Service Menu Table Of Contents

Quick Adjustments

Diagnostics

- Switch Test
- Coil Test
- LED Test
- Node Board Test
- Technician Alerts

Device Tests

- Ball Trough Test
- Sound/Speaker Test
- Game Specific Device Tests

Audits

- Play Counts
- Awards
- Scores
- Time
- Earnings Audits
- Diagnostic Audits
- Game Play Audits
- Dump Audits to USB
- Dump Audits to USB (Comp)

Adjustments

- Pricing
- Game Play Settings
- Machine Settings

Stern Insider Connected™

- About
- Setup Connection
- Test Connection
- Game Registration
- Software Update
- Setup Home Team™
- Change Settings

Utilities

- Presets
- Start Guided Setup
- Enter Custom Message
- Save Settings
- Restore Settings
- Resets

Tournament Menu

Redemption Menu

SERVICE MENU DEFINITIONS

Quick Adjustments

- » The most commonly changed adjustments are located here.

Diagnostics

- **Switch Test**
- **Coil Test**
- **LED Test**
- **Node Board Test**
- **Technician Alerts** (located here in addition to the main page)

Device Tests

- **Ball Trough Test**
- **Sound/Speaker Test**
- **Game Specific Device Tests**

Audits

- **Play Counts**
 - » Counts of games and balls played, plus any play count specific audits unique to the game.
- **Awards**
 - » Counts of replays, extra balls, specials, and matches awarded, plus any award specific audits unique to the game.
- **Scores**
 - » Counts of game scores, split into divisions of score ranges.
- **Time**
 - » Average ball and game time, plus counts of total game time, split into divisions of time ranges.
- **Earnings Audits**
 - » Counts of coins deposited, credits paid, service credits and other counts related to money and earnings.
- **Diagnostic Audits**
 - » Counts of ball searches, lost balls, power on time, and other counts related to machine operation.
- **Game Play Audits**
 - » Game audits unique to the game.
- **Dump Audits to USB**
 - » Save the audits to a text file on a USB storage device. Includes Game and Location IDs set via the machine adjustments. Audit text will include mixed upper/lower case letters.
- **Dump Audits to USB (Comp)**
 - » Save the audits to a text file on a USB storage device, in a format . similar to previous software release. Game and Location IDs will not be present in this file, and all audit text will be upper case only.

Adjustments

- **Pricing**
 - » Game pricing and coin door settings, and on-screen credit formatting options.
- **Game Play Settings**
 - **Player and Ball Settings**
 - » Ball and players per game, tilt adjustments, ball save timer and plunger settings.
 - **Game Settings**
 - » Game play adjustments unique to the game.
 - **Game Types**
 - » For games with multiple types of play modes, the enabling and disabling of these play types.
 - **Standard High Scores**
 - » High score default scores and award settings. High score initial entry settings and how often they will be reset.
 - **Game High Scores**
 - » Game specific high scores defaults.

Machine Settings

- **Machine Operation**
 - » Controls how the start and action buttons behave, the ticket dispenser settings and the Game and Location IDs (used for audit dumps).
- **Devices**
 - » Allows you to disable certain game devices, so the game will ... continue to function while repairs are being made.
- **Coil Settings**
 - » Adjust the power settings of flippers and coils, and any settings relevant to any game specific devices.
- **LCD/Lamp**
 - » Brightness settings for lamps and the LCD screen.
- **Audio Settings**
 - » Main volume settings, plus any individual volume settings specific to this game.
- **Audio Configuration**
 - » Speaker, Volume, and sound setup settings.
- **Attract Mode**
 - » Control of some attract mode displays.

Stern Insider Connected™

- **About**
 - » Network connection details
- **Setup Connection**
 - » Connect this game to the internet.
- **Test Connection**
 - » Test the machine's internet connection.
- **Game Registration**
 - » Register this game with Stern Insider Connected. Display the .. registration details, and unregister games.
- **Software Update**
 - » Check for, download, and install any software updates. Enable/Disable updates and change the download scheduling.
- **Setup Home Team™**
 - » For non-commercial settings, scan players to the Stern Insider . Connected™ account, so connected games can be played without having to scan in each time.
- **Change Settings**
 - » Stern Insider Connected™ related adjustments, including start . button behavior, play again times, and home team settings.

Utilities

- **Presets**
 - » Change the game settings en-mass from a selection of grouped adjustment settings.
- **Start Guided Setup**
 - » Enter the guided setup menu, setting up the machine for the first time.
- **Enter Custom Message**
 - » Enter a message unique to this specific game that will **display in the attract mode.**
- **Save Settings**
 - » Save the settings to a USB storage device.
- **Restore Settings**
 - » Restore the settings from a USB storage device.
- **Resets**
 - » Allows resetting coin, game, and high score audits, credits, audio and other settings back to default values.

Tournament Menu

- » Allows the configuration of a built-in tournament on this game.

Redemption Menu

- » Allows the configuration of a game that dispenses tickets during game play.

1.3 GAME PRICING REFERENCE TABLE

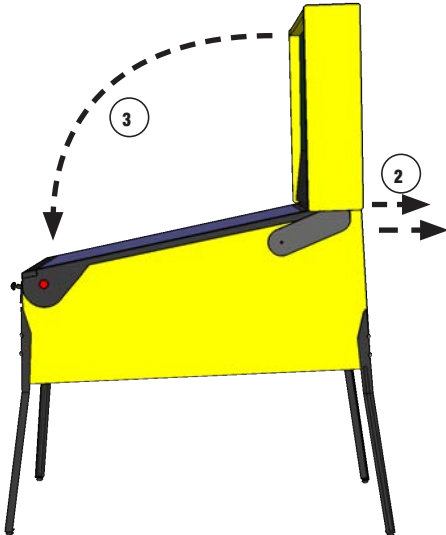
Country	ID	Pricing (Credits / Cost)						Unit per Pulse	Coin Door Pulse Settings					
									Left	Center	Right	4th	5th	6th
Australia	1	1/\$1.00 AU	3/\$2.00 AU					\$0.10 AU	2	10	20	50	5	0
	2	1/\$1.00 AU												
	3	1/\$2.00 AU												
	4	1/\$2.00 AU	2/\$4.00 AU	3/\$5.00 AU										
	5	1/\$2.00 AU	2/\$3.00 AU											
Canada	1	1/\$0.50 CN	2/\$0.75 CN	3/\$1.00 CN				\$0.25 CN	1	1	4	8	0	0
	2	1/\$1.00 CN	3/\$2.00 CN					\$1.00 CN	1	1	2	2	0	0
China	1	1/5 Yuan	3/10 Yuan					1 Yuan	1	1	1	0	0	0
	2	1/10 Yuan	2/15 Yuan											
Croatia		1/3 kuna	2/5 kuna					1 kuna	1	2	5	1	0	0
Denmark	1	1/3 DKr	2/5 DKr					1 DKr	1	5	10	20	0	0
	2	1/2 DKr	2/4 DKr	3/5 DKr	4/7 DKr	5/9 DKr	7/10 DKr							
	3	1/5 DKr												
	4	1/10 DKr												
	5	1/20 DKr												
	6	1/10 DKr	3/20 DKr											
Euro	1	1/EUR 0.50						Electronic EUR 0.10	5	10	20	2	0	0
	2	1/EUR 0.50	2/EUR 1.00	3/EUR 1.50	5/EUR 2.00									
	3	1/EUR 0.50	3/EUR 1.00											
	4	1/EUR 1.00	2/EUR 2.00	3/EUR 3.00	5/EUR 4.00									
	5	1/EUR 1.00	3/EUR 2.00											
	6	1/EUR 1.00	2/EUR 1.50	3/EUR 2.00										
	7	1/EUR 1.00	3/EUR 2.00	7/EUR 3.00				Mechanical EUR 0.10	5	1	5	1	0	0
	8	1/EUR 1.00	4/EUR 2.00											
	9	2/EUR 1.00	4/EUR 2.00	6/EUR 3.00	9/EUR 4.00									
	10	1/EUR 2.00	2/EUR 3.00	3/EUR 4.00										
	11	1/EUR 2.00	2/EUR 4.00	3/EUR 5.00										
	12	1/EUR 2.00	3/EUR 4.00	7/EUR 6.00										
Indonesia	1	1/20000 Rp	2/40000 Rp	3/50000 Rp	4/60000 Rp	5/80000 Rp	8/100000 Rp	10,000 Rp	0	0	0	0	0	1
	2	1/20000 Rp	2/40000 Rp	4/50000 Rp	5/60000 Rp	6/80000 Rp	10/100000 Rp							
	3	2/20000 Rp	4/40000 Rp	6/50000 Rp	8/60000 Rp	10/80000 Rp	13/100000 Rp							
Japan	1	1/YEN 100						Yen 100	1	1	1	1	0	0
	2	1/YEN 100	3/YEN 200											
	2	1/YEN 200												
Lithuania		1/2 LTL						1 LTL	1	2	5	0	0	0
Middle East		1/1 token						1 token	1	1	1	1	0	0
New Zealand	1	1/\$1 NZ						\$1 NZ	1	1	2	1	0	0
	2	1/\$1 NZ	3/\$2 NZ											
	3	1/\$2 NZ	2/\$3 NZ											
Norway	1	1/10 Nkr						1 Nkr	1	5	10	20	0	0
	2	1/10 Nkr	3/20 Nkr											
	3	1/20 Nkr												
	4	1/20 Nkr	3/40 Nkr											
	5	1/5 Nkr												
Russia		1/5 RUB						1 RUB	10	5	1	1	0	0
South Africa	1	1/R2						R 0.50	1	2	4	10	0	0
	2	1/R3	2/R5											
Sweden	1	1/10 SKr	2/15 SKr	3/20 SKr				1 SKr	1	5	10	2	0	0
	2	1/5 SKr												
	3	1/10 SKr												
	4	1/20 SKr												
	5	1/10 SKr	3/20 SKr											
Switzerland	1	1/1 SwF	2/2 SwF	3/3 SwF	4/4 SwF	6/5 SwF		1 SwF	1	2	5	1	0	0
	2	1/2 SwF	2/4 SwF	3/5 SwF										
Taiwan		1/10 TWD						10 TWD	1	1	1	1	0	0
UK	1	1/2.00						10p	1	5	10	2	20	0
	2	1/1.00												
	3	1/50p	2/1.00	3/1.50	5/2.00									
	4	1/2.00	2/3.00	4/5.00										
	5	1/1.00	3/2.00											
USA	1	1/\$0.25						\$0.25	1	4	1	1	0	0
	2	1/\$0.50	2/\$0.75	3/\$1.00										
	3	1/\$0.50												
	5	1/\$0.50	2/\$1.00	3/\$1.50	5/\$2.00									
	7	1/\$0.50	2/\$1.00	4/\$1.50	6/\$2.00									
	8	1/\$0.50	3/\$1.00											
	9	1/\$1.00												
	10	1/\$0.75	2/\$1.50	3/\$2.00										
	11	1/\$1.00	3/\$2.00											
	12	1/\$0.25	2/\$0.50	3/\$0.75	5/\$1.00									
	13	1/\$1.00	2/\$2.00	3/\$3.00	4/\$4.00	7/\$5.00								

1.4 TRANSPORTING THE GAME

When transporting the game, such as in the back of a truck or with a hand truck, the game's backbox must be secured to prevent damage to the side rails.

1. SECURE THE BACKBOX

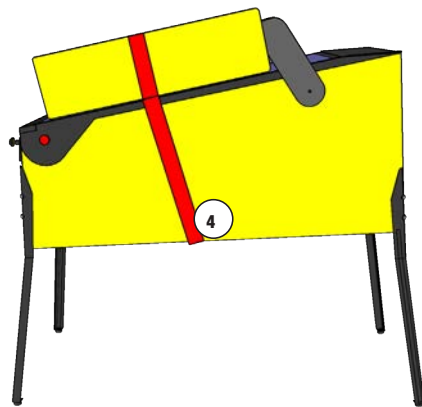
1. Ensure that the pinballs are removed from the playfield, and secure any free-moving mechanisms that may get damaged in transport



2. Remove the backbox securing bolts
3. Carefully lower the backbox onto the side rails. Use a piece of cardboard or suitable padding between the backbox and the game.

TOOLS REQUIRED

- STRAP (500LB OR GREATER)
- AN ASSISTANT
- HAND TRUCK

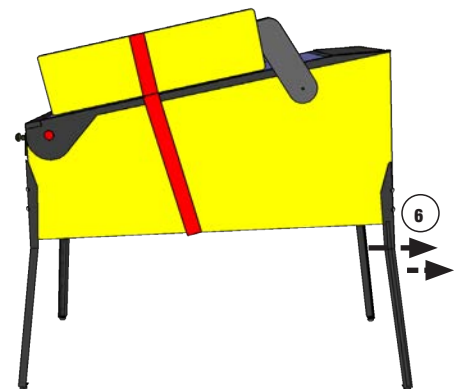


4. Securely strap the back box to the game
5. The game may be transported with the legs on. If the legs must be removed, follow the remaining steps.

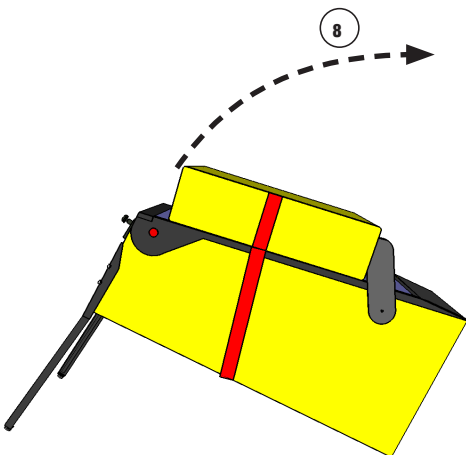
CAUTION

NEVER TRANSPORT THE GAME IN A MOVING VEHICLE WITH THE BACKBOX RAISED! TWO PEOPLE ARE REQUIRED TO REMOVE THE LEGS!

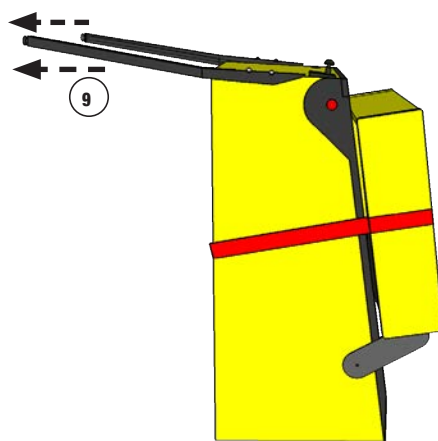
2. REMOVE THE LEGS AND STAND UP



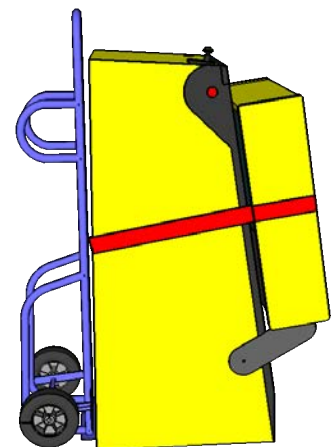
6. Remove the legs, rear legs first. Use a stool or a friend to support the rear of the game.
7. Rest the rear of the game on the ground.



8. Stand the game up on its back.



9. Remove the front two legs.



10. Secure all loose parts and transport with a hand truck in the upright position.

1.5 MAINTENANCE

REGULAR MAINTENANCE - (MONTHLY/500 GAMES)

- Remove the playfield glass
- Enter the software diagnostics menu, start lamp test, then clean and wax the playfield.
 - While cleaning the playfield, identify and repair malfunctioning lights, loose parts, cracked plastics and worn rubber parts.
- While in diagnostics, enter the switch test (Select the "SW" icon, then "TEST" icon).
 - Use a pinball to actuate all switches and verify the correct switch registers with the switch test.
 - The game will play a sound to confirm the switch.
- Lift the playfield and inspect all assemblies for loose parts, broken wires or excessive wear. Look at the bottom of the cabinet for any parts that may have worked loose, then find the source.
- Check all coin door mechanisms and bill acceptor (if installed) for proper operation
- Play the game to ensure all coils and features are working
- Check the playfield to ensure it is level and set to the proper pitch using the bubble level on the right side wood rail.
- Check game audits: Replay % and Ball Time and note abnormal values which can indicate problems.
- Ensure game volume is set appropriately for the location.
- Clean both sides of the playfield glass and reinstall.
- Check and clean pinballs and replace if excessively worn or scuffed. Dirty pinballs accelerate game wear.

OVERHAUL MAINTENANCE - (5000 GAMES)

- Verify latest game software is installed
- Check flippers for excessive wear. Excessive flipper sloppiness (vertical or horizontal) or weakness indicates a flipper rebuild is required.
- Clean machine inside and out and check leg levelers for free operation.
- Visual check for loose or broken playfield and cabinet parts and repair as necessary.
- Electrical check: Plug into grounded outlet and check for proper operation through DIAGNOSTICS.
- Replace worn or dirty rubbers.
- Replace pinballs.
- Check all playfield switches with a pinball.
- Check all settings (refer to manual for factory settings).
- Check coin door: With door closed, insert coins to verify proper operation.
- Check for proper adjustment of the plumb bob tilt.
- Play game: Check for satisfactory operation.

COMMON PINBALL TOOLS

- Common nut drivers (1/4", 5/16", 11/32", 3/8")
- Phillips screwdriver
- Standard Allen wrench/Hex key set
- 5/8" Socket with ratchet
- Adjustable wrench (5/8" & 9/16")
- 6" Torpedo Level (or use a pinball)
- Flashlight or headlamp
- Soldering Iron (60w with flat tip), lead-free solder
- Wire cutter
- Wire stripper
- Long nose ("needle nose") pliers

1.6 MAINTENANCE KITS

Description	Part Number
The Walking Dead Remastered LE / Premium Playfield Plastics Kit	803-5000-AM
The Walking Dead Remastered LE / Premium Playfield Decals Kit	802-5000-AM
The Walking Dead Remastered LE Backbox Decal Left	820-90AM-01
The Walking Dead Remastered Premium Backbox Decal Left	820-76AN-01
The Walking Dead Remastered LE Backbox Decal Right	820-90AM-02
The Walking Dead Remastered Premium Backbox Decal Right	820-76AN-02
The Walking Dead Remastered LE Cabinet Decal Left	820-90AM-03
The Walking Dead Remastered Premium Cabinet Decal Left	820-76AN-03
The Walking Dead Remastered LE Cabinet Decal Right	820-90AM-04
The Walking Dead Remastered Premium Cabinet Decal Right	820-76AN-04
The Walking Dead Remastered LE Cabinet Decal Front	820-90AM-05
The Walking Dead Remastered Premium Cabinet Decal Front	820-76AN-05
The Walking Dead Remastered LE Playfield, Bare	830-5100-AM
The Walking Dead Remastered Premium Playfield, Bare	830-5100-AN
The Walking Dead Remastered LE Mirror Backglass	830-8426-AM
The Walking Dead Remastered Premium Translite	830-8427-AN

1.7 COMMON PARTS

Description	Part Number
8 oz Pinball Playfield wax (Novus # 2)	675-0003-01
Standard Pinball, 1-1/16 in	260-5000-00
Flipper Rebuild Kit Left (Standard)	500-6307-10
Flipper Base Plate Kit Left	515-6617-01
Flipper Rebuild Kit Right	500-6307-00
Flipper Base Plate Kit Right	515-6617-00
Memory Card - MicroSD	970-0142-64
Wi-Fi Adapter	509-2013-00

2. SPIKE SYSTEM AND NODE GUIDE

2.1 SPIKE SYSTEM OVERVIEW

The SPIKE Pinball system is a rugged, distributed, and embedded platform custom-designed for the rigors of the pinball machine environment. SPIKE takes advantage of modern technologies to deliver an immersive pinball experience that supports modern features, reduces cabling, and increases serviceability and reliability.

A Stern Pinball machine based on the SPIKE system will have at least two nodes networked together with the SPIKE node bus, a custom industrial pinball control bus that is designed around industry standards and optimized for the pinball environment. The primary CPU node is networked to one or more input/output nodes over standard Category 5 UTP (unshielded twisted pair) ethernet cabling.

There are five primary types of nodes that are found in the game.

- CPU node (Node 0) - The primary node that controls other nodes in the system. Contains the primary game software for the system and provides SPIKE node bus power for other nodes.
- Cabinet 48V node (Node 1) - Specialized node with specific inputs and outputs for coin doors, tilt mechanisms, and other bottom-cabinet devices.
- 48V playfield node - Controls high power devices such as coils and flashers, and also supports a few switch and low-power outputs. Powered by the system 48V power supply.
- Light and switch node - High-density switch and low-power LED outputs, bus-powered from the node bus. These boards contain as many 32 switch inputs and light outputs.
- Node extensions - These sub-nodes add additional low-power input and outputs to a specific Power or I/O node and are connected with simple serial bus.

2.2 NODE BUS CABLING

The SPIKE node bus utilizes standard Ethernet-style RJ45 8-pin modular jacks, and off-the-shelf Category 5e or better ethernet cabling. The node bus is electrically different from Ethernet and does not utilize Ethernet or TCP/IP protocols or signaling standards. SPIKE nodes are not compatible with standard computer networking equipment.

CAUTION: *Plugging a SPIKE Node or CPU board into a standard Ethernet port may damage one or both devices and may void your warranty.*

2.3 SYSTEM POWER

The SPIKE System is powered from an 48V DC power supply bus. Each SPIKE node converts this voltage to lower voltages required by the node and its specific components. A SPIKE 48V node typically controls high-power outputs such as game coil mechanisms and high-brightness LEDs. These powered nodes are supplied directly with 48V system power. SPIKE standard I/O nodes are low-power nodes that read switch inputs and output to standard-brightness LEDs. Standard I/O nodes use the node bus power, which is supplied by the main CPU node over the node bus modular jack connectors.

2.4 SPIKE NODE ADDRESSES

Each SPIKE node has a unique address ranging from 0 to 15. Not all addresses are used in all games. Nodes can be of the same part number, so the address is specified on the DIP switches on each node. When replacing a node, be certain that the correct address is set. Nodes can have 3-position and 4-position DIP switches. Refer to the appropriate table to set the address for each type of Node. The correct address for a node can be found in the SPIKE node reference section of the manual or in the game diagnostic software. Address 0 is reserved for the backbox CPU node, where the game software resides. Address 1 is reserved for the cabinet node, located inside the coin door. These two nodes do not have DIP switches as their address is not configurable.

Address	1	2	3	4
8	OFF	OFF	OFF	OFF
9	OFF	OFF	ON	OFF
10	OFF	ON	OFF	OFF
11	OFF	ON	ON	OFF
12	ON	OFF	OFF	OFF
13	ON	OFF	ON	OFF
14	ON	ON	OFF	OFF
15	ON	ON	ON	OFF

SPIKE node addresses for nodes with 4-position DIP switches. Addresses 0-7 are reserved for fixed-function nodes and do not require configuration.

SPIKE SYSTEM AND NODE GUIDE CONTINUED

2.5 SPIKE NODE PROGRAMMING

The SPIKE nodes are smart nodes that have on-board processors and run embedded code. The nodes are programmed automatically by the CPU node whenever software updates are installed to the CPU. When replacing a node, the CPU node will detect and update the node to the latest software with no user intervention. Always replace nodes with the power to the game turned OFF.

2.6 SPIKE SYSTEM TERMINOLOGY

MULTI GENERAL ILLUMINATION LIGHTING

General Illumination Lighting is two or more lights powered by one control source. These are often a number of LEDs connected in parallel and the system controls these as one large LED. A missing LED will not affect these circuits, however a shorted LED can cause the entire string of LEDs to turn off.

SINGLE LIGHTS

Single lights and LEDs are direct-controlled from SPIKE node boards. A common power source is grounded by individual transistors to turn individual LEDs on and off. Groups of LEDs, usually by node connector, share a common power source, so if a group of LEDs is out, check the wiring for the power source.

FLASHERS

SPIKE games treat flashers the same as single LEDs that draw more power. Flashers are controlled from the same circuits that power regular lights.

DRIVERS

A driver is a circuit that controls a high power-device such as a coil, magnet, or motor. Each device has a common 48V power source that is then connected to ground by a dedicated control transistor. Each driver is protected against shorting, static electricity, and over-current conditions. Take caution as 48V is always present on a device even when it is not energized.

OPTOS

Certain types of optical switches (“optos”) require external signal conditioning. For these optos, they will interface to a SPIKE node via an opto signal conditioning board. Other optical switches connect directly to the Spike node board.

CAUTION: Unless explicitly directed by an Authorized Stern Repair technician, perform ALL work on your pinball machine with the power disabled!

INPUT/OUTPUT PROTECTIONS (OVERCURRENT)

SPIKE features built-in short-circuit, static electricity, and other protections to maximize reliability. If an LED, coil or other device shorts, it will be disabled but will not shut down the entire system in most circumstances. Groups of LEDs, coils, and switches often share common power supplies or other circuits, so it is possible that a bad device will affect the group of related devices and require removal or repair to fix the group. The system diagnostics will inform the technician of shorted or otherwise malfunctioning devices whenever possible. While the system is protected against permanent damage, it is strongly recommended to repair or replace these bad components as soon as possible to minimize downtime and maximize game earnings.

2.7 COMMON SPIKE NODE BOARDS

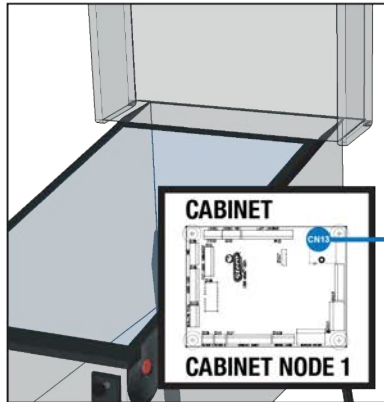
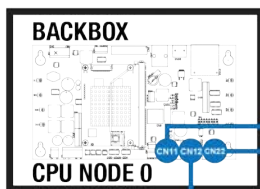
Description	Type	Part Number
SPIKE CPU Node	Node	509-1007-42
Cabinet Node	Node	520-6967-72
Playfield 48V Core-Driver Node	Node	520-1057-00 520-1070-00
Trough Serial Opto Receiver Extension	Extension	520-8516-00
QR Scanner Assembly	Node	509-2020-00

3. LIGHT, SWITCH, AND DRIVER REFERENCE

THE
WALKING DEAD



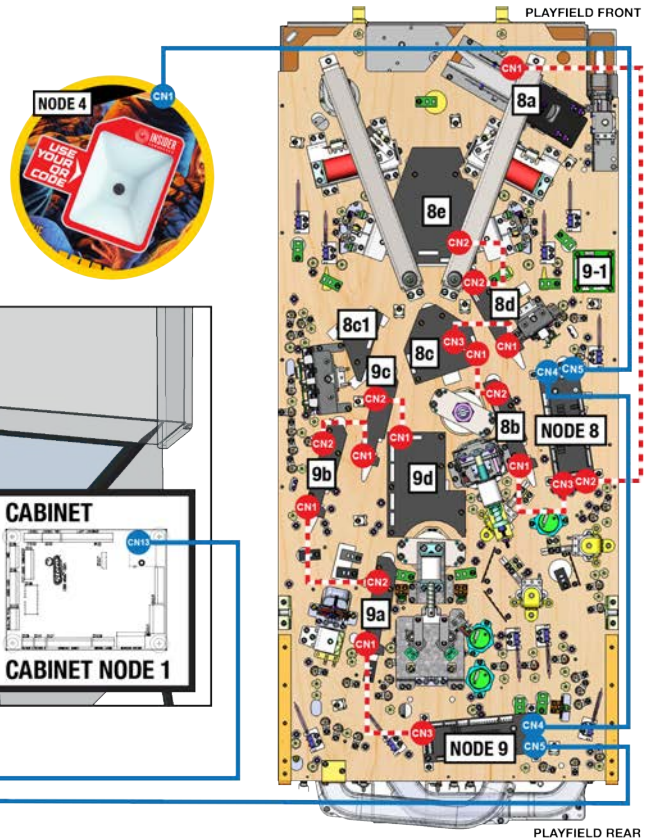
REMASTERED
PREMIUM / LE



OPTIONAL
TOPPER

Node Bus Cable (RJ45)
604-5004-0B-XX
Serial Data Cable
036-8054-XX

When replacing node boards,
ensure DIP address switches
are set correctly!



3.1 SPIKE NODE BOARDS

ID	DIP Address	Description	Location	Part Number
Node 0	n/a	SPIKE 3 CPU Node	Backbox	509-1007-42
Node 1	n/a	Cabinet Node	Cabinet	520-6967-72
Node 4	n/a	QR Reader Node	Bottom Arch	509-2020-00
Node 8	OFF-OFF-OFF-OFF	Core - Driver Node	Lower Playfield	520-1070-00
8a	n/a	Trough Serial Opto Receiver Extension	Playfield	520-8516-00
8b	n/a	2RGB 2W LED Board	Playfield	520-8695-00
8c	n/a	6W LED Board	Playfield	520-8697-00
8c1	n/a	3W 1RGB LED Board	Playfield	520-8700-00
8d	n/a	2RGB 2W LED Board	Playfield	520-8695-00
8e	n/a	1F 16W LED Board	Playfield	520-8696-00
Node 9	OFF-OFF-ON-OFF	Core - Driver Node	Playfield	520-1070-00
91	n/a	4 Coil Demux	Playfield	520-8721-00
9a	n/a	2RGB 2W LED Board	Playfield	520-8695-00
9b	n/a	2RGB 2W LED Board	Playfield	520-8695-00
9c	n/a	2RGB 2W LED Board	Playfield	520-8695-00
9d	n/a	2F 6R LED Board	Playfield	520-8698-00
Node 0(2)	n/a	(LE Option)	Cabinet-Expression	
Node 0(7)	n/a	(LE Option)	Speaker-Expression	
Node 12	ON-OFF-OFF-OFF	Topper (Optional)	Topper	
Node 14	ON-ON-OFF-OFF	Expression Topper (Optional)	Topper	

3.2 DRIVER REFERENCE

ID	Name	Node	Connector	Ret. Pin	Ret. Wire	Voltage	V+ Pin	V+ Color	Location	Type	Address	Part Number
1	Trough	8	CN8	7	ORG GRY	48V	1-4	GRY ORG	Playfield	Coil - 27-1500	8-DR-1	090-5004-ND
2	Auto Plunger	8	CN8	9	ORG WHT	48V	1-4	GRY ORG	Playfield	Coil - 23-800	8-DR-4	090-5001-ND
3	Left Flipper	8	CN8	6	ORG YEL	48V	1-4	GRY ORG	Playfield	Coil - 22-1080	8-DR-5	090-5032-ND
4	Right Flipper	8	CN8	5	ORG GRN	48V	1-4	GRY ORG	Playfield	Coil - 22-1080	8-DR-0	090-5032-ND
5	Left Slingshot	8	CN8	11	ORG BLU	48V	1-4	GRY ORG	Playfield	Coil - 26-1200	8-DR-3	090-5044-ND
6	Right Slingshot	8	CN8	10	ORG VIO	48V	1-4	GRY ORG	Playfield	Coil - 26-1200	8-DR-2	090-5044-ND
7	Shaker Motor	1	CN16	1	BLU	48V	5	RED	Cabinet	Motor	1-DR-0	041-5029-04
8	Diverter Magnet	8	CN7	3	YEL BLK	48V	1	GRY ORG	Playfield	Coil - 31-1500	8-DR-6	090-5054-ND
9	Crossbow Motor	8	CN7	4	BRN ORG	48V	1	GRY ORG	Playfield	Motor - 041-5111-00	8-DR-7	511-6968-02 (W/CAPS&CBL)
10	Crossbow Eject	8	CN7	2	YEL RED	48V	1	GRY ORG	Playfield	Coil - 23-800	8-DR-8	511-2664-00
11	Left Pop Bumper	9	CN8	10	ORG BLK	48V	1-4	GRY BRN	Playfield	Coil - 26-1200	9-DR-2	090-5044-ND
12	Right Pop Bumper	9	CN8	11	ORG BRN	48V	1-4	GRY BRN	Playfield	Coil - 26-1200	9-DR-3	090-5044-ND
13	Bicycle Girl Ramp	9	CN8	5	YEL VIO	48V	1-4	GRY BRN	Playfield	Coil - 23-1100	9-DR-0	090-5030-ND
14	Well Walker Magnet	9	CN8	6	BRN RED	48V	1-4	GRY BRN	Playfield	Coil - 22-650	9-DR-5	511-5065-ND
15	Prison Doors	9	CN7	3	YEL GRN	48V	1	GRY BRN	Playfield	Coil - 26-1200	9-DR-6	090-5044-ND
16	Prison Magnet	9	CN7	4	BRN BLK	48V	1	GRY BRN	Playfield	Coil - 22-650	9-DR-7	511-5065-ND
17	Demux Source	9	CN8	7	YEL WHT	48V	1-4	GRY BRN	Playfield	Demux Source	9-DR-1	520-8456-00
18	Well Walker	9	CN7	2	YEL ORG	48V	1	GRY BRN	Playfield	Coil - 26-1200	9-DR-8	090-5044-ND
19	Top Pop Bumper	9	CN8	9	ORG RED	48V	1-4	GRY BRN	Playfield	Coil - 26-1200	9-DR-4	090-5044-ND
20												
21	Right Drop Reset	9	CN4	2	YEL WHT	48V	1	GRY BRN	Playfield	Coil - 25-1240	9-DR-1a	090-5034-ND
22	Right Drop Trip	9	CN4	4	YEL GRY	48V	3	GRY BRN	Playfield	Coil - 32-1800	9-DR-1b	090-5031-00-ND
23	Left Drop Reset	9	CN4	6	YEL BRN	48V	5	GRY BRN	Playfield	Coil - 25-1240	9-DR-1c	090-5034-ND
24												
25												
26												
27												
28												
29												
30												
31												
32												
33	Coin Meter	1	CN3	2	BLK	12V	1	RED	Cabinet	Digital Out	1-DR-2	500-9946-00
34	Ticket Meter	1	CN4	2	BLK	12V	1	RED	Cabinet	Digital Out	1-DR-3	500-9946-00
35	Ticket Dispenser	1	CN11	3		12V	1		Cabinet	Digital Out	1-DR-4	

Continued on next page...





3.3 SWITCH REFERENCE

ID	Name	Node	Node Ext	Conn.	Input Pin	Input Wire	GND Pin	Ground Wire	Location	Type	Address	Part Number
1	Left Outlane	8	-	CN11	4	LGN RED	11/12	BLK ORG	Playfield	Rollover	8-SW-17	500-9935-04
2	Left Return Lane	8	-	CN11	5	LGN ORG	11/12	BLK ORG	Playfield	Rollover	8-SW-18	500-9935-04
3												
4												
5	Right Return Lane	8	-	CN11	6	LGN YEL	11/12	BLK ORG	Playfield	Rollover	8-SW-19	500-9935-04
6	Right Outlane	8	-	CN11	7	LGN BLU	11/12	BLK ORG	Playfield	Rollover	8-SW-20	500-9935-04
7	Left Slingshot	8	-	CN10	4	GRY BLU	8	BLK GRN	Playfield	Leaf	8-SW-30	180-5231-00
8	Right Slingshot	8	-	CN10	3	GRY VIO	8	BLK GRN	Playfield	Leaf	8-SW-29	180-5231-00
9	Left Flipper Button	8	-	CN9	4	GRY BRN	7	BLK GRN	Cabinet	Leaf	8-SW-25	180-5160-01
10	Right Flipper Button	8	-	CN9	3	GRY RED	7	BLK GRN	Cabinet	Leaf	8-SW-24	180-5160-01
11	Left Flipper EOS	8	-	CN10	6	GRY YEL	9	BLK GRN	Playfield	Leaf	8-SW-16	180-5149-00
12	Right Flipper EOS	8	-	CN10	5	GRY GRN	9	BLK GRN	Playfield	Leaf	8-SW-31	180-5149-00
13												
14												
15	Trough 6	8	8a	CN14	-		-		Playfield	Opto	8-SW-32	520-5344-00 tx 520-8516-00 rx
16	Trough 5	8	8a	CN14	-		-		Playfield	Opto	8-SW-33	520-5344-00 tx 520-8516-00 rx
17	Trough 4	8	8a	CN14	-		-		Playfield	Opto	8-SW-34	520-5344-00 tx 520-8516-00 rx
18	Trough 3	8	8a	CN14	-		-		Playfield	Opto	8-SW-35	520-5344-00 tx 520-8516-00 rx
19	Trough 2	8	8a	CN14	-		-		Playfield	Opto	8-SW-36	520-5344-00 tx 520-8516-00 rx
20	Trough 1	8	8a	CN14	-		-		Playfield	Opto	8-SW-37	520-5344-00 tx 520-8516-00 rx
21	Trough Jam	8	8a	CN14	-		-		Playfield	Opto	8-SW-38	520-5344-00 tx 520-8516-00 rx
22	Shooter Lane	8	-	CN10	2	GRY WHT	7	BLK GRN	Playfield	Micro	8-SW-28	180-5157-01
23	Upper Shooter Lane	8	-	CN11	8	LGN VIO	11/12	BLK ORG	Playfield	Rollover	8-SW-21	500-9935-03
24												
25												
26												
27												
28												
29												
30	Right Spinner	8	-	CN12	2	WHT BRN	10	BLK RED	Playfield	Opto	8-SW-8	511-2785-01
31	Right Ramp Enter	8	-	CN12	3	WHT RED	10	BLK RED	Playfield	Micro	8-SW-9	180-5087-00
32	Right Ramp Exit	8	-	CN12	4	WHT ORG	10	BLK RED	Playfield	Micro	8-SW-10	180-5087-00
33	Left Spinner	8	-	CN12	5	WHT YEL	10	BLK RED	Playfield	Opto	8-SW-11	511-2785-01
34												
35												
36	Crossbow Home	8	-	CN11	3	LGN BRN	11/12	BLK ORG	Playfield	Micro	8-SW-27	180-5119-02
37	Crossbow Mark	8	-	CN11	9	LGN GRY	11/12	BLK ORG	Playfield	Micro	8-SW-22	180-5181-00
38												
39	Encoder 1	8	-	CN13	2	PNK RED	10	BLK BRN	Playfield	Opto	8-SW-0	520-7021-00
40	Encoder 2	8	-	CN13	3	PNK ORG	10	BLK BRN	Playfield	Opto	8-SW-1	520-7021-00
41												
42												
43												

Continued on next page...

SWITCH REFERENCE CONTINUED

ID	Name	Node	Node Ext	Conn.	Input Pin	Input Wire	GND Pin	Ground Wire	Location	Type	Address	Part Number
44												
45												
46	Button Rollover Top	9	-	CN9	3	LGN ORG	7/8	BLK BLU	Playfield	Rollover	9-SW-24	520-8527-00
47	Button Rollover Middle	9	-	CN9	4	LGN YEL	7/8	BLK BLU	Playfield	Rollover	9-SW-25	520-8527-00
48	Button Rollover Bottom	9	-	CN9	5	LGN BLU	7/8	BLK BLU	Playfield	Rollover	9-SW-26	520-8527-00
49	Right Drop	9	-	CN9	6	LGN VIO	7/8	BLK BLU	Playfield	Opto	9-SW-27	520-5357-00
50												
51												
52	Left Pop Bumper	9	-	CN10	2	GRY BLK	7/8/9	BLK BLU	Playfield	Leaf	9-SW-28	180-5232-00
53	Right Pop Bumper	9	-	CN10	3	GRY BRN	7/8/9	BLK BLU	Playfield	Leaf	9-SW-29	180-5232-00
54	Top Pop Bumper	9	-	CN10	4	GRY RED	7/8/9	BLK BLU	Playfield	Leaf	9-SW-30	180-5232-00
55	Well Walker	9	-	CN10	5	GRY BRN	7/8/9	BLK BLU	Playfield	Leaf, Target	9-SW-31	180-5119-02
56												
57												
58												
59	Left Top Lane	9	-	CN11	4	TAN ORG	11/12	BLK GRY	Playfield	Rollover	9-SW-17	500-9935-04
60	Right Top Lane	9	-	CN11	5	TAN YEL	11/12	BLK GRY	Playfield	Rollover	9-SW-18	500-9935-04
61	Tower Target	9	-	CN11	6	TAN GRN	11/12	BLK GRY	Playfield	Leaf, Target	9-SW-19	515-9784-00-00
62	Right Loop	9	-	CN11	7	TAN BLU	11/12	BLK GRY	Playfield	Rollover	9-SW-20	500-9935-03
63	Left Ramp Exit	9	-	CN11	8	TAN VIO	11/12	BLK GRY	Playfield	Micro	9-SW-21	180-5087-00
64	Center Lane	9	-	CN11	9	TAN WHT	11/12	BLK GRY	Playfield	Rollover	9-SW-22	500-9935-04
65												
66												
67												
68	Left Loop	9	-	CN12	2	WHT BRN	10	BLK WHT	Playfield	Rollover	9-SW-8	500-9935-04
69	Bicycle Girl Hit	9	-	CN12	3	WHT RED	10	BLK WHT	Playfield	Micro	9-SW-9	180-5010-04
70	Left Ramp Enter	9	-	CN12	4	WHT ORG	10	BLK WHT	Playfield	Micro	9-SW-10	180-5087-00
71	Prison Entrance	9	-	CN12	5	WHT YEL	10	BLK WHT	Playfield	Opto	9-SW-11	515-0215-00 tx 515-0215-01 rx
72	Left Prison Target	9	-	CN12	6	WHT GRN	10	BLK WHT	Playfield	Leaf, Target	9-SW-12	515-9785-00-00
73	Right Prison Target	9	-	CN12	7	WHT BLU	10	BLK WHT	Playfield	Leaf, Target	9-SW-13	515-9785-00-00
74	Prison Door Closed	9	-	CN12	8	WHT VIO	10	BLK WHT	Playfield	Micro	9-SW-14	180-5119-02
75	Prison Walker Hit	9	-	CN12	9	WHT GRY	10	BLK WHT	Playfield	Micro	9-SW-15	180-5010-04
76												
77												
78	Left Drop Bottom	9	-	CN13	2	PNK RED	10	BLK BRN	Playfield	Opto	9-SW-0	520-8497-00
79	Left Drop Middle	9	-	CN13	3	PNK ORG	10	BLK BRN	Playfield	Opto	9-SW-1	520-8497-00
80	Left Drop Top	9	-	CN13	4	PNK YEL	10	BLK BRN	Playfield	Opto	9-SW-2	520-8497-00
81												
82												
83												
84												
85												
86												
87												
88												
89												

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SWITCH REFERENCE CONTINUED

ID	Name	Node	Node Ext	Conn.	Input Pin	Input Wire	GND Pin	Ground Wire	Location	Type	Address	Part Number
90	Action Button	1	-	CN7	10	TAN WHT	9	BLK WHT	Cabinet	Leaf	1-SW-2	180-5218-00
91												
92												
93	Start Button	1	-	CN6	11	GRY	12	BLK WHT	Cabinet	Micro	1-SW-11	500-1060-44-LED
94	Tournament Start Button	1	-	CN6	9	GRY WHT	5	BLK WHT	Cabinet	Micro	1-SW-12	500-6587-06-TL
95												
96	Left Coin	1	-	CN5	9	PNK BRN	3	BLK	Coin Door	Micro	1-SW-16	
97	Right Coin	1	-	CN5	7	PNK ORG	3	BLK	Coin Door	Micro	1-SW-18	
98	Center Coin	1	-	CN5	8	PNK RED	3	BLK	Coin Door	Micro	1-SW-17	
99	Fourth Coin	1	-	CN5	6	-	3	-	Coin Door	-	1-SW-19	
100	Fifth Coin	1	-	CN5	5	-	3	-	Coin Door	-	1-SW-20	
101	Tilt Pendulum	1	-	CN6	7	WHT	5	BLK WHT	Cabinet	Plumb Bob	1-SW-14	516-0007-00
102	Sixth Coin	1	-	CN9	5	-	6	-	Coin Door	-	1-SW-21	
103	Ticket Notch	1	-	CN11	5	BLU	4	BLK	Cabinet	-	1-SW-8	
104	Slam Tilt	1	-	CN5	4	-	3	-	Coin Door	-	1-SW-22	
105	Ticket Low	1	-	CN2	2	-	1	-	Cabinet	-	1-SW-7	
106												
107												
108												
109												
110												
C9	Service Select	0	-	CN25	1	LGN GRY	11	BLK WHT	Coin Door		0-SW-8	515-1963-00
C10	Service Plus	0	-	CN25	2	LGN VIO	11	BLK WHT	Coin Door		0-SW-9	515-1963-00
C11	Service Minus	0	-	CN25	3	LGN BLU	11	BLK WHT	Coin Door		0-SW-10	515-1963-00
C12	Service Back	0	-	CN25	4	LGN BLK	11	BLK WHT	Coin Door		0-SW-11	515-1963-00
C17	Headphone Detect	0	-	-	-	-	-	-	Coin Door		0-SW-16	-
C18	Headphone Kit Detect	0	-	CN3	5	BLK	4	BLK	Coin Door		0-SW-17	-
C19	Volume Encoder 1	0	-	CN3	6	WHT	1	DRAIN	Coin Door		0-SW-18	-
C20	Volume Encoder 2	0	-	CN3	7	GRN	1	DRAIN	Coin Door		0-SW-19	-
C21	Jumper LVDS Resolution 1	0	-	-	-	-	-	-	CPU Node		0-SW-20	-
C22	Jumper LVDS Resolution 2	0	-	-	-	-	-	-	CPU Node		0-SW-21	-
C23	Jumper Unused	0	-	-	-	-	-	-	CPU Node		0-SW-22	-
C24	Coin Door Power Interlock	0	a	CN4	1	WHT GRY	4	BLK WHT	Cabinet		0-SW-23	-

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SWITCH REFERENCE CONTINUED

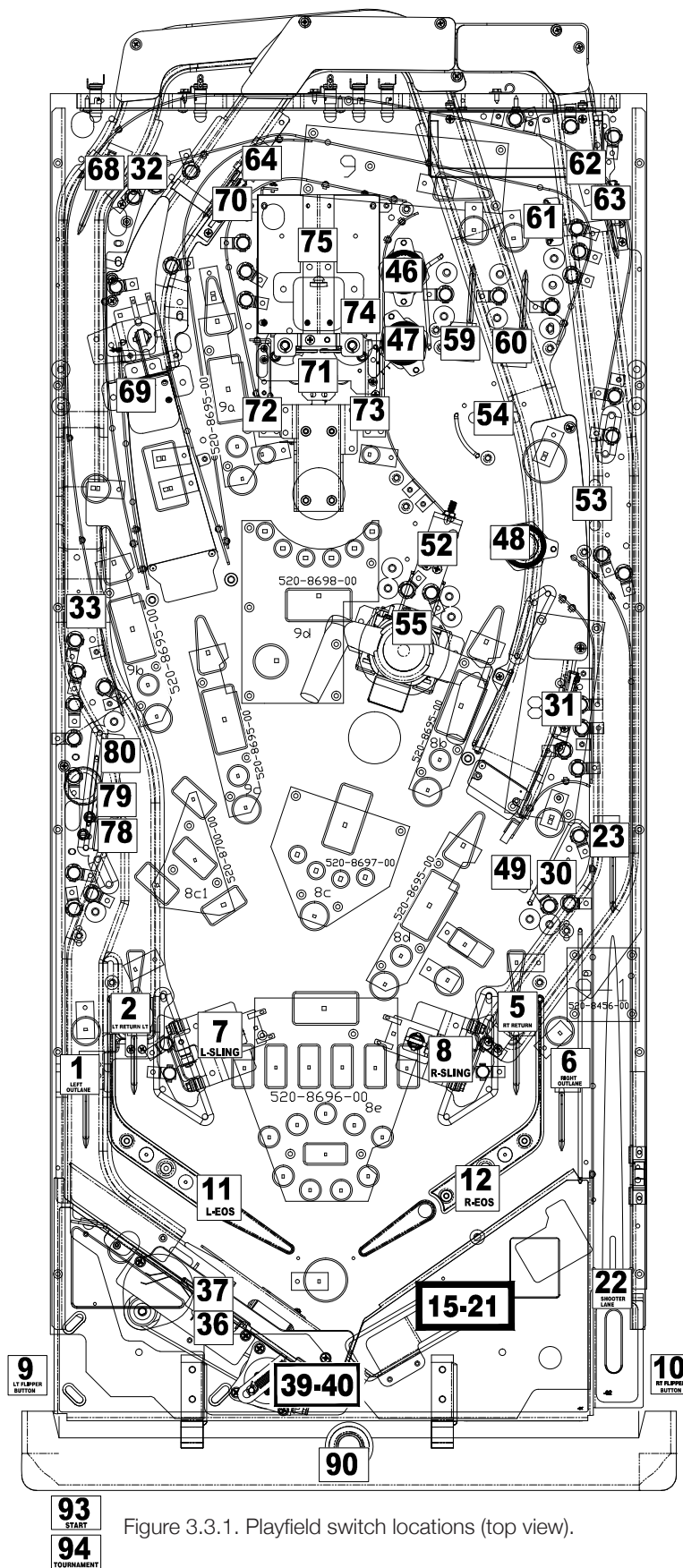


Figure 3.3.1. Playfield switch locations (top view).

3.4 LIGHT REFERENCE

ID	Name	Node	Node Ext.	Conn.	Ret. Pin	Ret. Wire	Src. Pin	Src. Wire	Location	Type	Light Color	Address	Part Number
1	Coin Enable	1	-	CN8	6	BLK GRY	2	GRY RED	Coin Door	Digital Out		1-LP-0	
2	Start Button	1	-	CN6	3	YEL BRN	1	RED	Cabinet	Feature	White	1-LP-2	113-5071-00
3	Tournament Start	1	-	CN6	2	YEL RED	1	RED	Cabinet	Feature	White	1-LP-3	112-5031-01
4	Action Button-R	1	-	CN7	2	RED WHT	1	RED	Cabinet	Feature	RGB	1-LP-5	520-5333-00
5	Action Button-G	1	-	CN7	3	GRN WHT	1	RED	Cabinet	Feature	RGB	1-LP-4	520-5333-00
6	Action Button-B	1	-	CN7	4	BLU WHT	1	RED	Cabinet	Feature	RGB	1-LP-7	520-5333-00
7	Ticket Low	1	-	CN2	4	-	5	-	Cabinet	Feature	White	1-LP-8	
8													
9													
10													
11	Left Outlane	8	e	CN4	4	BRN RED	1/2/3	RED	Playfield	Feature	White	8-LP-64	520-5307-00
12	Left Return Lane	8	e	CN4	5	BRN ORG	1/2/3	RED	Playfield	Feature	White	8-LP-65	520-5307-00
13	Shoot Again	8	e	CN4	6	BRN	1/2/3	RED	Playfield	Feature	White	8-LP-66	520-5307-00
14	Right Return Lane	8	e	CN4	7	BRN YEL	1/2/3	RED	Playfield	Feature	White	8-LP-67	520-5307-00
15	Right Outlane	8	e	CN4	8	BRN BLU	1/2/3	RED	Playfield	Feature	White	8-LP-68	520-5307-00
16													
17													
18	1 Walker Killed	8	e	LED39	-	-	-	-	Playfield	Feature	White	8-LP-86	520-8696-00
19	2 Walkers Killed	8	e	LED37	-	-	-	-	Playfield	Feature	White	8-LP-84	520-8696-00
20	3 Walkers Killed	8	e	LED34	-	-	-	-	Playfield	Feature	White	8-LP-81	520-8696-00
21	4 Walkers Killed	8	e	LED32	-	-	-	-	Playfield	Feature	White	8-LP-79	520-8696-00
22	5 Walkers Killed	8	e	LED31	-	-	-	-	Playfield	Feature	White	8-LP-78	520-8696-00
23	10 Walkers Killed	8	e	LED33	-	-	-	-	Playfield	Feature	White	8-LP-80	520-8696-00
24	20 Walkers Killed	8	e	LED36	-	-	-	-	Playfield	Feature	White	8-LP-83	520-8696-00
25	30 Walkers Killed	8	e	LED38	-	-	-	-	Playfield	Feature	White	8-LP-85	520-8696-00
26	40 Walkers Killed	8	e	LED40	-	-	-	-	Playfield	Feature	White	8-LP-87	520-8696-00
27	Last Man Standing	8	e	LED35	-	-	-	-	Playfield	Feature	White	8-LP-82	520-8696-00
28	Hammer Multi-Kill	8	e	LED25	-	-	-	-	Playfield	Feature	White	8-LP-72	520-8696-00
29	Sword Multi-Kill	8	e	LED26	-	-	-	-	Playfield	Feature	White	8-LP-73	520-8696-00
30	Crossbow Multi-Kill	8	e	LED27	-	-	-	-	Playfield	Feature	White	8-LP-74	520-8696-00
31	Gun Multi-Kill	8	e	LED28	-	-	-	-	Playfield	Feature	White	8-LP-75	520-8696-00
32	Knife Multi-Kill	8	e	LED29	-	-	-	-	Playfield	Feature	White	8-LP-76	520-8696-00
33	Axe Multi-Kill	8	e	LED30	-	-	-	-	Playfield	Feature	White	8-LP-77	520-8696-00
34													
35													
36	First Aid	8	c	CN2	4	BLU BRN	1/2/3	RED	Playfield	Feature	White	8-LP-32	520-8700-00
37	Weapons	8	c	CN2	5	BLU RED	1/2/3	RED	Playfield	Feature	White	8-LP-33	520-8700-00
38	Food	8	c	CN2	6	BLU ORG	1/2/3	RED	Playfield	Feature	White	8-LP-34	520-8700-00
39	Blood Bath-R	8	c	CN2	7	RED YEL	1/2/3	RED	Playfield	Feature	RGB	8-LP-35	520-8700-00
40	Blood Bath-G	8	c	CN2	8	GRN YEL	1/2/3	RED	Playfield	Feature	RGB	8-LP-36	520-8700-00
41	Blood Bath-B	8	c	CN2	9	BLU YEL	1/2/3	RED	Playfield	Feature	RGB	8-LP-37	520-8700-00
42													
43													
44	Well Walker Kill	8	c	LED1	-	-	-	-	Playfield	Feature	White	8-LP-16	520-8697-00
45	(W)ELL-R	8	c	LED5	-	-	-	-	Playfield	Feature	RGB	8-LP-26	520-8697-00
46	(W)ELL-G	8	c	LED5	-	-	-	-	Playfield	Feature	RGB	8-LP-27	520-8697-00
47	(W)ELL-B	8	c	LED5	-	-	-	-	Playfield	Feature	RGB	8-LP-28	520-8697-00
48	W(E)LL-R	8	c	LED4	-	-	-	-	Playfield	Feature	RGB	8-LP-23	520-8697-00
49	W(E)LL-G	8	c	LED4	-	-	-	-	Playfield	Feature	RGB	8-LP-24	520-8697-00
50	W(E)LL-B	8	c	LED4	-	-	-	-	Playfield	Feature	RGB	8-LP-25	520-8697-00

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LIGHT REFERENCE CONTINUED

ID	Name	Node	Node Ext.	Conn.	Ret. Pin	Ret. Wire	Src. Pin	Src. Wire	Location	Type	Light Color	Address	Part Number
51	WE(L)L-R	8	c	LED3	-	-	-	-	Playfield	Feature	RGB	8-LP-20	520-8697-00
52	WE(L)L-G	8	c	LED3	-	-	-	-	Playfield	Feature	RGB	8-LP-21	520-8697-00
53	WE(L)L-B	8	c	LED3	-	-	-	-	Playfield	Feature	RGB	8-LP-22	520-8697-00
54	WEL(L)-R	8	c	LED2	-	-	-	-	Playfield	Feature	RGB	8-LP-17	520-8697-00
55	WEL(L)-G	8	c	LED2	-	-	-	-	Playfield	Feature	RGB	8-LP-18	520-8697-00
56	WEL(L)-B	8	c	LED2	-	-	-	-	Playfield	Feature	RGB	8-LP-19	520-8697-00
57	Well Walker-R	8	c	LED6	-	-	-	-	Playfield	Feature	RGB	8-LP-29	520-8697-00
58	Well Walker-G	8	c	LED6	-	-	-	-	Playfield	Feature	RGB	8-LP-30	520-8697-00
59	Well Walker-B	8	c	LED6	-	-	-	-	Playfield	Feature	RGB	8-LP-31	520-8697-00
60													
61													
62	Right Ramp Walker Kill	8	d	LED1	-	-	-	-	Playfield	Feature	White	8-LP-40	520-8695-00
63	Right Ramp Multi-Kill	8	d	LED2	-	-	-	-	Playfield	Feature	White	8-LP-41	520-8695-00
64	Arena-R	8	d	LED3	-	-	-	-	Playfield	Feature	RGB	8-LP-42	520-8695-00
65	Arena-G	8	d	LED3	-	-	-	-	Playfield	Feature	RGB	8-LP-43	520-8695-00
66	Arena-B	8	d	LED3	-	-	-	-	Playfield	Feature	RGB	8-LP-44	520-8695-00
67	Right Ramp Arrow-R	8	d	LED4	-	-	-	-	Playfield	Feature	RGB	8-LP-45	520-8695-00
68	Right Ramp Arrow-G	8	d	LED4	-	-	-	-	Playfield	Feature	RGB	8-LP-46	520-8695-00
69	Right Ramp Arrow-B	8	d	LED4	-	-	-	-	Playfield	Feature	RGB	8-LP-47	520-8695-00
70													
71													
72	Extra Ball	8	e	CN4	9	BRN VIO	1/2/3	RED	Playfield	Feature	White	8-LP-69	520-5307-00
73	Welcome To Woodbury	8	e	CN4	10	BRN GRY	1/2/3	RED	Playfield	Feature	White	8-LP-70	520-5307-00
74													
75													
76	Left Loop Walker Kill	9	b	LED1	-	-	-	-	Playfield	Feature	White	9-LP-16	520-8695-00
77	Left Loop Multi-Kill	9	b	LED2	-	-	-	-	Playfield	Feature	White	9-LP-17	520-8695-00
78	Barn-R	9	b	LED3	-	-	-	-	Playfield	Feature	RGB	9-LP-18	520-8695-00
79	Barn-G	9	b	LED3	-	-	-	-	Playfield	Feature	RGB	9-LP-19	520-8695-00
80	Barn-B	9	b	LED3	-	-	-	-	Playfield	Feature	RGB	9-LP-20	520-8695-00
81	Left Loop Arrow-R	9	b	LED4	-	-	-	-	Playfield	Feature	RGB	9-LP-21	520-8695-00
82	Left Loop Arrow-G	9	b	LED4	-	-	-	-	Playfield	Feature	RGB	9-LP-22	520-8695-00
83	Left Loop Arrow-B	9	b	LED4	-	-	-	-	Playfield	Feature	RGB	9-LP-23	520-8695-00
84													
85													
86	Left Ramp Walker Kill	9	c	LED1	-	-	-	-	Playfield	Feature	White	9-LP-24	520-8695-00
87	Left Ramp Multi-Kill	9	c	LED2	-	-	-	-	Playfield	Feature	White	9-LP-25	520-8695-00
88	CDC-R	9	c	LED3	-	-	-	-	Playfield	Feature	RGB	9-LP-26	520-8695-00
89	CDC-G	9	c	LED3	-	-	-	-	Playfield	Feature	RGB	9-LP-27	520-8695-00
90	CDC-B	9	c	LED3	-	-	-	-	Playfield	Feature	RGB	9-LP-28	520-8695-00
91	Left Ramp Arrow-R	9	c	LED4	-	-	-	-	Playfield	Feature	RGB	9-LP-29	520-8695-00
92	Left Ramp Arrow-G	9	c	LED4	-	-	-	-	Playfield	Feature	RGB	9-LP-30	520-8695-00
93	Left Ramp Arrow-B	9	c	LED4	-	-	-	-	Playfield	Feature	RGB	9-LP-31	520-8695-00
94													
95													
96	Center Lane Walker Kill	9	a	LED1	-	-	-	-	Playfield	Feature	White	9-LP-8	520-8695-00
97	Center Lane Multi-Kill	9	a	LED2	-	-	-	-	Playfield	Feature	White	9-LP-9	520-8695-00
98	Riot-R	9	a	LED3	-	-	-	-	Playfield	Feature	RGB	9-LP-10	520-8695-00
99	Riot-G	9	a	LED3	-	-	-	-	Playfield	Feature	RGB	9-LP-11	520-8695-00
100	Riot-B	9	a	LED3	-	-	-	-	Playfield	Feature	RGB	9-LP-12	520-8695-00
101	Center Lane Arrow-R	9	a	LED4	-	-	-	-	Playfield	Feature	RGB	9-LP-13	520-8695-00
102	Center Lane Arrow-G	9	a	LED4	-	-	-	-	Playfield	Feature	RGB	9-LP-14	520-8695-00

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LIGHT REFERENCE CONTINUED

ID	Name	Node	Node Ext.	Conn.	Ret. Pin	Ret. Wire	Src. Pin	Src. Wire	Location	Type	Light Color	Address	Part Number
103	Center Lane Arrow-B	9	a	LED4	-	-	-	-	Playfield	Feature	RGB	9-LP-15	520-8695-00
104													
105													
106	Left Prison Target	9	d	CN4	9	ORG GRY	1/2	RED	Playfield	Feature	White	9-LP-70	520-5307-00
107	Right Prison Target	9	d	CN4	10	ORG WHT	1/2	RED	Playfield	Feature	White	9-LP-71	520-5307-00
108													
109	(P)RISON-R	9	d	LED1	-	-	-	-	Playfield	Feature	RGB	9-LP-32	520-8698-00
110	(P)RISON-G	9	d	LED1	-	-	-	-	Playfield	Feature	RGB	9-LP-33	520-8698-00
111	(P)RISON-B	9	d	LED1	-	-	-	-	Playfield	Feature	RGB	9-LP-34	520-8698-00
112	P(R)ISON-R	9	d	LED2	-	-	-	-	Playfield	Feature	RGB	9-LP-35	520-8698-00
113	P(R)ISON-G	9	d	LED2	-	-	-	-	Playfield	Feature	RGB	9-LP-36	520-8698-00
114	P(R)ISON-B	9	d	LED2	-	-	-	-	Playfield	Feature	RGB	9-LP-37	520-8698-00
115	PR(I)SON-R	9	d	LED3	-	-	-	-	Playfield	Feature	RGB	9-LP-38	520-8698-00
116	PR(I)SON-G	9	d	LED3	-	-	-	-	Playfield	Feature	RGB	9-LP-39	520-8698-00
117	PR(I)SON-B	9	d	LED3	-	-	-	-	Playfield	Feature	RGB	9-LP-40	520-8698-00
118	PRI(S)ON-R	9	d	LED4	-	-	-	-	Playfield	Feature	RGB	9-LP-41	520-8698-00
119	PRI(S)ON-G	9	d	LED4	-	-	-	-	Playfield	Feature	RGB	9-LP-42	520-8698-00
120	PRI(S)ON-B	9	d	LED4	-	-	-	-	Playfield	Feature	RGB	9-LP-43	520-8698-00
121	PRIS(O)N-R	9	d	LED5	-	-	-	-	Playfield	Feature	RGB	9-LP-44	520-8698-00
122	PRIS(O)N-G	9	d	LED5	-	-	-	-	Playfield	Feature	RGB	9-LP-45	520-8698-00
123	PRIS(O)N-B	9	d	LED5	-	-	-	-	Playfield	Feature	RGB	9-LP-46	520-8698-00
124	PRISO(N)-R	9	d	LED6	-	-	-	-	Playfield	Feature	RGB	9-LP-47	520-8698-00
125	PRISO(N)-G	9	d	LED6	-	-	-	-	Playfield	Feature	RGB	9-LP-48	520-8698-00
126	PRISO(N)-B	9	d	LED6	-	-	-	-	Playfield	Feature	RGB	9-LP-49	520-8698-00
127													
128													
129	Right Loop Walker Kill	8	b	LED1	-	-	-	-	Playfield	Feature	White	8-LP-8	520-8695-00
130	Right Loop Multi-Kill	8	b	LED2	-	-	-	-	Playfield	Feature	White	8-LP-9	520-8695-00
131	Tunnel-R	8	b	LED3	-	-	-	-	Playfield	Feature	RGB	8-LP-10	520-8695-00
132	Tunnel-G	8	b	LED3	-	-	-	-	Playfield	Feature	RGB	8-LP-11	520-8695-00
133	Tunnel-B	8	b	LED3	-	-	-	-	Playfield	Feature	RGB	8-LP-12	520-8695-00
134	Right Loop Arrow-R	8	b	LED4	-	-	-	-	Playfield	Feature	RGB	8-LP-13	520-8695-00
135	Right Loop Arrow-G	8	b	LED4	-	-	-	-	Playfield	Feature	RGB	8-LP-14	520-8695-00
136	Right Loop Arrow-B	8	b	LED4	-	-	-	-	Playfield	Feature	RGB	8-LP-15	520-8695-00
137													
138													
139	Left Pop Bumper-R	9	d	CN2	4	RED BLK	1/2/3	RED	Playfield	Feature	RGB	9-LP-52	520-5374-00
140	Left Pop Bumper-G	9	d	CN2	5	GRN BLK	1/2/3	RED	Playfield	Feature	RGB	9-LP-53	520-5374-00
141	Left Pop Bumper-B	9	d	CN2	6	BLU BLK	1/2/3	RED	Playfield	Feature	RGB	9-LP-54	520-5374-00
142	Right Pop Bumper-R	9	d	CN3	2	RED BRN	1	RED	Playfield	Feature	RGB	9-LP-56	520-5374-00
143	Right Pop Bumper-G	9	d	CN3	3	GRN BRN	1	RED	Playfield	Feature	RGB	9-LP-57	520-5374-00
144	Right Pop Bumper-B	9	d	CN3	4	BLU BRN	1	RED	Playfield	Feature	RGB	9-LP-58	520-5374-00
145	Top Pop Bumper-R	9	d	CN3	5	RED GRY	1	RED	Playfield	Feature	RGB	9-LP-59	520-5374-00
146	Top Pop Bumper-G	9	d	CN3	6	GRN GRY	1	RED	Playfield	Feature	RGB	9-LP-60	520-5374-00
147	Top Pop Bumper-B	9	d	CN3	7	BLU GRY	1	RED	Playfield	Feature	RGB	9-LP-61	520-5374-00
148													
149													
150	Button Rollover Top-R	9	d	CN6	1	RED ORG	CN8-1	RED	Playfield	Feature	RGB	9-LP-79	520-8527-00
151	Button Rollover Top-G	9	d	CN6	2	GRN ORG	CN8-1	RED	Playfield	Feature	RGB	9-LP-80	520-8527-00
152	Button Rollover Top-B	9	d	CN6	3	BLU ORG	CN8-1	RED	Playfield	Feature	RGB	9-LP-81	520-8527-00
153	Button Rollover Middle-R	9	d	CN6	4	RED YEL	CN8-2	RED	Playfield	Feature	RGB	9-LP-82	520-8527-00
154	Button Rollover Middle-G	9	d	CN6	5	GRN YEL	CN8-2	RED	Playfield	Feature	RGB	9-LP-83	520-8527-00

Continued on next page...



LIGHT REFERENCE CONTINUED

ID	Name	Node	Node Ext.	Conn.	Ret. Pin	Ret. Wire	Src. Pin	Src. Wire	Location	Type	Light Color	Address	Part Number
155	Button Rollover Middle-B	9	d	CN6	6	BLU YEL	CN8-2	RED	Playfield	Feature	RGB	9-LP-84	520-8527-00
156	Button Rollover Bottom-R	9	d	CN6	7	RED VIO	CN8-3	RED	Playfield	Feature	RGB	9-LP-85	520-8527-00
157	Button Rollover Bottom-G	9	d	CN6	8	GRN VIO	CN8-3	RED	Playfield	Feature	RGB	9-LP-86	520-8527-00
158	Button Rollover Bottom-B	9	d	CN6	9	BLU VIO	CN8-3	RED	Playfield	Feature	RGB	9-LP-87	520-8527-00
159													
160	Tower	9	d	CN5	4	YEL BRN	1/2/3	RED	Playfield	Feature	White	9-LP-72	520-5307-00
161	Left Top Lane	9	d	CN5	5	YEL RED	1/2/3	RED	Playfield	Feature	White	9-LP-73	520-5307-00
162	Right Top Lane	9	d	CN5	6	YEL ORG	1/2/3	RED	Playfield	Feature	White	9-LP-74	520-5307-00
163													
164													
165													
166													
167													
168													
169													
170	Billboard Bicycle Girl	9	d	CN5	10	YEL GRY	1/2/3	RED	Playfield	Feature	White	9-LP-78	520-5307-00
171	Billboard Crossbow	8	e	CN1	5	ORG BRN	1/2/3/4	RED	Playfield	Feature	White	8-LP-48	520-5307-00
172	Billboard Fish Tank	8	e	CN1	6	ORG RED	1/2/3/4	RED	Playfield	Feature	White	8-LP-49	520-5307-00
173	Fish Tank Head 1	9	d	CN5	7	YEL GRN	1/2/3	RED	Playfield	Feature	Green	9-LP-75	520-5333-00
174	Fish Tank Head 2	9	d	CN5	8	YEL BLU	1/2/3	RED	Playfield	Feature	Green	9-LP-76	520-5333-00
175	Fish Tank Head 3	9	d	CN5	9	YEL VIO	1/2/3	RED	Playfield	Feature	Green	9-LP-77	520-5333-00
176													
177	Demux Lamp A	9	-	CN14	6	VIO YEL	8	YEL	Playfield	Digital Out		9-LP-3	520-8456-00
178	Demux Lamp B	9	-	CN14	5	VIO GRN	8	YEL	Playfield	Digital Out		9-LP-4	520-8456-00
179													
180	Coin Door GI	1	-	CN5	2	YEL	1	YEL-WHT	Coin Door	G.I.	White	1-LP-1	112-5033-08
181	Bottom GI-WHT	8	-	CN15	5	WHT BLK	1	YEL BLK	Playfield	G.I.	White	8-LP-0	112-5034-08F (Bot Arch) 520-8652-00
182	Bottom GI-RED	8	-	CN15	6	RED BLK	2	YEL RED	Playfield	G.I.	White	8-LP-1	112-5034-02F
183	Bottom Arch	8	-	CN15	7	BLU BLK	3	YEL BLU	Playfield	G.I.	White	8-LP-2	520-5307-00 520-7000-00
184													
185	Top GI-WHT	9	-	CN15	5	WHT BLK	1	YEL BLK	Playfield	G.I.	White	9-LP-0	112-5034-08F
186	Top GI-RED	9	-	CN15	6	RED BLK	2	YEL RED	Playfield	G.I.	White	9-LP-1	112-5034-02F
187	Backpanel GI	9	-	CN15	7	BLU BLK	3	YEL BLU	Playfield	G.I.	White	9-LP-2	112-5034-02F
188													
189													
190	Horde Flash	8	e	LED24	-	-	-	-	Playfield	Flash	White	8-LP-71	520-8696-00
191	2X Playfield Flash	9	d	LED8	-	-	-	-	Playfield	Flash	White	9-LP-51	520-8698-00
192	Siege Flash	9	d	LED7	-	-	-	-	Playfield	Flash	White	9-LP-50	520-8698-00
193	Well Walker Flash	8	e	CN1	9	ORG BLU	1/2/3/4	RED	Playfield	Flash	White	8-LP-52	113-5045-08
194													
195	Pop Flash	9	d	CN2	7	ORG BLK	1/2/3	RED	Playfield	Flash	White	9-LP-55	520-7000-00

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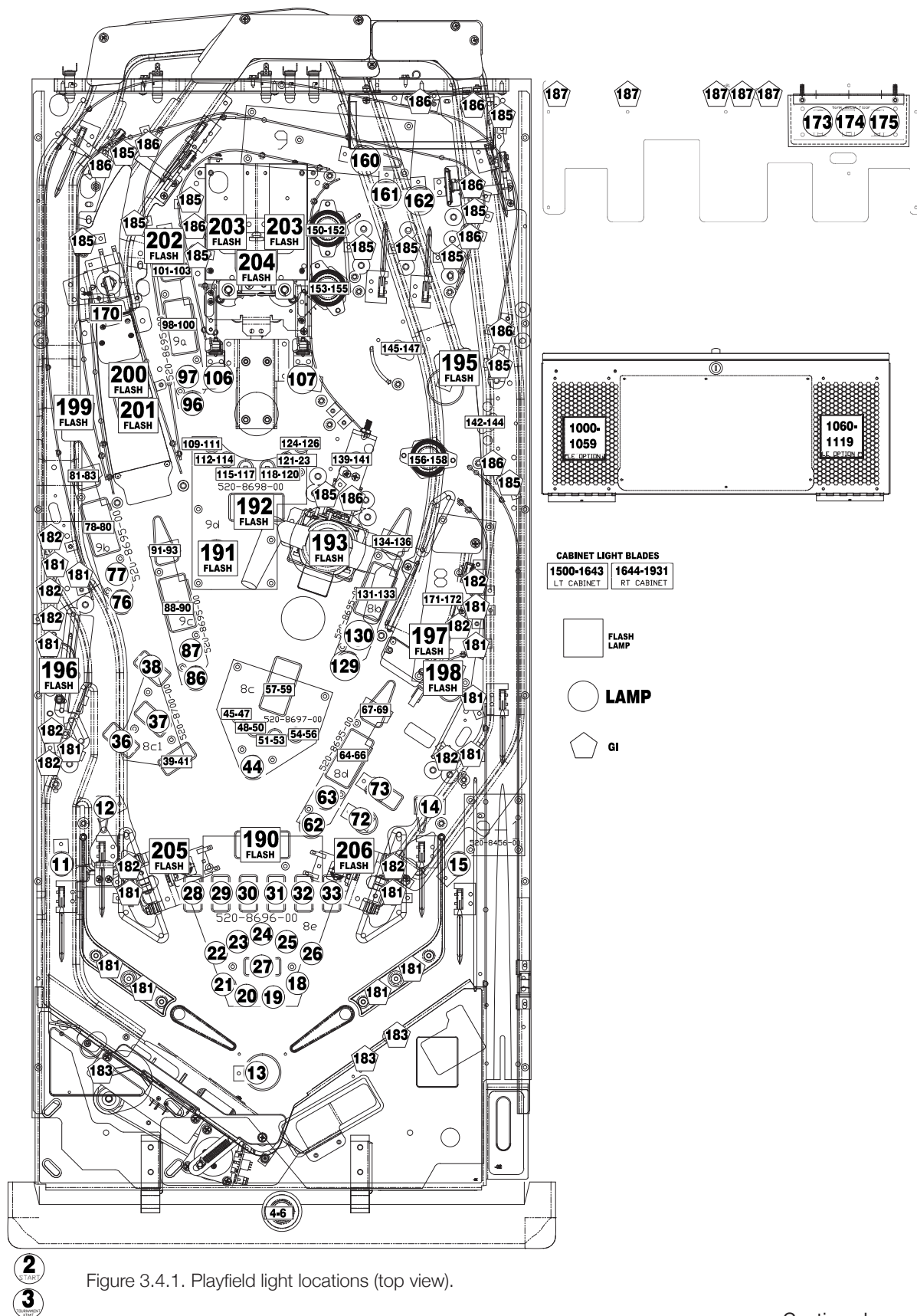
LIGHT REFERENCE CONTINUED

ID	Name	Node	Node Ext.	Conn.	Ret. Pin	Ret. Wire	Src. Pin	Src. Wire	Location	Type	Light Color	Address	Part Number
196	Left Dome Flash	8	c	CN2	10	ORG BRN	1/2/3	RED	Playfield	Flash	White	8-LP-38	520-7000-00
197	Right Dome Flash	8	e	CN1	8	ORG GRN	1/2/3/4	RED	Playfield	Flash	White	8-LP-51	520-7000-00
198	Right Spinner Flash	8	e	CN1	7	ORG YEL	1/2/3/4	RED	Playfield	Flash	White	8-LP-50	520-7000-00
199	Left Loop Flash	9	d	CN4	3	ORG BRN	1/2	RED	Playfield	Flash	White	9-LP-64	520-7000-00
200	Bicycle Girl Flash-WHT	9	d	CN4	4	ORG RED	1/2	RED	Playfield	Flash	White	9-LP-65	520-7000-00
201	Bicycle Girl Flash-RED	9	d	CN4	5	ORG YEL	1/2	RED	Playfield	Flash	Red	9-LP-66	520-8457-00
202	Center Lane Flash	9	d	CN4	6	ORG GRN	1/2	RED	Playfield	Flash	White	9-LP-67	520-7000-00
203	Prison Bottom Flash-X2	9	d	CN4	7	ORG BLU	1/2	RED	Playfield	Flash	Red	9-LP-68	520-8457-00
204	Prison Top Flash	9	d	CN4	8	ORG VIO	1/2	RED	Playfield	Flash	White	9-LP-69	113-5045-08
205	Left Sling Head Flash	8	e	CN3	5	ORG VIO	1/2/3/4	RED	Playfield	Flash	White	8-LP-56	520-7000-00
206	Right Sling Head Flash	8	e	CN3	6	ORG WHT	1/2/3/4	RED	Playfield	Flash	White	8-LP-57	520-7000-00
207													
208													
209													
210													
211													
212													
213													
214													
215													
216													
217													
218													
219													

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LIGHT REFERENCE CONTINUED



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4. ELECTRONIC PINOUTS AND SCHEMATICS

4.1 SPIKE-3 CPU NODE 0

509-1007-42

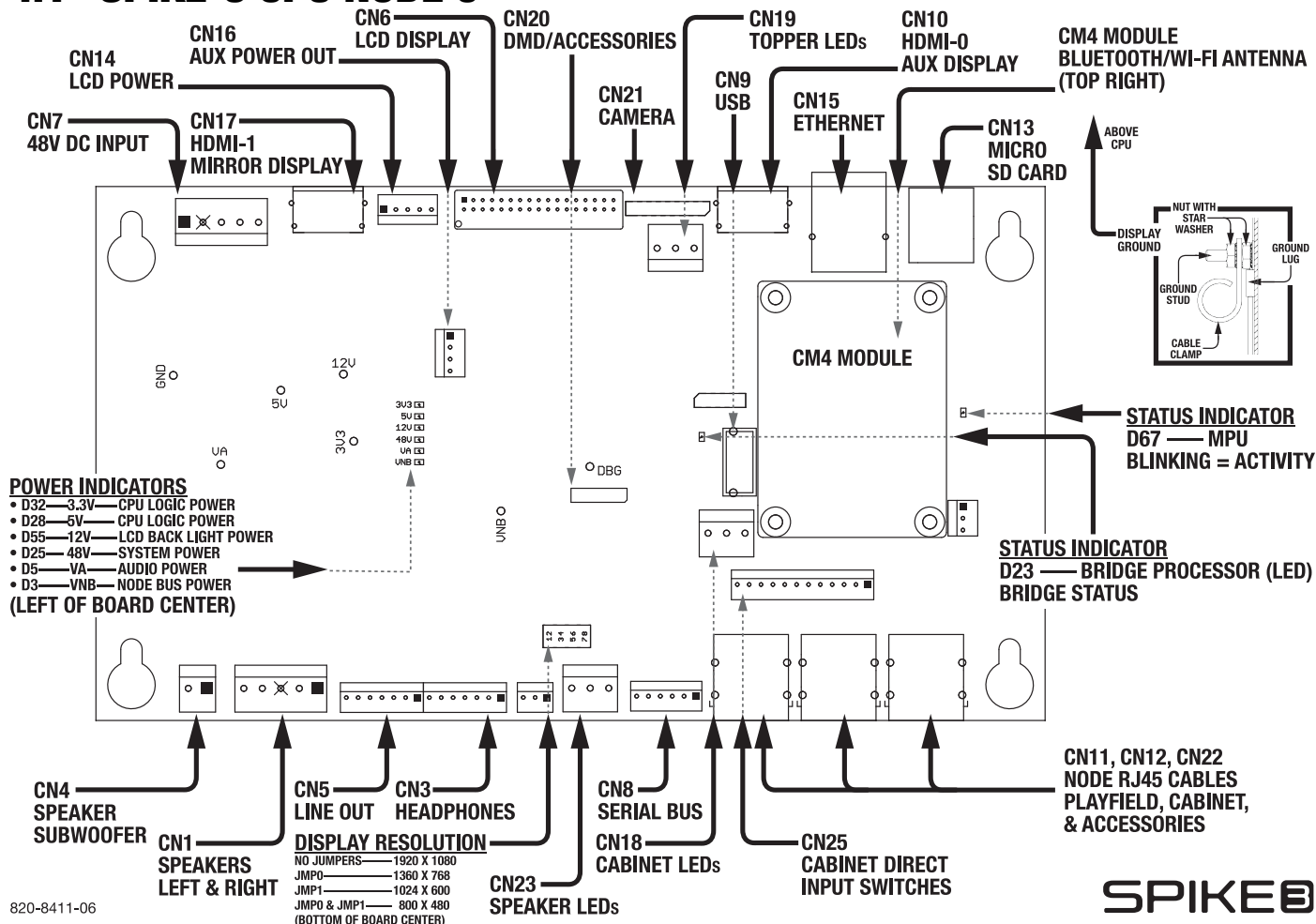


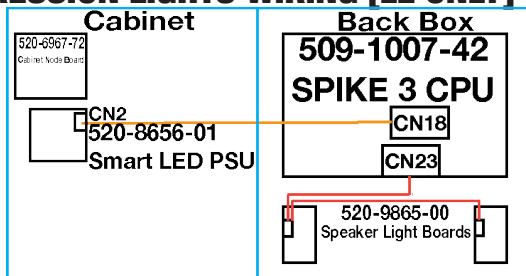
Figure 4.1.1. SPIKE 3 CPU Node connector and status LED details.

DIRECT SWITCH MAPPING (CN25)

The coin-door diagnostic switches are connected directly to the CPU node via the Cabinet Node. Note that both the CPU and Cabinet nodes are required for diagnostic switch operation.

ID	Name	Conn.	Input Pin	Input Wire	GND Pin	Ground Wire	Location	Type	Address	Part Number
C9	Service Select	CN25	1	LGN-GRY	11	BLK-WHT	Coin Door	Push Button	0-SW-9	180-5192-04
C10	Service Plus	CN25	2	LGN-VIO	11	BLK-WHT	Coin Door	Push Button	0-SW-10	180-5192-02
C11	Service Minus	CN25	3	LGN-BLU	11	BLK-WHT	Coin Door	Push Button	0-SW-11	180-5192-02
C12	Service Back	CN25	4	LGN-BLK	11	BLK-WHT	Coin Door	Push Button	0-SW-12	180-5192-00

EXPRESSION LIGHTS WIRING [LE ONLY]



DISPLAY RESOLUTION JUMPER SETTINGS

JP1 Config	Setting
No Jumpers	1920 x 1080 (SPIKE-3: 18" LCD)
JMP0	1360 X 768 (SPIKE-2: 15.6" LCD)
JMP1	1024 X 600 (SPIKE-3: 10" Home Edition LCD)
JPMP 0 & 1	800 X 480 (SPIKE-2: 7.6" Home Edition LCD)

SPIKE-3 CPU NODE 0 CONTINUED CONNECTORS

ID	Connector Type	Description
CN1	5-Pin .156" Header	Backbox 2-channel amplified speaker out
CN3	7-Pin .100" Header	Headphone connector
CN4	2-Pin .156" Header	Cabinet 1-channel amplified speaker out
CN5	7-Pin .100" Header	Line In/Out
CN6	34-Pin 2.00mm Header	LCD display connector
CN7	5-Pin .156" Header	48V supply from main power supply
CN8	6-Pin .100" Header	SPI Serial
CN9	USB	USB connector - for software updates, audit dumps, and expansion modules
CN10	HDMI	HDMI Out
CN11	RJ45	SPIKE node bus - To Cabinet Node 1
CN12	RJ45	SPIKE node bus - To Topper accessory kit
CN13	SD CARD	MicroSD Card Connector
CN14	5-Pin .100" Header	LCD Backlight
CN15	ETHERNET	ETHERNET connector
CN16	4-Pin .100" Header	3.3v / 5v / 12v
CN17	HDMI	HDMI-1 Mirror Display
CN18	3-Pin .156" Header	Cabinet LEDs
CN19	3-Pin .156" Header	Topper LEDs
CN20	10-Pin 1.00mm Header	DMD / Accessories
CN21	SATA Header	Camera
CN22	RJ45	SPIKE node bus - To Playfield node board
CN23	3-Pin .156" Header	Speaker LEDs
CN25	12-Pin .100" Header	Dedicated switch inputs - service, volume switches

COMPONENTS

ID	Name
Micro SD Card (CN13)	For system SD card. Note: only to be removed if instructed to by Stern Service.

STATUS LEDs

LED ID	Name	Color	Description
D35 [48V]	48V Supply In	Red	ON: Main system power is connected. OFF: No 48V system power. Check power supply connections, cables, and fuses.
D32 [3.3V]	3.3V Logic	Red	ON: Logic power supply is good. OFF: Logic power supply bad, call tech support.
D20 [5V]	5V Logic	Red	ON: Logic power supply is good. OFF: Logic power supply bad, call tech support.
D55 [12V]	12V Backbox Illumination	Red	ON: Back box LED power good. OFF: Backbox LED power bad, call tech support.
D5 [VA]	30V Audio	Red	ON: Audio power supply is good. OFF: Audio power supply off, call tech support.
D3 [VNB]	9V Node Bus	Red	ON: Power for node bus good. OFF: Power to node bus not detected, call tech support.
D23	CPU Heartbeat	Red	Should blink once every ~1/2 second. OFF: Processor not running, call tech support.
D67 [ACT]	MPU Status	Red	MPU Activity LED. Flashes with use of MPU, typically flicker.

AUDIO PINOUTS

ID	Type	Pin	Description	Minimum Impedance	Max Power (RMS)	Wire Color
CN1	.156" 5-pin Header	1	Speaker Right Ground (-)	4 Ohms	-	BLK-WHT
		2	Speaker Right (+)	4 Ohms	19 W	RED-WHT
		3	n/c	-	-	-
		4	Speaker Left Ground (-)	4 Ohms	-	BLK-RED
		5	Speaker Left (+)	4 Ohms	19 W	RED-BLK
CN3	.100" 7-pin Header	1	n/c	-	-	-
		2	L-HP	16 Ohms	30 mW	-
		3	R-HP	16 Ohms	30 mW	-
		4	n/c	-	-	-
		5	Headphone Detect	-	-	-
		6	Headphone vol +	-	-	-
		7	Headphone vol -	-	-	-
CN4	.156" 2-pin Header	1	Woofer Ground (-)	6 Ohms	-	YEL-BLK
		2	Woofer Out (+)	6 Ohms	50 W	YEL-WHT
CN5	.100" 7-pin Header	1	n/c	-	-	-
		2	n/c	-	-	-
		3	n/c	-	-	-
		4	n/c	-	-	-
		5	L-OUT	10k Ohms	1.95 V	-
		6	R-OUT	10k Ohms	1.95 V	-
		7	n/c	-	-	-

BACK BOX WIRING

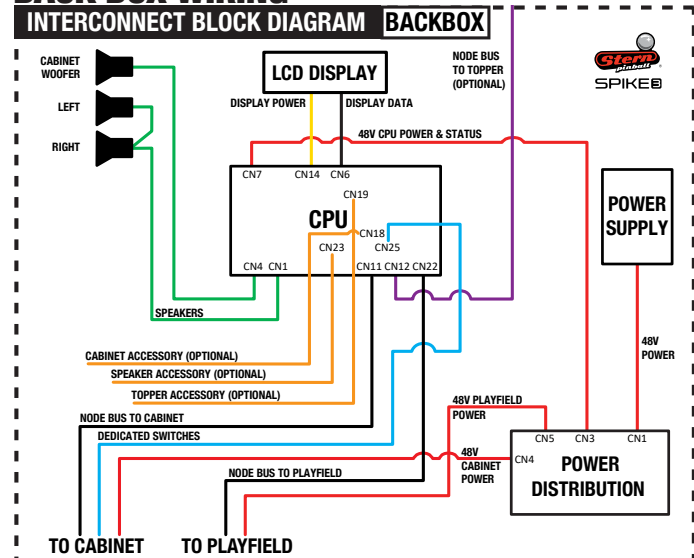


Figure 4.1.2. SPIKE 3 Back box wiring block diagram.

COIN DOOR SERVICE SWITCH WIRING

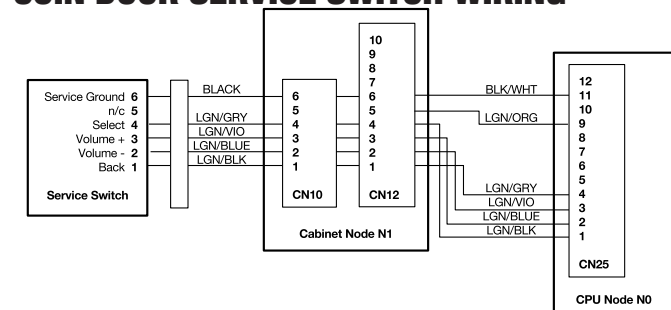
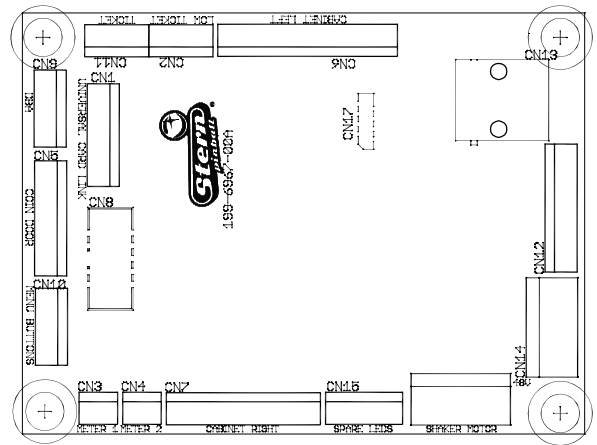


Figure 4.1.3. Service switch wiring. Note that the Cabinet Node must be present and CN10 and CN12 connected for the Coin Door Service Switches to function correctly.

4.2 CABINET NODE 1

520-6967-72

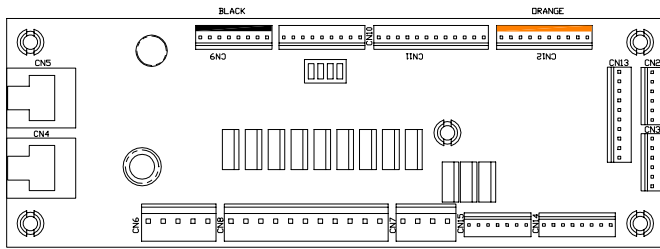
ID	Type	Pin	Description	Wire Color
CN1	.100" 8-Pin Header Universal Card Link	1	12V	-
		2	Coin 1	-
		3	Meter 1	-
		4	N/C	-
		5	Notch	-
		6	Coin Enable	-
		7	Ticket Enable	-
		8	Ground	-
CN2	.100" 5-Pin Header Low Ticket	1	Ground	-
		2	Ticket Low sw.	-
		3	Key	-
		4	Ticket Low	-
		5	5V Out	-
CN3	.100" 3-Pin Header Meter 1	1	Meter 12V (+)	RED
		2	Meter (-)	BLK
		3	N/C	-
CN4	.100" 3-Pin Header Meter 2	1	Meter 12V (+)	RED
		2	Meter (-)	BLK
		3	N/C	-
CN5	.100" 9-Pin Header	1	5V Out	YEL/WHT
		2	Coin LED Out	YEL
		3	Ground	BLK
		4	Slam Tilt In	LGN/RED
		5	Coin 5	PNK/GRN*
		6	Coin 4	PNK/YEL*
		7	Coin 3	PNK/ORN*
		8	Coin 2	PNK/RED*
		9	Coin 1	PNK/BRN*
CN6	.100" 14-Pin Header Cabinet Left	1	5V LED Power	RED
		2	Start 2 LED	YEL-RED
		3	Start 1 LED	YEL-BRN
		4	Spare LED	-
		5	Ground	BLK-WHT
		6	Spare Left	-
		7	Tilt Input	WHT
		8	Door Open	-
		9	Start 2 Switch	GRY-WHT
		10	Start 1 Switch	GRY
		11	N/C	-
		12	N/C	-
		13	N/C	-
		14	N/C	-
CN7	.100" 12-Pin Header Cabinet Right	1	5V LED Power	RED
		2	Plunge 2 LED	RED-WHT
		3	Plunge 1 LED	GRN-WHT
		4	Spare LED 2	BLU-WHT
		5	Ground	BLK-WHT
		6	Spare Right In	-
		7	Plunge 2 Switch	-
		8	Plunge 1 Switch	-
		9	N/C	-
		10	N/C	-
		11	N/C	-
		12	N/C	-
CN8	.100" 10-Pin Header Dual Row Electronic Coin Mech	1	Ground	-
		2	12V	-
		3	Coin 5	-
		4	Coin 6	-
		5	N/C	-
		6	Coin Enable/Inhibit (+)	-
		7	Coin 1	-
		8	Coin 2	-
		9	Coin 3	-
		10	Coin 4	-



CN9	.100" 6-Pin Header Dollar Bill Acceptor	1	Coin Enable/DBA Inhibit (-)	BLK
		2	Coin Enable/DBA Inhibit (+)	-
		3	Key	Key
		4	DBA 12V	ORG
		5	Coin 6 / DBA Credit	-
		6	Ground	BLK-ORG
CN10	.100" 6-Pin Header Service Switch In	1	Service Back (To Coindoor)	LGN-BLK
		2	Service Down (To Coindoor)	LGN-BLU
		3	Service Up (To Coindoor)	LGN-VIO
		4	Service Select (To Coindoor)	LGN-GRY
		5	Key	Key
		6	Service Ground (To Coin-door)	BLK
CN11	.100" 5-Pin Header Ticket Dispenser	1	12V	RED
		2	N/C	-
		3	Ticket Dispenser Enable	WHT
		4	Ground	BLK
		5	Ticket Dispenser Notch	BLU
CN12	.100" 10-Pin Header CPU Direct Switches	1	Service Back (To CPU)	LGN-BLK
		2	Service Down (To CPU)	LGN-BLU
		3	Service Up (To CPU)	LGN-VIO
		4	Service Select (To CPU)	LGN-GRY
		5	Power Present	LGN-ORG
		6	Service Ground (To CPU)	BLK-WHT
		7	N/C	-
		8	N/C	-
		9	N/C	-
		10	N/C	-
CN14	.156" 5-Pin Header Power Input	1	Ground	BLK
		2	Key	Key
		3	N/C	-
		4	N/C	-
		5	48VDC In	GRY-YEL
CN15	.100" 6-Pin Header Spare LED's	1	5V LED Power	-
		2	Key	Key
		3	Spare LED 3	-
		4	Spare LED 4	-
		5	Spare LED 5	-
		6	Spare LED 6	-
CN16	.156" 5-Pin Header Shaker Motor	1	Shaker Motor (-)	BLU
		2	Shaker Motor (-)	-
		3	Shaker Motor (+)	-
		4	Key	Key
		5	Shaker Motor (+)	RED
			*Varies by country model	

4.3 LOWER PLAYFIELD 48V DRIVER PINOUT NODE 8

520-1070 / 520-1057-00

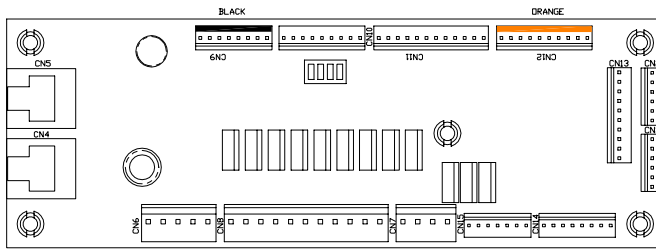


ID	Type	Pin	Description	Wire Color
SW1	Address DIP	-	Node 8 - OFF-OFF-OFF-OFF	-
CN4	RJ45	-	SPIKE Node Bus	Multi
CN5	RJ45	-	SPIKE Node Bus	Multi
CN6	.156" 5-Pin Header Node Power	1	Ground	BLK
		2	Key	Key
		3	N/C	-
		4		-
		5	48VDC In	GRY
CN7	.156" 4-Pin Header (White)	1	48V Driver Power	GRY ORG
		2	8-DR-8 Driver Return	YEL RED
		3	8-DR-6 Driver Return	YEL BLK
		4	8-DR-7 Driver Return	BRN ORG
CN8	.156 11-Pin Header (White)	1	48V Driver Power	GRY ORG
		2	48V Driver Power	GRY ORG
		3	48V Driver Power	GRY ORG
		4	48V Driver Power	GRY ORG
		5	8-DR-0 Driver Return	ORG GRN
		6	8-DR-5 Driver Return	ORG YEL
		7	8-DR-1 Driver Return	ORG GRY
		8	8-DR-8 Driver Return	-
		9	8-DR-4 Driver Return	ORG WHT
		10	8-DR-2 Driver Return	ORG VIO
		11	8-DR-3 Driver Return	ORG BLU
CN9	.100" 8-Pin Header (Black)	1	V+	-
		2	V+	-
		3	8-SW-24 Switch	GRY RED
		4	8-SW-25 Switch	GRY BRN
		5	8-SW-26 Switch	-
		6	8-SW-27 Switch	-
		7	Ground	BLK GRN
		8	Ground	-
CN10	.100" 9-Pin Header (White)	1	V+	-
		2	8-SW-28 Switch	GRY WHT
		3	8-SW-29 Switch	GRY VIO
		4	8-SW-30 Switch	GRY BLU
		5	8-SW-31 Switch	GRY GRN
		6	8-SW-16 Switch	GRY YEL
		7	Ground	BLK GRN
		8	Ground	BLK GRN
		9	Ground	BLK GRN

CN11	.100" 12-Pin Header (White)	1	V+	-
		2	8-SW-26 Switch	-
		3	8-SW-27 Switch	LGN BRN
		4	8-SW-17 Switch	LGN RED
		5	8-SW-18 Switch	LGN ORG
		6	8-SW-19 Switch	LGN YEL
		7	8-SW-20 Switch	LGN BLU
		8	8-SW-21 Switch	LGN VIO
		9	8-SW-22 Switch	LGN GRY
		10	8-SW-23 Switch	-
		11	Ground	BLK ORG
		12	Ground	BLK ORG
CN12	.156 10-Pin Header (Orange)	1	V+	RED
		2	8-SW-8 Switch	WHT BRN
		3	8-SW-9 Switch	WHT RED
		4	8-SW-10 Switch	WHT ORG
		5	8-SW-11 Switch	WHT YEL
		6	8-SW-12 Switch	-
		7	8-SW-13 Switch	-
		8	8-SW-14 Switch	-
		9	8-SW-15 Switch	-
		10	Ground	BLK RED
CN13	.156 10-Pin Header (White)	1	V+	RED
		2	8-SW-0 Switch	PNK RED
		3	8-SW-1 Switch	PNK ORG
		4	8-SW-2 Switch	-
		5	8-SW-3 Switch	-
		6	8-SW-4 Switch	-
		7	8-SW-5 Switch	-
		8	8-SW-6 Switch	-
		9	8-SW-7 Switch	-
		10	Ground	BLK BRN
CN14	.100" 8-Pin Header	1	Ground	-
		2	8-LP-7 Driver Return	-
		3	8-LP-6 Driver Return	-
		4	8-LP-5 Driver Return	-
		5	8-LP-4 Driver Return	-
		6	8-LP-3 Driver Return	-
		7	LED V+	-
		8	LED V+	-
CN15	.100" 7-Pin Header (White)	1	LED V+	YEL BLK
		2	LED V+	YEL RED
		3	LED V+	YEL BLU
		4	-	-
		5	8-LP-0 GI Return	WHT BLK
		6	8-LP-1 GI Return	RED BLK
		7	8-LP-2 GI Return	BLU BLK
CN2	.100" 6-Pin Header, Node Extension Bus	1	Ground	BLK
		2	DIN	VIO BLK
		3	DOUT	VIO BRN
		4	SCK	VIO RED
		5	RCK	VIO ORG
		6	V+	RED
CN3	.100" 6-Pin Header, Node Extension Bus	1	Ground	BLK
		2	DIN	VIO BLK
		3	DOUT	VIO BRN
		4	SCK	VIO RED
		5	RCK	VIO ORG
		6	V+	RED

4.4 MID PLAYFIELD 48V DRIVER PINOUT NODE 9

520-1070 / 520-1057-00



ID	Type	Pin	Description	Wire Color	
SW1	Address DIP	-	Node 9 - OFF-OFF-ON-OFF	-	
CN4	RJ45	-	SPIKE Node Bus	Multi	
CN5	RJ45	-	SPIKE Node Bus	Multi	
CN6	.156" 5-Pin Header Node Power	1	Ground	BLK	
		2	Key	Key	
		3	N/C	-	
		4		-	
		5	48VDC In	GRY	
CN7	.156" 4-Pin Header (White)	1	48V Driver Power	GRY BRN	
		2	9-DR-8 Driver Return	YEL ORG	
		3	9-DR-6 Driver Return	YEL GRN	
		4	9-DR-7 Driver Return	BRN BLK	
CN8	.156 11-Pin Header (White)	1	48V Driver Power	GRY BRN	
		2	48V Driver Power	GRY BRN	
		3	48V Driver Power	GRY BRN	
		4	48V Driver Power	GRY BRN	
		5	9-DR-0 Driver Return	YEL VIO	
		6	9-DR-5 Driver Return	BRN RED	
		7	9-DR-1 Driver Return	YEL WHT	To 9-1 CN2
		8	9-DR-8 Driver Return	-	
		9	9-DR-4 Driver Return	ORG RED	
		10	9-DR-2 Driver Return	ORG BLK	
		11	9-DR-3 Driver Return	ORG BRN	
CN9	.100" 8-Pin Header (Black)	1	V+	RED	
		2	V+	-	
		3	9-SW-24 Switch	LGN ORG	
		4	9-SW-25 Switch	LGN YEL	
		5	9-SW-26 Switch	LGN BLU	
		6	9-SW-27 Switch	LGN VIO	
		7	Ground	-	
		8	Ground	BLK BLU	
CN10	.100" 9-Pin Header (White)	1	V+	-	
		2	9-SW-28 Switch	GRY BLK	
		3	9-SW-29 Switch	GRY BRN	
		4	9-SW-30 Switch	GRY RED	
		5	9-SW-31 Switch	GRY ORG	
		6	9-SW-16 Switch	-	
		7	Ground	BLK BLU	
		8	Ground	BLK BLU	
		9	Ground	BLK BLU	

CN11	.100" 12-Pin Header (White)	1	V+	-	
		2	9-SW-26 Switch	-	
		3	9-SW-27 Switch	-	
		4	9-SW-17 Switch	TAN ORG	
		5	9-SW-18 Switch	TAN YEL	
		6	9-SW-19 Switch	TAN GRN	
		7	9-SW-20 Switch	TAN BLU	
		8	9-SW-21 Switch	TAN VIO	
		9	9-SW-22 Switch	TAN WHT	
		10	9-SW-23 Switch	-	
		11	Ground	BLK GRY	
		12	Ground	BLK GRY	
CN12	.156 10-Pin Header (Orange)	1	V+	RED	
		2	9-SW-8 Switch	WHT BRN	
		3	9-SW-9 Switch	WHT RED	
		4	9-SW-10 Switch	WHT ORG	
		5	9-SW-11 Switch	WHT YEL	
		6	9-SW-12 Switch	WHT GRN	
		7	9-SW-13 Switch	WHT BLU	
		8	9-SW-14 Switch	WHT VIO	
		9	9-SW-15 Switch	WHT GRY	
		10	Ground	BLK WHT	
CN13	.156 10-Pin Header (White)	1	V+	RED	
		2	9-SW-0 Switch	PNK RED	
		3	9-SW-1 Switch	PNK ORG	
		4	9-SW-2 Switch	PNK YEL	
		5	9-SW-3 Switch	-	
		6	9-SW-4 Switch	-	
		7	9-SW-5 Switch	-	
		8	9-SW-6 Switch	-	
		9	9-SW-7 Switch	-	
		10	Ground	BLK BRN	
CN14	.100" 8-Pin Header	1	Ground	BLK	To 9-1 CN1
		2	8-LP-7 Driver Return	-	
		3	8-LP-6 Driver Return	-	
		4	8-LP-5 Driver Return	-	
		5	8-LP-4 Driver Return	VIO-GRN	To 9-1 CN1
		6	8-LP-3 Driver Return	VIO-YEL	To 9-1 CN1
		7	LED V+	-	
		8	LED V+	YEL	To 9-1 CN1
CN15	.100" 7-Pin Header (White)	1	LED V+	YEL BLK	
		2	LED V+	YEL RED	
		3	LED V+	YEL BLU	
		4	-	-	
		5	9-LP-0 GI Return	WHT BLK	
		6	9-LP-1 GI Return	RED BLK	
		7	9-LP-2 GI Return	BLU BLK	
CN2	.100" 6-Pin Header, Node Extension Bus	1	Ground	-	
		2	DIN	-	
		3	DOUT	-	
		4	SCK	-	
		5	RCK	-	
		6	V+	-	
CN3	.100" 6-Pin Header, Node Extension Bus	1	Ground	BLK	
		2	DIN	VIO BLK	
		3	DOUT	VIO BRN	
		4	SCK	VIO RED	
		5	RCK	VIO ORG	
		6	V+	RED	

4.5 2RGB 2W LED BOARD (8B, 8D, 9A, 9B, 9C)

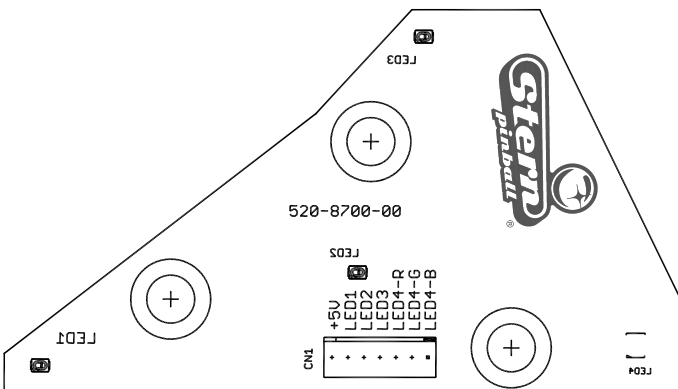
520-8695-00



ID	Type	Pin	Description	Wire Color
CN1	.100" 7-Pin Header	1	Ground	BLK
		2	MISO Output Data	VIO-BLK
		3	MOSI Input Data	VIO-BRN
		4	SCK Serial Clock	VIO-RED
		5	RCK Register Clock	VIO-ORG
		6	NC	-
		7	+5 VDC IN	RED
CN2	.100" 6-Pin Header	1	GND	BLK
		2	MOSI Input Data	VIO-BLK
		3	MISO Output Data	VIO-BRN
		4	SCK Serial Clock	VIO-RED
		5	RCK Register Clock	VIO-ORG
		6	+5V	RED

4.6 6W-8C LED BOARD 8C1

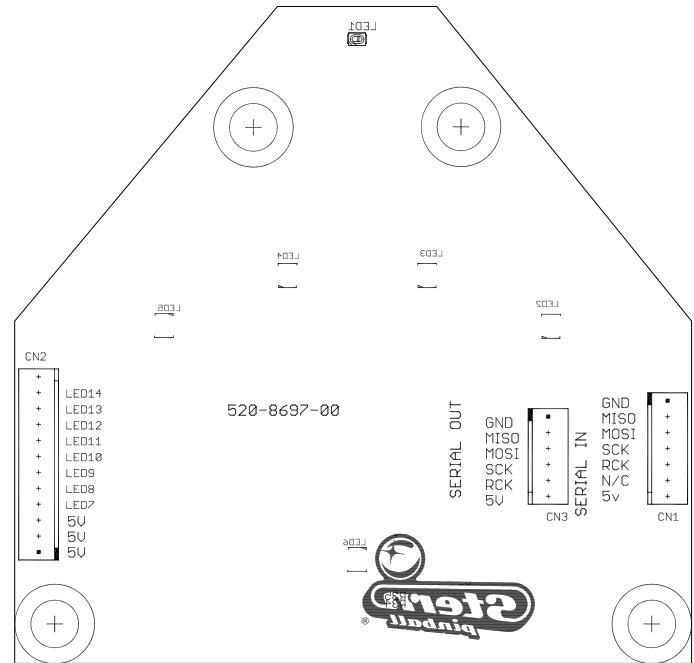
520-8700-00



ID	Type	Pin	Description	Wire Color
CN1	.100" 7-Pin Header	1	LED 4-B	BLU YEL
		2	LED 4-G	GRN YEL
		3	LED 4-R	RED YEL
		4	LED 3	BLU BRN
		5	LED 2	BLU RED
		6	LED 1	BLU ORG
		7	+5 VDC IN	RED

4.7 6W-8C LED BOARD 8C

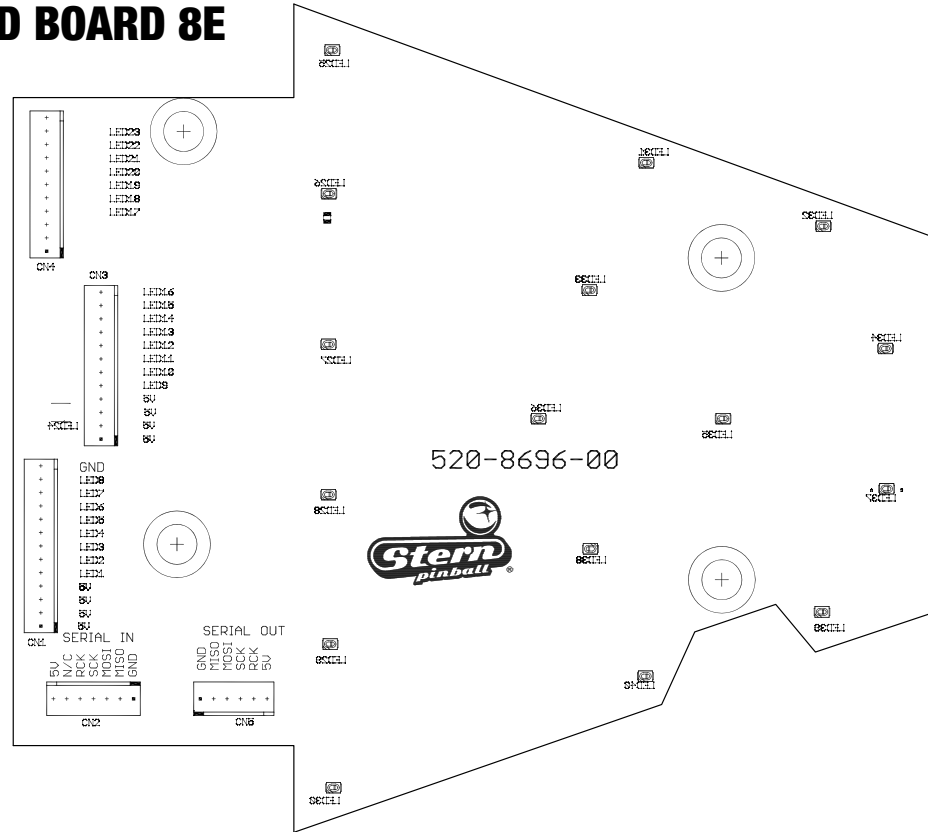
520-8695-00



ID	Type	Pin	Description	Wire Color	
CN1	.100" 7-Pin Header	1	Ground	BLK	
		2	MISO Output Data	VIO BLK	
		3	MOSI Input Data	VIO BRN	
		4	SCK Serial Clock	VIO RED	
		5	RCK Register Clock	VIO ORG	
		6	NC	-	
		7	+5 VDC IN	RED	
CN2	.100" 12-Pin Header	1	+5V	RED	To 8c1
		2	+5V	RED	
		3	+5V	-	
		4	LED 7	BLU BRN	To 8c1
		5	LED 8	BLU RED	To 8c1
		6	LED 9	BLU ORG	To 8c1
		7	LED 10	RED YEL	To 8c1
		8	LED 11	GRN YEL	To 8c1
		9	LED 12	BLU YEL	To 8c1
		10	LED 13	ORG BRN	
		11	LED 14	-	
		12	GND	-	
CN3	.100" 6-Pin Header	1	GND	BLK	
		2	MISO Output Data	VIO BLK	
		3	MOSI Input Data	VIO BRN	
		4	SCK Serial Clock	VIO RED	
		5	RCK Register Clock	VIO ORG	
		6	+5V	RED	

4.8 1F 16W LED BOARD 8E

520-8696-00

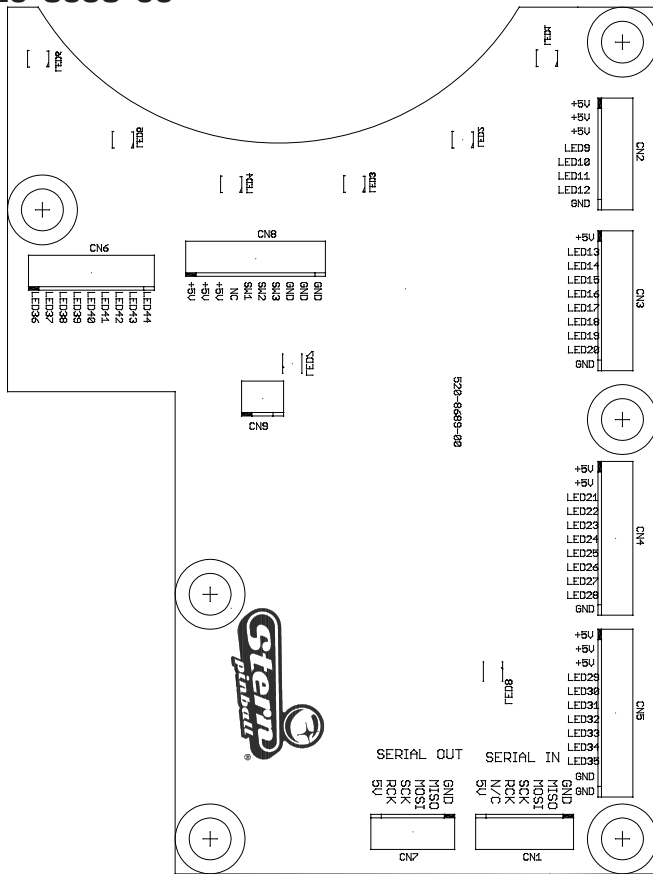


ID	Type	Pin	Description	Wire Color
CN1	.100" 13-Pin Header	1	+5V	RED
		2	+5V	RED
		3	+5V	RED
		4	+5V	-
		5	LED 1	ORG BRN
		6	LED 2	ORG RED
		7	LED 3	ORG YEL
		8	LED 4	ORG GRN
		9	LED 5	ORG BLU
		10	LED 6	-
		11	LED 7	-
		12	LED 8	-
		13	GND	-
CN2	.100" 7-Pin Header	1	Ground	BLK
		2	MISO Output Data	VIO BLK
		3	MOSI Input Data	VIO BRN
		4	SCK Serial Clock	VIO RED
		5	RCK Register Clock	VIO ORG
		6	NC	-
		7	+5 VDC IN	RED

ID	Type	Pin	Description	Wire Color
CN3	.100" 12-Pin Header	1	+5V	RED
		2	+5V	RED
		3	+5V	-
		4	+5V	-
		5	LED 9	ORG VIO
		6	LED 10	ORG WHT
		7	LED 11	-
		8	LED 12	-
		9	LED 13	-
		10	LED 14	-
		11	LED 15	-
		12	LED 16	-
CN4	.100" 11-Pin Header	1	+5V	RED
		2	+5V	RED
		3	+5V	RED
		4	LED 17	BRN RED
		5	LED 18	BRN ORG
		6	LED 19	BRN
		7	LED 20	BRN YEL
		8	LED 21	BRN BLU
		9	LED 22	BRN VIO
		10	LED 23	BRN GRY
		11	GND	-
CN5	.100" 6-Pin Header	1	GND	-
		2	MISO Output Data	-
		3	MOSI Input Data	-
		4	SCK Serial Clock	-
		5	RCK Register Clock	-
		6	+5V	-

4.9 2F 6R LED BOARD 9D

520-8698-00

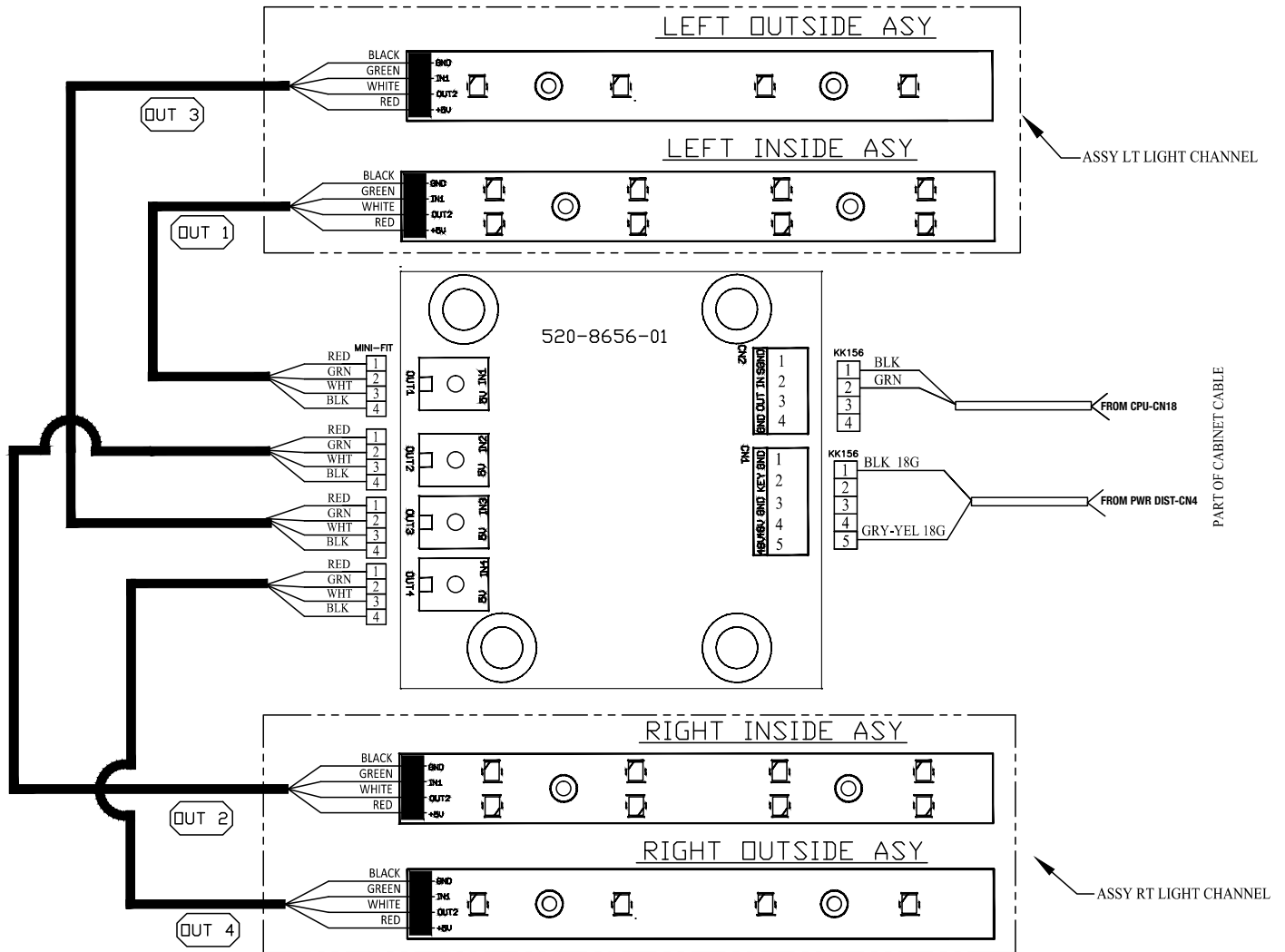


ID	Type	Pin	Description	Wire Color
CN1	.100" 7-Pin Header	1	Ground	BLK
		2	MISO Output Data	VIO BLK
		3	MOSI Input Data	VIO BRN
		4	SCK Serial Clock	VIO RED
		5	RCK Register Clock	VIO ORG
		6	NC	-
		7	+5 VDC IN	RED
CN2	.100" 8-Pin Header	1	+5V	RED
		2	+5V	RED
		3	+5V	RED
		4	LED 9	RED BLK
		5	LED 10	GRN BLK
		6	LED 11	BLU BLK
		7	LED 12	ORG BLK
		8	GND	-
CN3	.100" 10-Pin Header	1	+5V	RED
		2	LED 13	RED
		3	LED 14	-
		4	LED 15	-
		5	LED 16	ORG VIO
		6	LED 17	ORG WHT
		7	LED 18	-
		8	LED 19	-
		9	LED 20	-
		10	GND	-

ID	Type	Pin	Description	Wire Color
CN4	.100" 11-Pin Header	1	+5V	RED
		2	+5V	RED
		3	LED 21	ORG BRN
		4	LED 22	ORG RED
		5	LED 23	ORG YEL
		6	LED 24	ORG GRN
		7	LED 25	ORG BLU
		8	LED 26	ORG VIO
		9	LED 27	ORG GRY
		10	LED 28	ORG WHT
		11	GND	-
CN5	.100" 12-Pin Header	1	+5V	RED
		2	+5V	RED
		3	+5V	RED
		4	LED 29	YEL BRN
		5	LED 30	YEL RED
		6	LED 31	YEL ORG
		7	LED 32	YEL GRN
		8	LED 33	YEL BLU
		9	LED 34	YEL VIO
		10	LED 35	YEL GRY
		11	GND	-
		12	GND	-
CN6	.100" 9-Pin Header	1	LED 36	RED ORG
		2	LED 37	GRN ORG
		3	LED 38	BLU ORG
		4	LED 39	RED YEL
		5	LED 40	GRN YEL
		6	LED 41	BLU YEL
		7	LED 42	RED VIO
		8	LED 43	GRN VIO
		9	LED 44	BLU VIO
CN7	.100" 6-Pin Header	1	GND	-
		2	MISO Output Data	-
		3	MOSI Input Data	-
		4	SCK Serial Clock	-
		5	RCK Register Clock	-
		6	+5 VDC IN	-
CN8	.100" 10-Pin Header	1	+5V	RED
		2	+5V	RED
		3	+5V	RED
		4	NC	
		5	SW 1	LGN ORG
		6	SW 2	LGN YEL
		7	SW 3	LGN BLU
		8	GND	BLK BLU
		9	GND	BLK BLU
		10	GND	BLK BLU
CN9		1	SW 1	LGN ORG
		2	SW 2	LGN YEL
		3	SW 3	LGN BLU

4.10 ISOLATED SMART LED PSU

520-8656-01

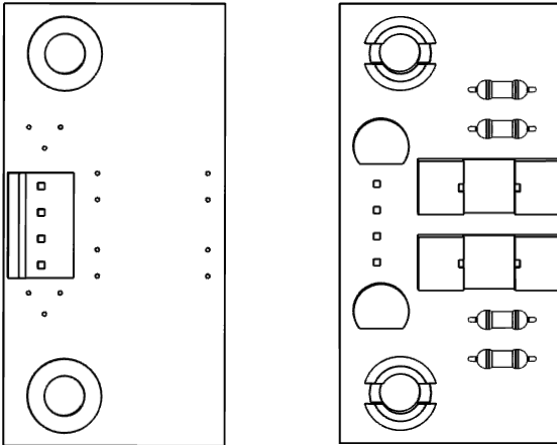


ID	Type	Pin	Description	Wire Color
CN1	.156 5-Pin Connector	1	GND	BLK
		2	KEY	Key
		3	GND	-
		4	+48 VDC IN	-
		5	+48 VDC IN	GRY
CN2	.156 4-Pin Connector	1	S-Ground	BLK
		2	SIGNAL-IN	GRN
		3	OUT	-
		4	GND	-
CN3	Mini-Fit Jr.4-Pin Connector	1	+5V	RED
		2	IN1	GRN
		3	OUT-1	WHT
		4	GND	BLK

ID	Type	Pin	Description	Wire Color
CN4	Mini-Fit Jr.4-Pin Connector	1	+5V	RED
		2	IN2	GRN
		3	OUT-2	WHT
		4	GND	BLK
CN5	Mini-Fit Jr.4-Pin Connector	1	+5V	RED
		2	IN3	GRN
		3	OUT-3	WHT
		4	GND	BLK
CN6	Mini-Fit Jr.4-Pin Connector	1	+5V	RED
		2	IN4	GRN
		3	OUT-4	WHT
		4	GND	BLK

4.11 ENCODER OPTO BOARD

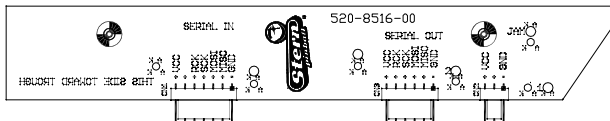
520-7021-00



ID	Type	Pin	Description	Wire Color
CN1	.100" 4-Pin Header	1	GND	BLK BRN
		2	Opto2	PNK ORG
		3	Opto1	PNK RED
		4	+6V	RED

4.12 TROUGH SERIAL OPTO RECEIVER 8A

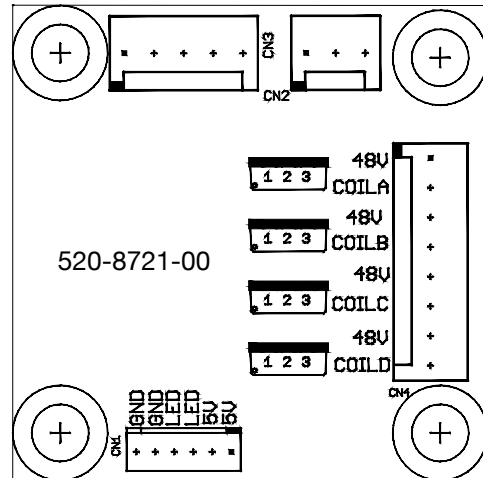
520-8516-00



ID	Type	Pin	Description	Wire Color
CN1	.100" 7-Pin Header	1	Ground	BLK
		2	MISO Output Data	VIO-BLK
		3	MOSI Input Data	VIO-BRN
		4	SCK Serial Clock	VIO-RED
		5	RCK Register Clock	VIO-ORG
		6	N/C	-
		7	+5 VDC IN	RED
CN2	.100" 3-Pin Header	1	Ground	BLK
		2	N/C	-
		3	+5 VDC IN	RED
CN3	.100" 6-Pin Header	1	Ground	-
		2	MISO Output Data	-
		3	MOSI Input Data	-
		4	SCK Serial Clock	-
		5	RCK Register Clock	-
		6	V+	-

4.13 4-COIL DEMUX 9-1

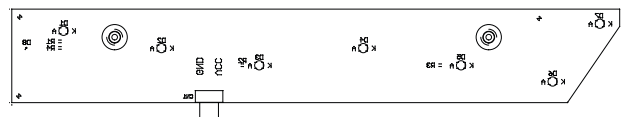
520-8721-00



ID	Type	Pin	Description	Wire Color
CN1	.100" 6-Pin Header	1	+5V	YEL
		2	+5V	-
		3	LEDA	VIO-YEL
		4	LEDB	VIO-GRN
		5	D-GND	-
		6	D-GND	BLK-BRN
CN2	.156 3-Pin Connector	1	48VDC	-
		2	COIL RET	YEL-WHT
		3	GND	-
CN3	.156 5-Pin Connector	1	GND	BLK
		2	KEY	Key
		3	GND	-
		4	+48 VDC IN	-
		5	+48 VDC IN	GRY
CN4	.156 8-Pin Connector	1	48VDC	GRY-BRN
		2	COIL A	YEL-WHT
		3	48VDC	GRY-BRN
		4	COIL B	YEL-GRY
		5	48VDC	GRY-BRN
		6	COIL C	YEL-BRN
		7	48VDC	-
		8	COIL D	-

4.14 TROUGH SERIAL OPTO TRANSMITTER

520-5344-00

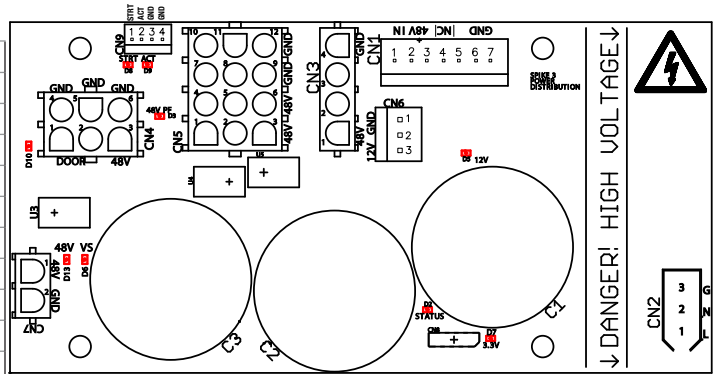


ID	Type	Pin	Description	Wire Color
CN1	.100" 3-Pin Header	1	Ground	BLK
		2	N/C	-
		3	+5 VDC IN	RED

4.15 POWER DISTRIBUTION BOARD

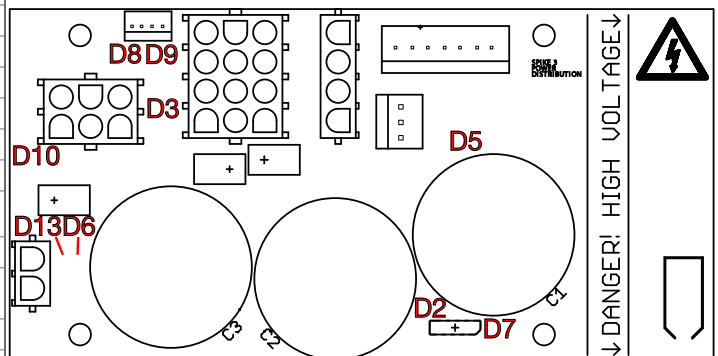
520-1092-00

ID	Type	Pin	Description	Wire Color
CN1	.156 in 7-Pin Housing Plug: 045-5259-07 Pin: 055-5331-00 Key: 060-5013-00	1	+48 VDC IN	GRY
		2	+48 VDC IN	GRY
		3	+48 VDC IN	GRY
		4	NC	KEY
		5	Ground	BLK
		6	Ground	BLK
		7	Ground	BLK
CN2	.093 in 3-Pos Plug Plug: 045-5003-03 Pin: 055-5013-09	1	Line In (100-240 VAC)	BLK
		2	Neutral	WHT
		3	Earth Ground	GRN
CN3	0.084 in 4-Pos Plug Plug: 045-5200-04 Pin: 055-5033-08	1	+48 VDC to CPU Node	GRY
		2	Door Interlock Switch Status	GRY RED
		3	Line Voltage Status	VIO
		4	Ground	BLK
CN4	0.084 in 6-Pos Plug Plug: 045-5200-06 Pin: 055-5033-08	1	Door Interlock Switch +48V	WHT GRY
		2	Door Interlock Switch +48V	-
		3	Switched 48V Out (to Node 1)	GRY YEL
		4	Door Interlock Return Ground	BLK WHT
		5	Smart LED Ground	BLK
		6	Ground (to Node 1)	BLK
CN5	0.084 in 12-Pos Plug Plug: 045-5200-12 Pin: 055-5033-08	1	Switched 48V Node Power	GRY
		2	Switched 48V Node Power	GRY
		3	Switched 48V Node Power	GRY
		4	Switched 48V Node Power	-
		5	Switched 48V Node Power	-
		6	Switched 48V Node Power	-
		7	Node Ground	-
		8	Node Ground	-
		9	Node Ground	-
		10	Node Ground	BLK
		11	Node Ground	BLK
		12	Node Ground	BLK
CN6	.156 in 3-Pos Plug: 045-5259-03 Pin: 055-5331-00 (18awg)	1	Ground	-
		2	Ground	-
		3	+12VDC	-
CN7	.084 2-Pos Plug: 045-5200-02 Pin: 055-5033-08	1	+48 VDC to Topper Node	-
		2	Ground	-
CN9	.100 in 4-Pos	1	Start	GRY
		2	Action	TAN-WHT
		3	Ground	BLK-BRN
		4	Ground	BLK-BRN



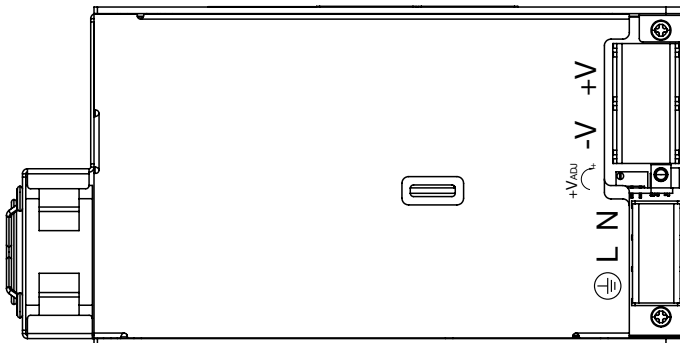
STATUS LEDS

LED ID	Name	Color	Description
D13	48V	Red	48V from the main power supply
D6	VS	Red	Power to the bulk caps, indicates if the caps are charged
D3	48V PF	Red	Power to playfield/cabinet node
D5	12V	Red	12V power supply (for topper), shuts off when DOOR is open
D7	3.3V	Red	3.3V logic supply
D10	DOOR	Red	Cabinet door switch is closed
D8	STRT	Red	Start switch is closed
D9	ACT	Red	Action switch is closed
D2	STATUS	Red	MCU status
			Boot Mode - fast blink (4Hz), 75% duty cycle
			Runtime Mode - slow blink (1Hz), 75% duty cycle
D2	STATUS	Red	Blink several times, long pause - error code(s)



4.16 POWER SUPPLY 48V/600W

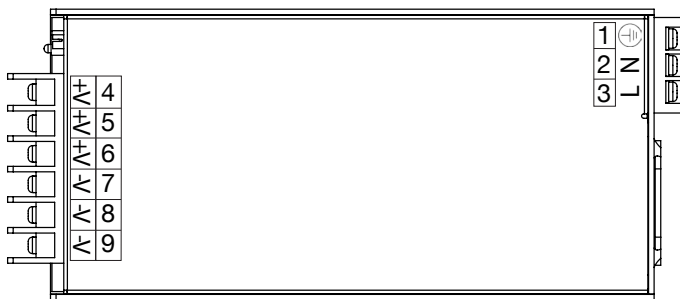
011-5011-00 (DELTA)



ID	Type	Pin	Description	Wire Color
CN1	Screw Terminal	+V	+48 V System Power	GRY
		-V	DC Ground	BLK
CN2	Potentiometer	+V ADJ	V Adjustment	N/A
CN3	Screw Terminal	N	AC Neutral In	WHT
		L	AC Line In	BLK
		⏏	Earth Ground In	GRN

4.17 POWER SUPPLY 48V/600W

011-5004-00 (MEANWELL)



ID	Type	Pin	Description	Wire Color
CN1	Screw Terminal	1	Earth Ground In	GRN
		2	AC Neutral In	WHT
		3	AC Line In	BLK
CN2	Screw Terminal	4	+48 V System Power	GRY
		5	+48 V System Power	GRY
		6	+48 V System Power	GRY
		7	DC Ground	BLK
		8	DC Ground	BLK
		9	DC Ground	BLK

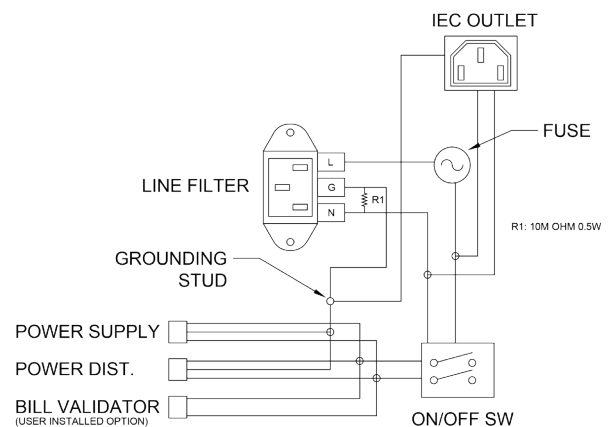
4.18 POWER PLUG WIRING

CAUTION

TO MAINTAIN SAFETY, GROUND WIRE FROM LINE FILTER IS TO BE MOUNTED FIRST ON GROUNDING STUD AND SECURED WITH NUT. ALL OTHER GROUNDS MAY THEN BE ATTACHED TO GROUNDING STUD.

REPLACE ALL FUSES WITH CORRECT CURRENT RATINGS!

NORTH AMERICA / INTERNATIONAL



LINE CORDS

Part Number	Description
034-6012-00	Line Cord, 3m, 5-15P USA
034-6012-01	Line Cord, 3m, CEE77P EUROPE
034-6012-02	Line Cord, 3m, BS1363P United Kingdom
034-6012-03	Line Cord, 3m, AS-NZS4417P Australia
034-6012-04	Line Cord, 3m, CEI23-16P Italy
034-6012-05	Line Cord, 3m, SEV1011P Switzerland
034-6012-06	Line Cord, 3m, JIS8303P Japan
034-6012-07	Line Cord, 3m, SI32P Israel
034-6012-08	Line Cord, 3m, BS546P S Africa, India
034-6012-09	Line Cord, 3m, IS6538P S. India

LINE FUSES

Line Voltage (Region)	Fuse Current	Type	Part Number
120/250V (North America / International)	8 A	Slow Blow 5 x 20mm	200-5003-08

5. PARTS REFERENCE

5.1 PLAYFIELD RUBBER PARTS

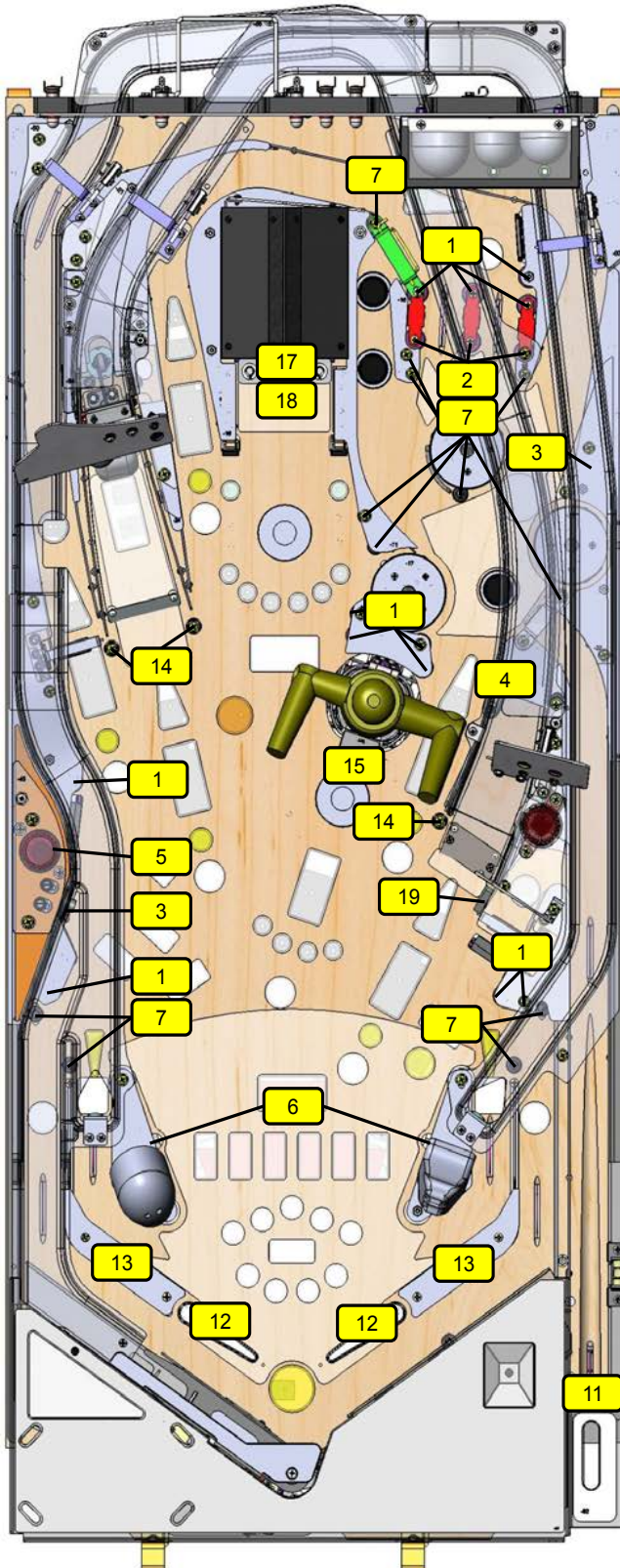


Figure 5.1.1. Rubber o-ring part locations

RUBBER O-RINGS

ID	Qty	Size (ID)	Size (OD)	Durometer	Color	Part Number
1	12	3/16"		50	Black	545-5348-01
2	1	5/16"		50	Black	545-5348-02
3	2	3/4"		50	Black	545-5348-04
4	1	1"		50	Black	545-5348-05
5	1	2"		50	Black	545-5348-08
6	2	2 - 1/2"		50	Black	545-5348-09
7	12		7/16"	50	Black	545-5348-17

Figure 5.1.2. Rubber o-ring part numbers and usage. ID: Inner Diameter, OD: Outer Diameter, Durometer: Higher number is firmer, less bounce, and more durable.

ID	Qty	Description	Color	Part Number
11	1	Plunger Tip	Black	545-5276-00
12	2	Flipper Rubber	Black	545-5277-00
13	2	Post Rubber 1/2"	Black	545-5151-00
14	3	Post Sleeve	Black	545-5308-00
15	12	Bumper Pad (Sub assemblies)	Black	545-5105-00
16	2	Bumper Pad (Flippers)	Black	545-5428-00
17	1	Bumper Pad (Prison Upper)	Black	626-5102-00
18	2	Bumper Pad (Prison Side)	Black	626-5102-01
19	1	Bumper Pad (Ball Guide)	Black	626-5057-01

Figure 5.1.3. Other rubber part numbers and usage

5.2 RUBBER SIZE CHART

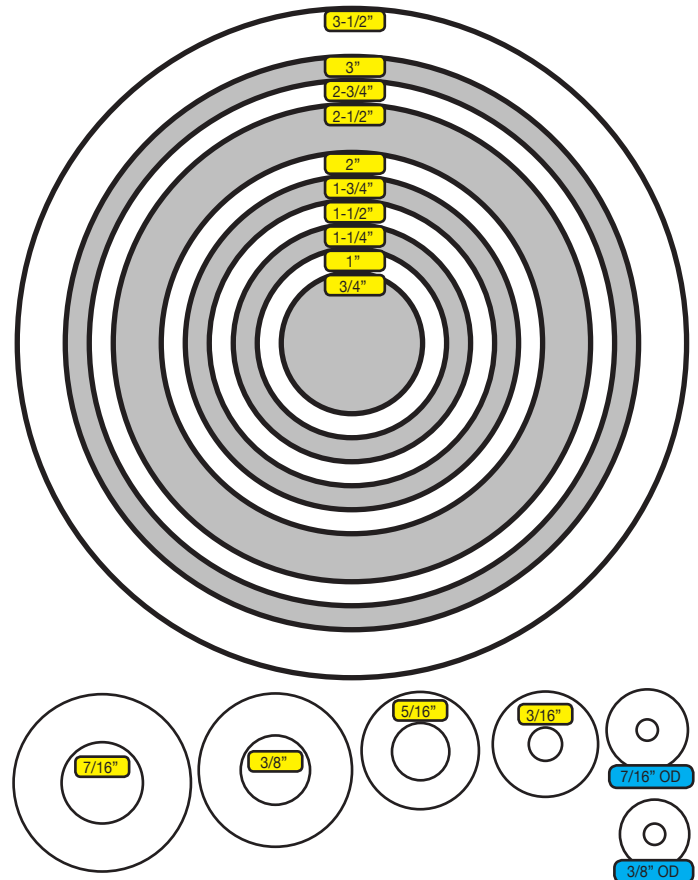
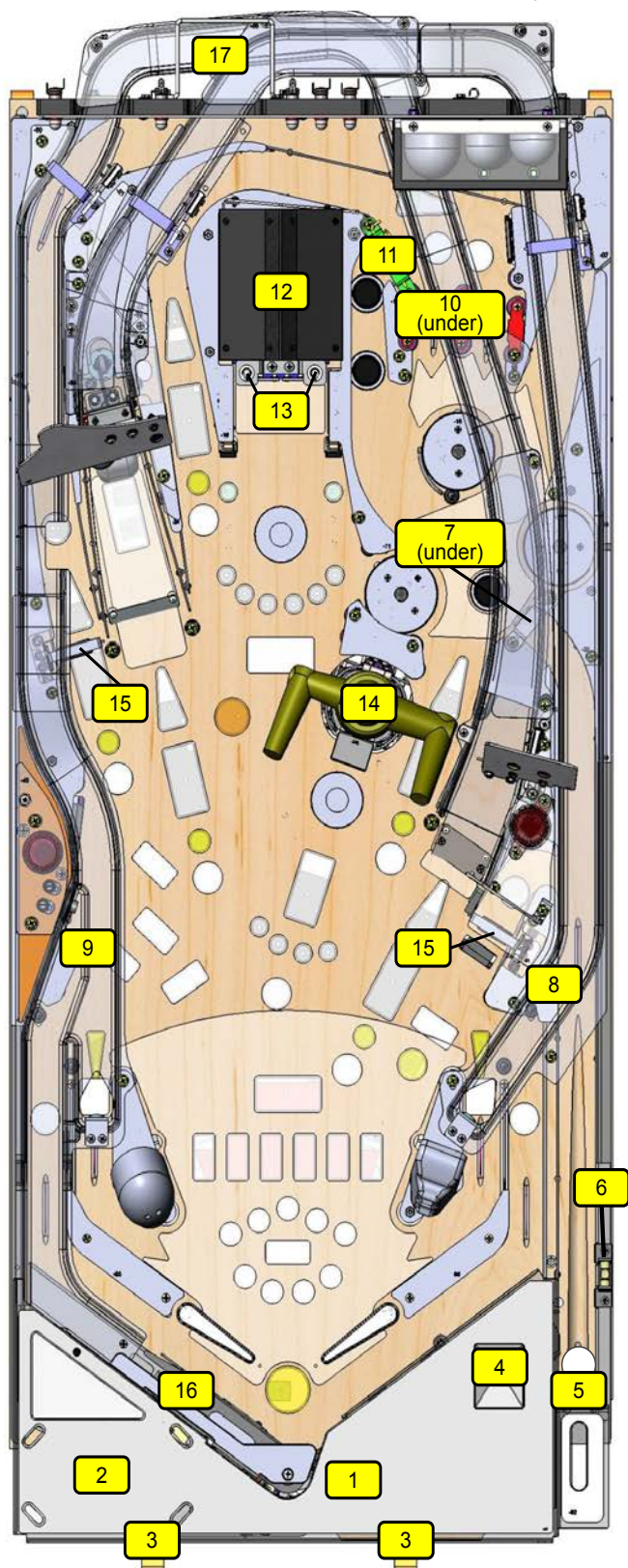


Figure 5.2.1. Rubber ring inner diameter sizing tool. Hold ring up to chart and read largest size on inside of ring. Dimensions are Inner Diameter (ID) unless otherwise noted as Outer Diameter (OD).

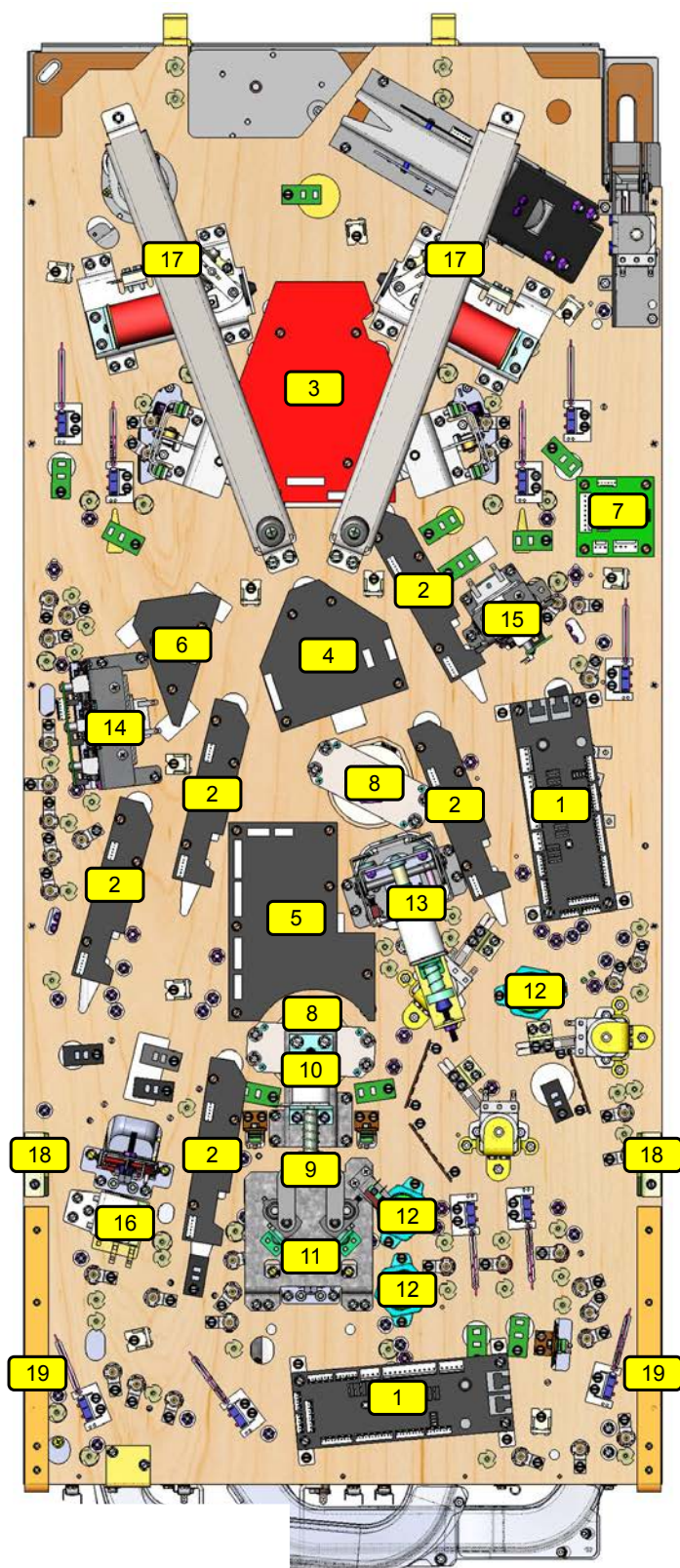
5.3 PLAYFIELD ASSEMBLIES, TOP



ID	Part Number	Description	Qty
1	500-7434-XX	Bottom Arch Assembly W/ Cutout	1
2	755-51AM-XX	Instructions Card	1
3	535-8385-00	Welded Hanger Bracket	2
4	509-2020-00	QR Reader	1
5	260-5000-00	Pinballs	6
6	500-6815-00	Bubble Level Assembly	1
7	500-7152-00	Shooter Lane One Way Gate	1
8	500-1207-00	Left Ramp Assembly	1
9	500-1205-00	Right Ramp Assembly	1
10	550-5061-02	Top Lane Mini Hood - Red	3
11	511-3651-00	One Way Gate Assembly	1
12	511-3119-00	Prison Upper Assembly	1
13	242-5674-00	Nylon Washer, 0.26 X 0.69 X 0.07 WHITE (Under Prison Doors)	2
14	511-0056-00	Well Zombie Top Assembly	1
15	511-3044-00	Spinner Assembly	2
16	500-3642-00	Crossbow Assembly	1
17	535-2288-00	Backpanel Handle	1

Figure 5.3.1. Major playfield assemblies, Top locations.

5.4 PLAYFIELD ASSEMBLIES, BOTTOM



ID	Part Number	Description	Qty
1	520-1070-00 520-1057-00	Core Node Driver Board (8, 9)	2
2	520-8695-00	2RGB 2W LED Board (8b, 8d, 9a, 9b, 9c)	5
3	520-8696-00	1F 16W LED Board (8e)	1
4	520-8697-00	6W LED Board (8c)	1
5	520-8698-00	2F 6R- LED Board (9d)	1
6	520-8700-00	3W 1RGB LED Board (8c1)	1
7	520-8456-00	4 Coil Demux (9-1)	1
8	511-7596-01	Magnet Assembly	2
9	511-3674-00	Prison Door Linkage Assembly	1
-	242-5081-00	Nylon Washer (Goes on plunger before spring, into solenoid)	1
-	266-5034-04	Compression Spring (Goes on plunger between washer and solenoid)	1
10	511-3118-00	Prison Door Solenoid Assembly	1
11	511-3117-00	Prison Door Lower Assembly	1
-	270-5002-00	Retaining Ring, 1/4" Dia. (Goes on end of shaft from Prison Doors)	2
12	511-3268-01	Rollover Button Assembly	1
13	511-3113-00	Well Zombie Bottom Assembly	1
14	500-1110-03-0-1-2	3-Bank Drop Target Assembly	1
15	500-1083-01	1-Bank Drop Target W/ Trip Coil	2
16	511-3120-00	Ramp Pull Down Solenoid Assembly	1
17	511-7621-00	Support Rail Assembly	2
18	500-5329-03	Pivot Bracket Assembly	2
19	535-5988-01	Edge Slide Bracket	2

Figure 5.4.1. Major playfield assemblies, Bottom locations.

5.6 BACKBOX PARTS

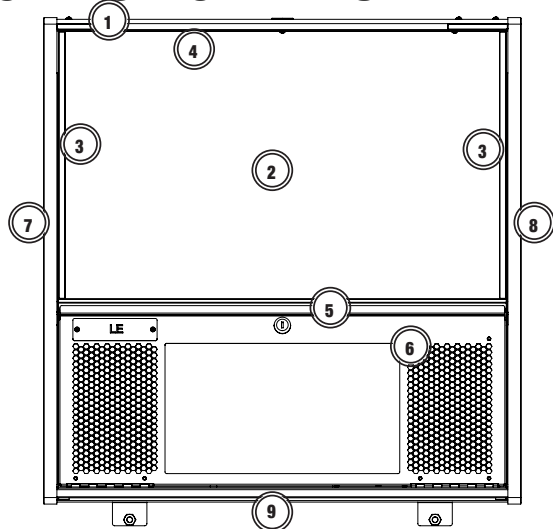


Figure 5.4.2. Backbox external assemblies and components

EXTERNAL

ID	Part Number	Description	Qty
1	545-9910-03	Backbox Bumper	2
2	830-8426-AM	Mirror Backglass [LE]	1
	660-5052-00	Backglass	1
	830-8427-AN	Translite Art [Premium]	1
3	545-5018-17	Plastic Extrusion 15-.450"	2
4	545-5018-15	Glass Channel 26"	1
5	545-6313-01	Glass Lift Channel 26"	1
6	500-9404-AM	LCD Speaker Panel Assembly [LE]	1
	500-9404-01	LCD Speaker Panel Assembly [Premium]	1
7	820-81AM-01	Left Backbox Decal [LE]	1
	820-81AN-01	Left Backbox Decal [Premium]	1
8	820-81AM-02	Right Backbox Decal [LE]	1
	820-81AN-02	Right Backbox Decal [Premium]	1
9	515-8868-00	Backbox Bottom Bracket	1

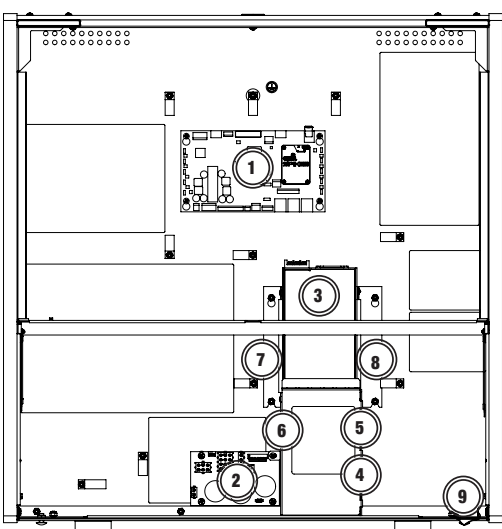
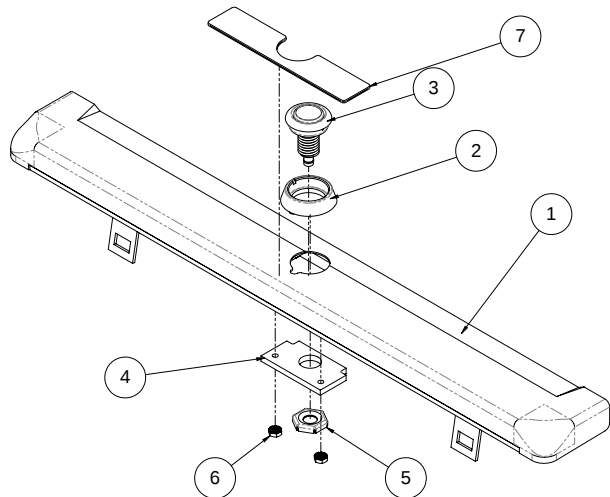


Figure 5.4.3. Backbox internal assemblies and components

INTERNAL

ID	Part Number	Description	Qty
1	509-1007-42	CPU Node Board	1
2	520-1092-00	Power Distribution Board	1
3	011-5004-00	Power Supply 48V/600W (Meanwell)	1
	011-5011-00	Power Supply 48V/600W (Delta)	1
4	205-5004-00	Fuse Holder - Screw In	1
	200-5003-08	8A SB Fuse	1
5	515-9769-00	Utility Outlet (USA)	1
6	535-1130-00	Cover AC, 600W (Meanwell)	1
	535-3050-00	Cover AC, 600W (Delta)	1
7	535-0879-00	P. S. Bracket, 600W Left (Meanwell)	1
*	535-0094-00	P. S. Bracket, 600W (Delta only uses 1)	1
8	535-1161-00	P. S. Bracket, 600W Right (Meanwell)	1
9	180-5001-03	Power Switch	1

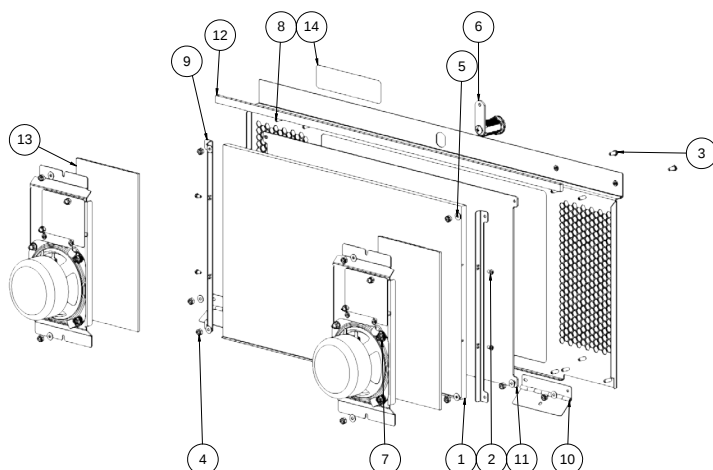
5.5 LOCKDOWN BAR ASSEMBLY W/ CENTER BUTTON & PLASTIC
500-7424-AM [LE] & 500-7424-AN [PREMIUM]



ID	Part Number	Description	Qty
1	500-2441-70	FRONT MOLD ASSEMBLY - CENTER BUTTON - ILLUSION COPPER [LE]	1
	500-2441-00	FRONT MOLD ASSEMBLY - CENTER BUTTON - WRINKLED BLACK [PREMIUM]	1
2	545-7292-10	SPACER, CENTER BUTTON	1
3	515-7791-00	CENTER BUTTON ASSEMBLY	1
4	545-7291-00	TOP BUTTON BAR	1
5	240-5003-01	PAL NUT	1
6	240-5104-00	8-32 KEPS NUT	2
7	830-5512-AM	PLASTIC, FRONT MOLDING, TWD R [LE]	1
	830-5512-AN	PLASTIC, FRONT MOLDING, TWD R [PREMIUM]	1

5.7 SPEAKER PANEL ASSEMBLY

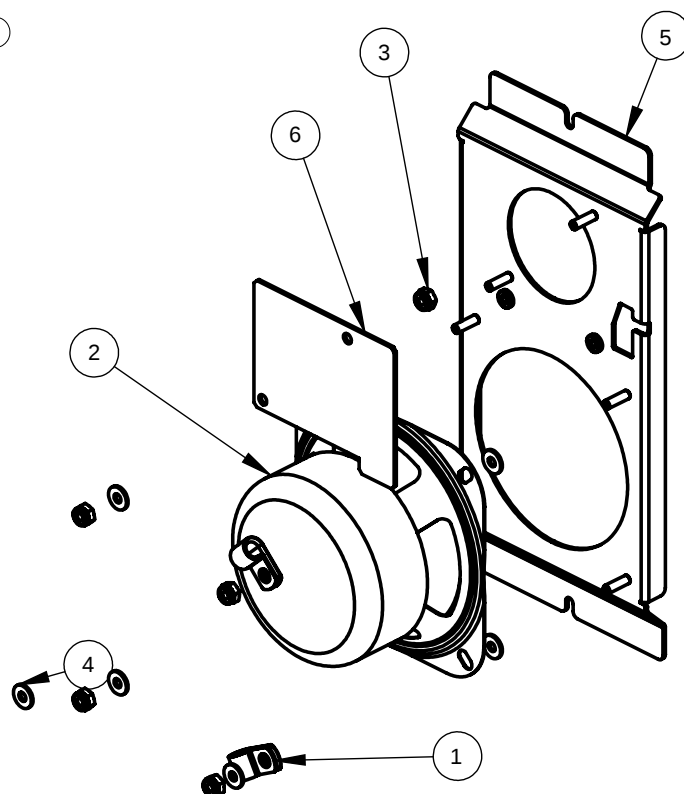
500-9404-01



ID	Part Number	Description	Qty
1	116-0036-40	18.5IN LCD	1
-	037-6034-10	LITEMAX LCD BACK LIGHT CABLE	1
-	037-8062-30	LVDS CABLE 18.5 FHD	1
2	237-6188-01P	SCREW, M3x0.5 X 6MM PPH SEMS ZINC, PATCH	4
3	237-6307-06	SCREW, 6-32 X 3/8" PAN TORX SS	2
4	240-5005-00	6-32 NYLON STOP NUT	12
5	242-5001-00	#6 WASHER	12
6	355-5175-00	CAM LOCK 1-3/16" BODY	1
7	511-3645-01	ASM SPEAKER BRKT MOUNT, PREM/PRO SPIKE 3	2
-	036-5600-46	SPEAKER PANEL CABLE W/ CONNECTORS	1
8	515-8870-99	SPEAKER PANEL 18.5IN LCD	1
9	515-8871-00	MOUNTING BRACKET 18.5IN LCD	2
10	515-8872-00	HINGE SPEAKER PANEL 18.5IN LCD	2
11	545-9995-00	LCD LENSE, 18.5IN SCREEN	1
12	626-5001-00	FOAM TAPE - 3/8 X 3/16 THK (BLACK)	1
13	626-5139-00	SPEAKER FOAM - LCD PANEL	2
14	820-6961-01	DECAL SPEAKER PANEL CONNECTED - SPIKE 3	1

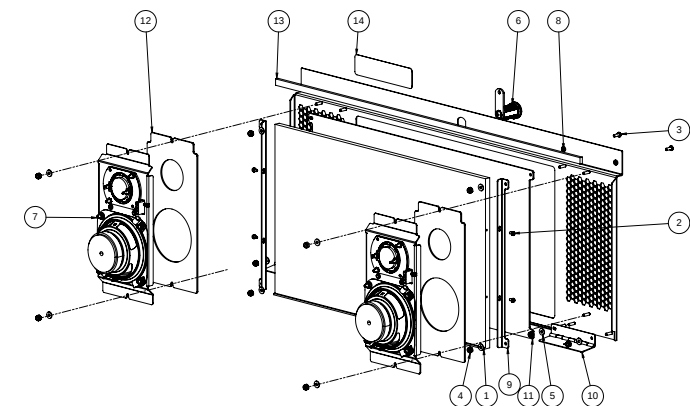
5.8 SPEAKER BRACKET MOUNT ASSEMBLY

511-3645-00



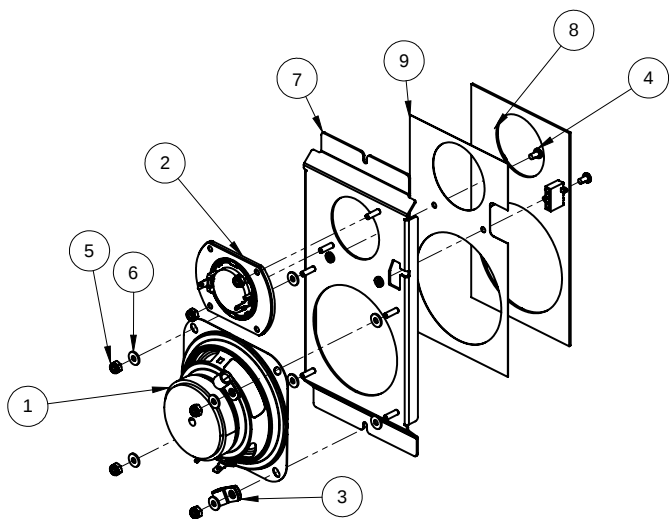
ID	Part Number	Description	Qty
1	040-5000-23	WIRE CLAMP, 1/4" CLOSED TAB	2
2	031-5026-00	SPKR 4 X 4 in 8 OHM MID RANGE	1
3	240-5005-00	6-32 NYLON STOP NUT	8
4	242-5001-00	#6 WASHER	8
5	515-8873-00	BRKT SPEAKER MOUNT SPIKE 3	1
6	535-3367-00	BLANKING PLATE	1

5.9 SPEAKER PANEL ASSEMBLY [LE]
500-9404-AM



ID	Part Number	Description	Qty
1	116-0036-40	LITEMAX 18.5IN LCD	1
-	037-6034-10	LITEMAX LCD BACK LIGHT CABLE	1
-	037-8062-30	LVDS CABLE 18.5 FHD	1
2	237-6188-01P	SCREW, M3x0.5 X 6MM PPH SEMS ZINC, PATCH	4
3	237-6307-06	SCREW, 6-32 X 3/8" PAN TORX SS	2
4	240-5005-00	6-32 NYLON STOP NUT	12
5	242-5001-00	#6 WASHER	12
6	355-5175-00	CAM LOCK 1-3/16" BODY	1
7	511-3645-02	ASM SPEAKER BRKT MOUNT, LE SPIKE 3	2
-	036-5600-46	SPEAKER PANEL CABLE W/ CONNECTORS	1
-	036-5600-82	RGB SPEAKER CABLE	1
8	515-8870-99	SPEAKER PANEL 18.5IN LCD	1
9	515-8871-00	MOUNTING BRACKET 18.5IN LCD	2
10	515-8872-00	HINGE SPEAKER PANEL 18.5IN LCD	2
11	545-9995-00	LCD LENSE, 18.5IN SCREEN	1
12	546-7994-00-AM	LEFT LIT SPEAKER LENS TWD R LE	1
-	546-7994-01-AM	RIGHT LIT SPEAKER LENS TWD R LE	1
13	626-5001-00	FOAM TAPE - 3/8 X 3/16 THK (BLACK)	1
14	820-6961-01	DECAL SPEAKER PANEL CONNECTED - SPIKE 3	1

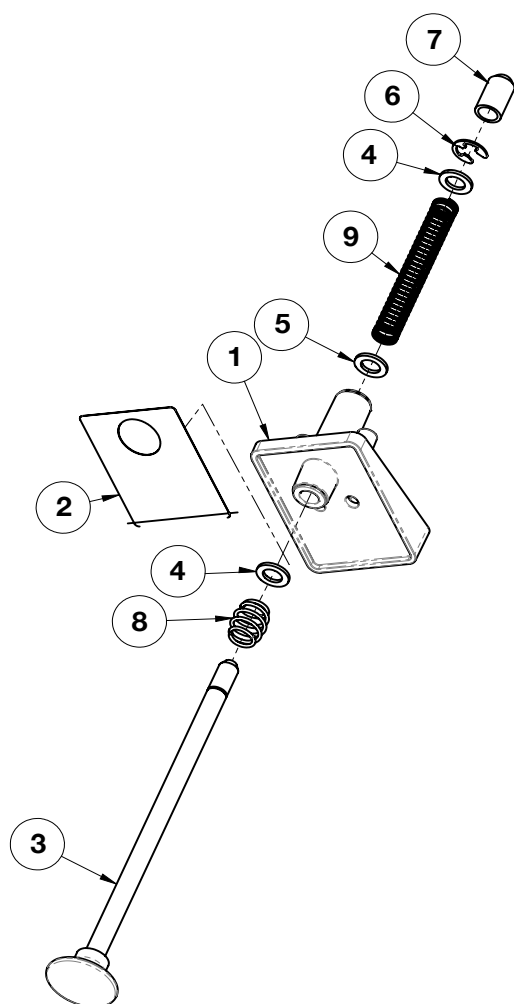
5.10 SPEAKER BRACKET MOUNT ASSEMBLY [LE]
511-3645-02



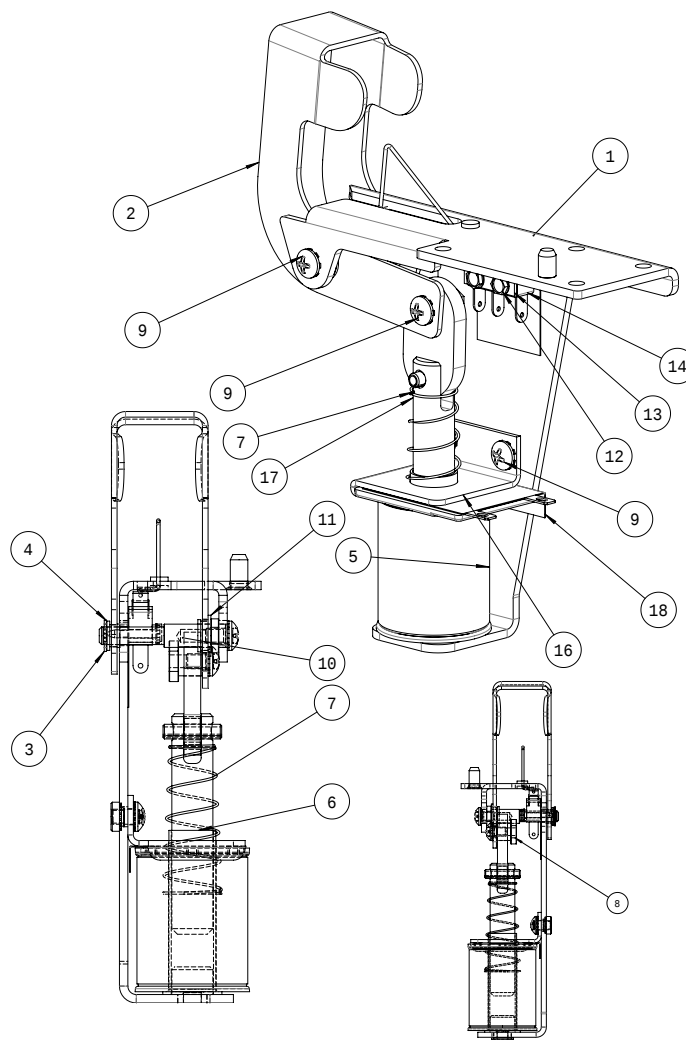
ID	Part Number	Description	Qty
1	031-5026-00	SPK 4" MID RANGE 8 OHM GEN 3 CAB	1
2	031-5028-00	SPK TWEETER 8 OHM GEN 3 CAB	1
3	040-5000-23	WIRE CLAMP, 1/4" CLOSED TAB	2
4	237-5500-01P	SCREW, 6-32 X 1/4" PPH MS BLACK, PATCH	2
5	240-5005-00	6-32 NYLON STOP NUT	6
6	242-5001-00	#6 WASHER	8
7	515-8873-00	BRKT SPEAKER MOUNT SPIKE 3	1
8	520-9865-00	PCA SPKR LIGHTING SPIKE 3	1
9	523-0051-00	FISH PAPER SPIKE 3 EXPRESSION LIGHTS	1

5.11 CABINET PARTS

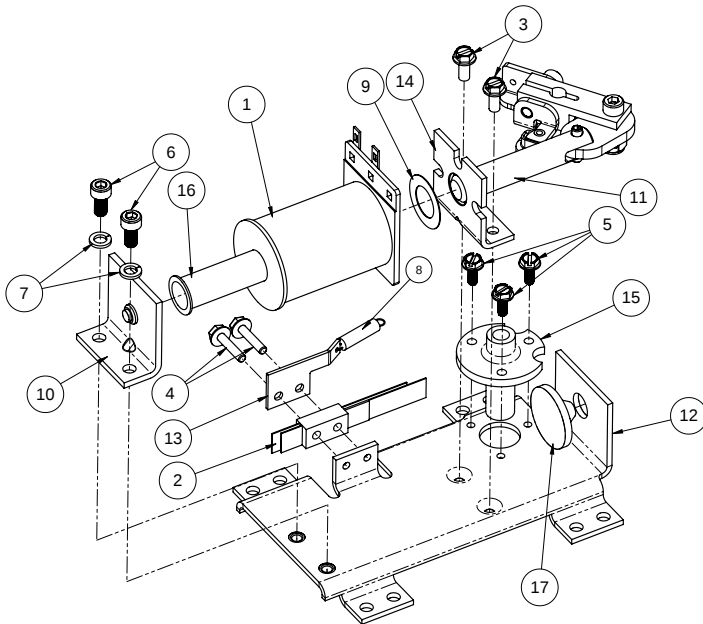
Coming Soon.....

5.12 BALL SHOOTER ASSEMBLY**500-2604-04**

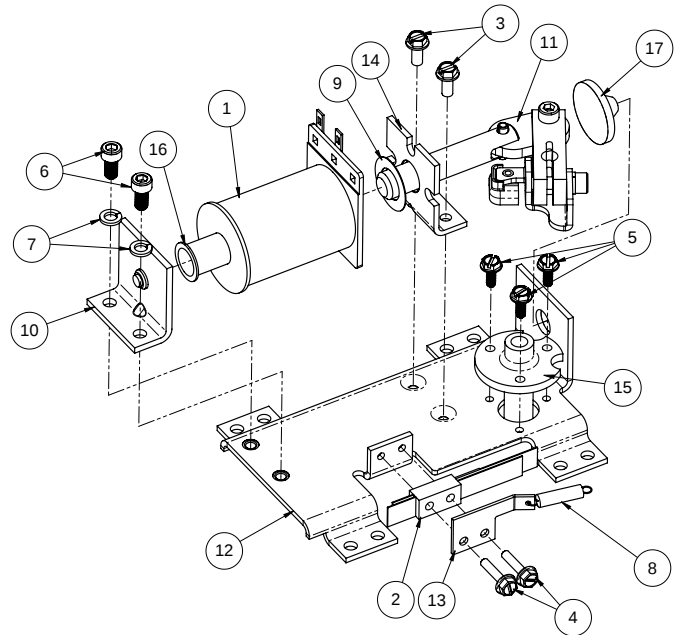
ID	Part Number	Description	Qty
1	515-2436-01	HOUSING ASSEMBLY	1
2	820-1408-00	DECAL - SHOOTER HOUSING SPI	1
3	515-6557-00	ROD ASSEMBLY	1
4	242-5014-00	WASHER 3/8 ID X 5/8 OD X 1/16"	2
5	242-5637-00	NYLON WASHER 3/8 ID X 5/8 OD X 1/16"	1
6	270-5012-00	RETAINING RING, 3/8"	1
7	545-5276-00	RUBBER TIP	1
8	266-5010-00	COMPRESSED SPRING (SHORT)	1
9	266-5001-04	COMPRESSED SPRING (LONG) - GREEN	1

5.13 AUTO LAUNCH ASSEMBLY**500-9818-02**

ID	Part Number	Description	Qty
1	515-9689-01	MAIN BRKT: AUTO-PLUNGER	1
2	535-0728-00	KICKER ARM, AUTO-PLUNGER	1
3	270-5001-00	RETAINING E-RING, 3/16" SHAFT OD	1
4	545-5352-00	NYLINER, 3/16" SHAFT	1
5	090-5001-ND	COIL - 23-800, NO DIODE	1
6	545-5411-00	COIL SLEEVE	1
7	266-5020-00	COMPRESSION SPRING-CONICAL	1
8	530-7834-00	PIN: KICKER ARM, AUTO-PLUNGER	1
9	232-5300-00	SCREW, 8-32 X 1/4" PPH SEMS	4
10	530-7835-00	PIVOT, AUTO-PLUNGER	1
11	545-5423-00	NYLINER, 1/4" SHAFT, 4L1-FF	1
12	237-5937-02	SCREW, 2-56 X 1/2" HWH MS	2
13	535-6539-00	SWITCH BODY PROTECT PLATE	1
14	180-5157-01	SHOOTER SWITCH - SHORT ARM	1
15	545-6268-00	FISCHE PAPER	1
16	535-0762-00	COIL BRACKET-AUTOPLUNGER	1
17	515-6304-03	PLUNGER / LINK ASSEMBLY	1
18	545-0762-00	FISCHE PAPER: AUTO-LAUNCHER	1

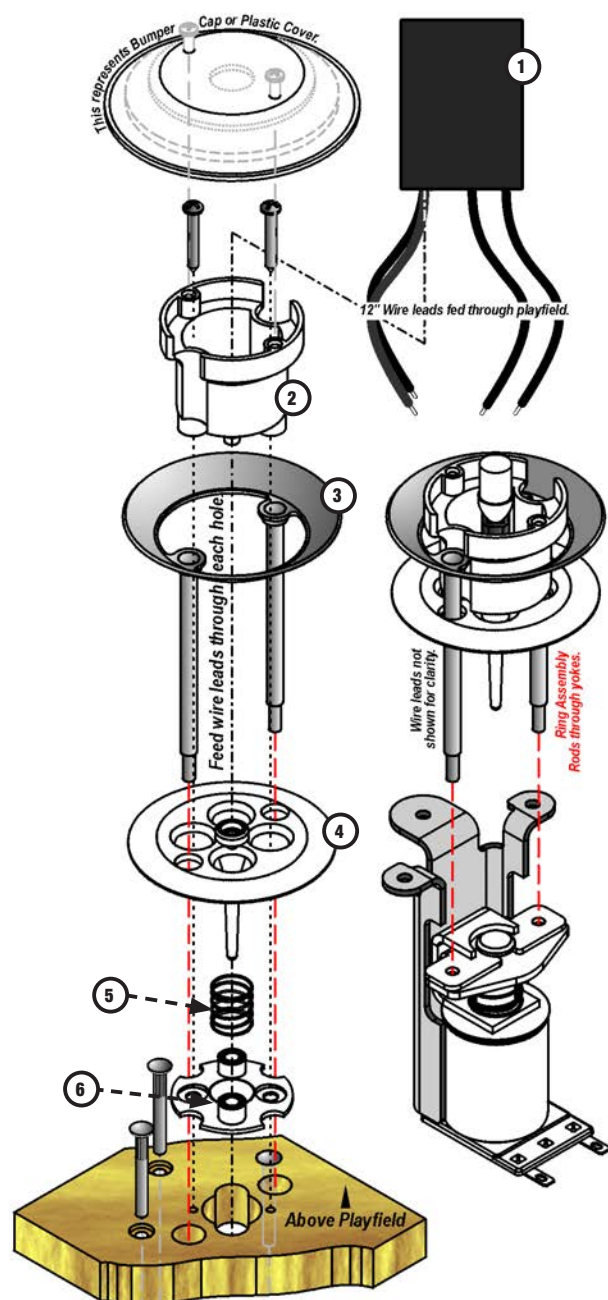
5.16 FLIPPER ASSEMBLY, LEFT**500-6543-12-ND**

ID	Part Number	Description	Qty
1	090-5032-ND	FLIPPER COIL (22-1080)	1
2	180-5149-00	SWITCH, END-OF-STROKE	1
3	237-5975-00	SCREW, 8-32 X 3/8" HWH SWAGE ZN	2
4	237-5976-04	SCREW, 6-32 X 5/8" HWH SWAGE	2
5	237-6388-00	SCREW, 6-32 X 3/8", SLOTTED HWH, TYPE F	3
6	237-6389-00	SCREW, 10-32 X 3/8", SHC	2
7	244-5003-00	#10 LOCK WASHER, SPLIT	2
8	265-5035-00	EXTENSION SPRING	1
9	269-5002-00	SPRING WASHER	1
10	515-6308-01	COIL STOP ASSEMBLY	1
11	515-7203-01	PLUNGER / CRANK ASSEMBLY	1
12	535-7275-01	FLIPPER BASE PLATE, LEFT	1
13	535-7354-01	SWITCH PLATE / SPRING RTN BRKT	1
14	535-7356-00	COIL BRACKET	1
15	545-5070-00	FLIPPER BUSHING	1
16	545-5388-00	COIL SLEEVE	1
17	545-5428-00	RUBBER BUMPER	1
18	515-5133-06-06	FLIPPER BAT AND SHAFT (YELLOW)	1
19	545-5277-00	FLIPPER RUBBER	1

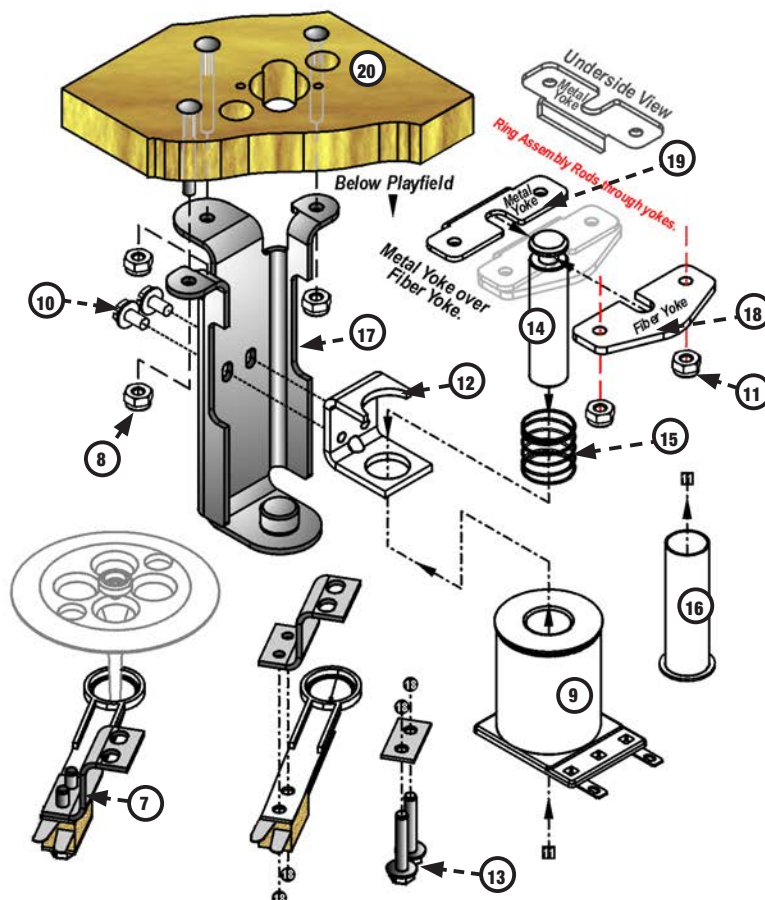
5.17 FLIPPER ASSEMBLY, RIGHT**500-6543-02-ND**

ID	Part Number	Description	Qty
1	090-5032-ND	FLIPPER COIL (22-1080)	1
2	180-5149-00	SWITCH, END-OF-STROKE	1
3	237-5975-00	SCREW, 8-32 X 3/8" HWH SWAGE ZN	2
4	237-5976-04	SCREW, 6-32 X 5/8" HWH SWAGE	2
5	237-6388-00	SCREW, 6-32 X 3/8", SLOTTED HWH, TYPE F	3
6	237-6389-00	SCREW, 10-32 X 3/8", SHC	2
7	244-5003-00	#10 LOCK WASHER, SPLIT	2
8	265-5035-00	EXTENSION SPRING	1
9	269-5002-00	SPRING WASHER	1
10	515-6308-01	COIL STOP ASSEMBLY	1
11	515-7203-00	PLUNGER / CRANK ASSEMBLY	1
12	535-7275-00	FLIPPER BASE PLATE, RIGHT	1
13	535-7354-00	SWITCH PLATE / SPRING RTN BRKT	1
14	535-7356-00	COIL BRACKET	1
15	545-5070-00	FLIPPER BUSHING	1
16	545-5388-00	COIL SLEEVE	1
17	545-5428-00	RUBBER BUMPER	1
18	515-5133-06-06	FLIPPER BAT AND SHAFT (YELLOW)	1
19	545-5277-00	FLIPPER RUBBER	1

5.18 POP BUMPER ASSEMBLY



ID	Part Number	Description	Qty
1	511-7670-00	POP BUMPER RGB LED MODULE	1
2	545-5197-00	BUMPER BODY	1
3	515-5085-00	RING AND ROD ASSY	1
-	515-5085-01	RING AND ROD ASSY - TRIMMED	
4	545-5607-00	BUMPER SKIRT	1
-	545-5607-04	BUMPER SKIRT - TRIMMED	1
5	266-5048-00	BUMPER SKIRT COMP SPRING	1
6	545-5195-00	BUMPER BASE	1

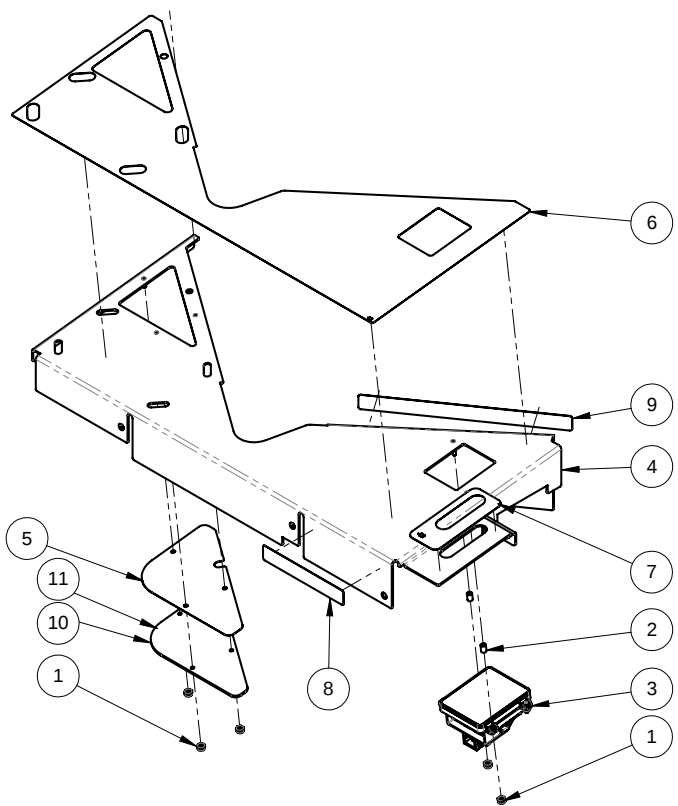


Part Number	Description	Qty
511-5067-BRD	BUMPER/RING TOP ASSY, W/ LED	2
511-7765-00	BUMPER/RING TOP ASSY, W/ LED TRIMMED	1
515-6459-04-ND	BUMPER BOTTOM ASSY, NO DIODE	3

ID	Part Number	Description	Qty
7	500-9934-01	POP BUMPER SWITCH ASSY-2 - LUG-LEFT	1
8	240-5005-00	6-32 NYLON STOP NUT	3
9	090-5044-ND	COIL - 26-1200	1
10	237-5976-01	#6-32 X 1/4" SHWH SWAGE ZN	2
11	240-5005-00	#6-32 NYLON STOP NUT	2
12	535-7347-00	METAL YOKE STOP	1
13	234-5101-00	SCREW, 8 X 1/2 SLT	6
14	530-5348-00	PLUNGER, POP BUMPER	1
15	266-5047-00	COMPRESSION SPRING, POP BUMPER	1
16	545-5031-00	COIL SLEEVE	1
17	515-5939-00	COIL BRACKET POP BUMPER ASSY	1
18	545-5609-00	FIBER YOKE	1
19	535-7346-00	METAL YOKE	1
20	237-5957-00	#6-32 x 1-3/16" SPIRAL FIN SHANK SCREW	3

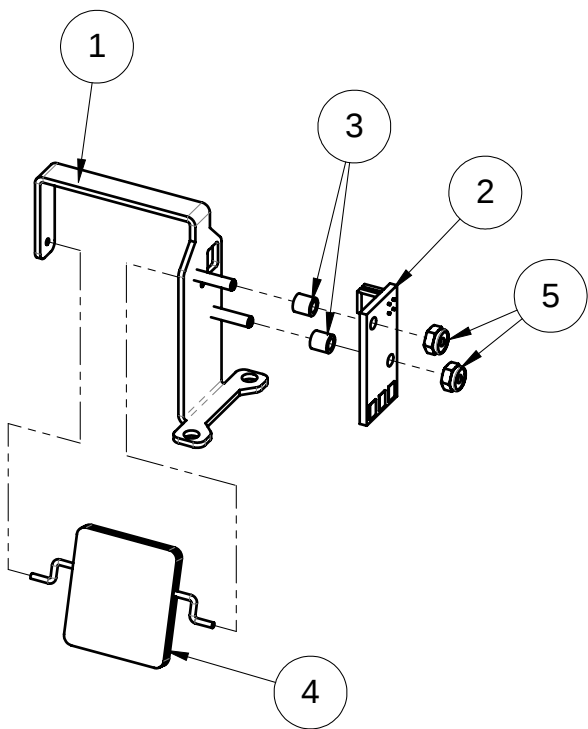
Right Pop Bumper is Trimmed, with the flat side facing to the right.

5.19 BOTTOM ARCH ASSEMBLY
500-7434-XX



ID	Part Number	Description	Qty
1	240-5303-00	4-40 NYLON LOCK NUT	5
2	254-5090-04	PLASTIC SPACER #4 SCREW, 3/16" OD - 9/32" LENGTH	2
3	509-2020-00	QR SCANNER M306 ASSEMBLY	1
4	510-8009-00	BOTTOM ARCH, STEEL W/ SPADE BOLT, QR READY; TWD R	1
5	545-2763-00	COVER, SIGNATURE PROTECTOR, METAL ARCH; TWD R [LE ONLY]	1
6	820-13AM-01	METAL ARCH DECAL SET -01; TWD R	1
7	820-13AM-02	METAL ARCH DECAL SET -02; TWD R	1
8	820-5422-00	WARNING DECAL, BOTTOM ARCH, QR READER	1
9	820-7953-00	ARCH PROTECTOR DECAL BLACK	1
10	830-6975-AM	LEFT SIDE ARCH PLASTIC; TWD R [LE ONLY]	1
11	830-6975-AN	LEFT SIDE ARCH PLASTIC; TWD R [PREMIUM ONLY]	1

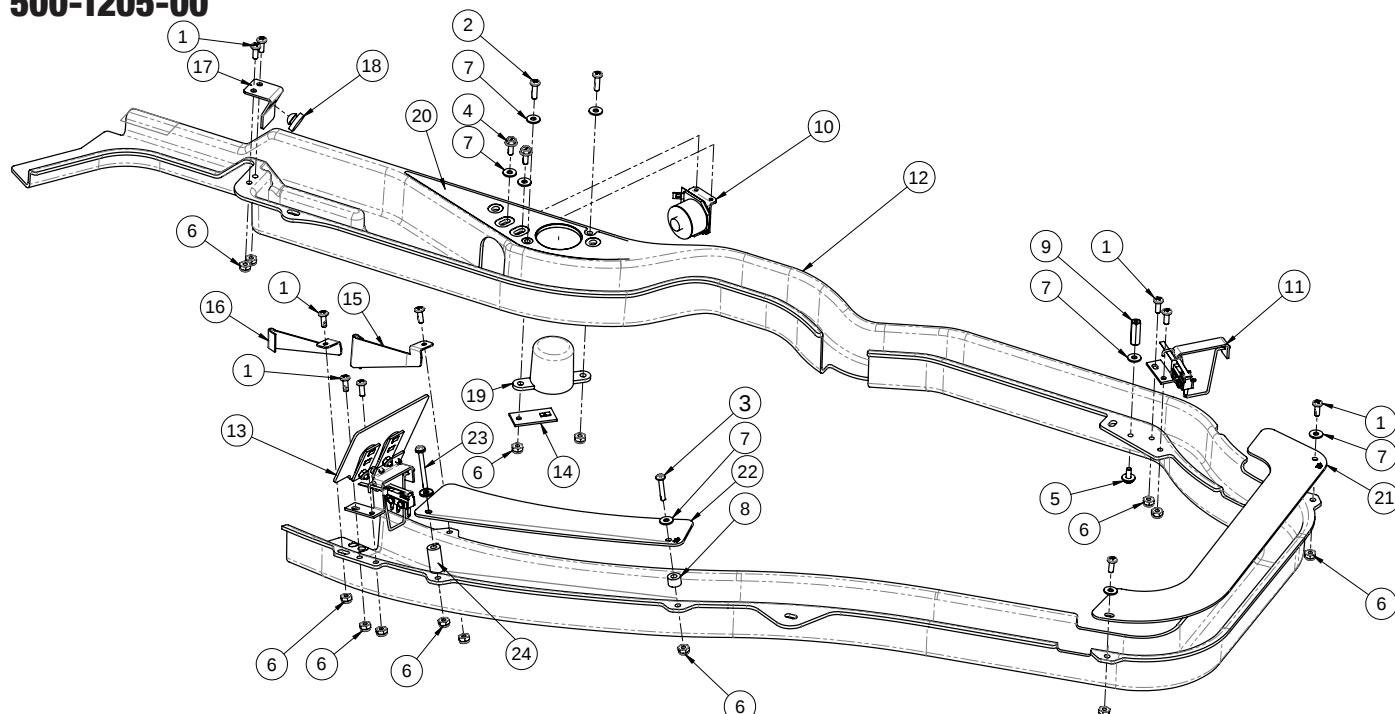
5.20 REFLECTIVE SPINNER ASSEMBLY
511-3044-00



ID	Part Number	Description	Qty
1	515-2456-00	BRACKET, SPINNER, REFLECTIVE OPTO	1
2	511-2785-01	SPINNER OPTO W/ CABLE	1
3	254-5090-01	PLASTIC SPACER #4 SCREW, 3/16" OD - 3/16" LENGTH	2
4	515-2326-00	SPINNER TARGET, REFLECTIVE	1
5	240-5303-00	4-40 NYLON LOCK NUT	2

5.21 RIGHT RAMP ASSEMBLY

500-1205-00

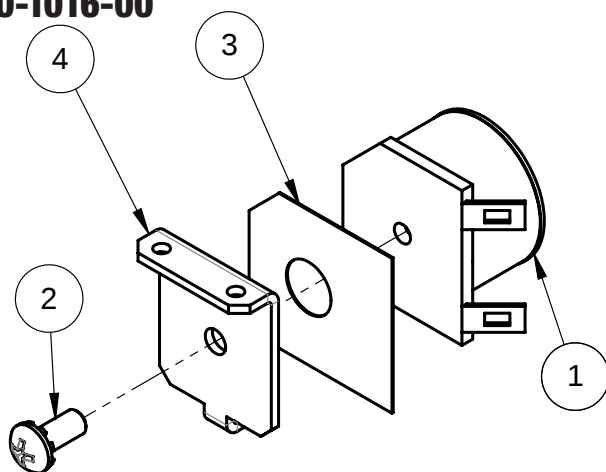


ID	Part Number	Description	Qty
1	237-5501-00P	SCREW, 6-32 X 3/8" PPH MS ZINC, PATCH	10
2	237-5502-00P	SCREW, 6-32 X 1/2" PPH MS ZINC, PATCH	2
3	237-5504-00P	SCREW, 6-32 X 3/4" PPH MS, PATCH	1
4	237-5976-02P	SCREW, 6-32 X 3/8" HWH SWAGE, PATCH	2
5	237-6378-00P	#6-32 X 3/8 PAN PHILLIPS w/DOUBLE SEMS, PATCH	1
6	240-5005-00	6-32 NYLON STOP NUT	14
7	242-5001-00	#6 WASHER	9
8	254-5000-09	NYLON SPACER - BLACK - 3/8 OD X .175 ID X 1/4"	1
9	254-5008-04	HEX SPACER - 3/4 "	1
10	500-1016-00	MAGNET ASSEMBLY, NO DIODE	1
11	500-9936-04	GATE ASSEMBLY	1
12	510-8011-00	RIVETED RIGHT RAMP ASM; TWD R	1

ID	Part Number	Description	Qty
13	511-0040-36	PLAYFIELD PLASTIC ASSEMBLY -36; TWD R	1
14	520-7000-00	SINGLE FLASH LED BOARD	1
15	535-0356-00	RAMP PROTECTOR - LEFT - LEFT RAMP - I.M.	1
16	535-0357-00	RAMP PROTECTOR - RIGHT - LEFT RAMP - I.M.	1
17	535-3346-00	BRACKET, RAMP STOP, TWD R	1
18	545-5105-00	RUBBER BUMPER	1
19	550-5031-02	MINI MARS W/ EARS - RED SB	1
20	820-7981-39	DECAL -39, TWD R	1
21	830-8589-22	PF PLASTIC -22; TWD R	1
22	830-8589-55	PF PLASTIC -55; TWD R	1
23	232-5207-00P	SCREW, 6-32 X 1-1/4" PPH SEMS, PATCH	1
24	254-5000-07	NYLON SPACER - BLACK - 3/8 OD X .175 ID X 3/4"	1

5.22 MAGNET ASSEMBLY (RIGHT RAMP)

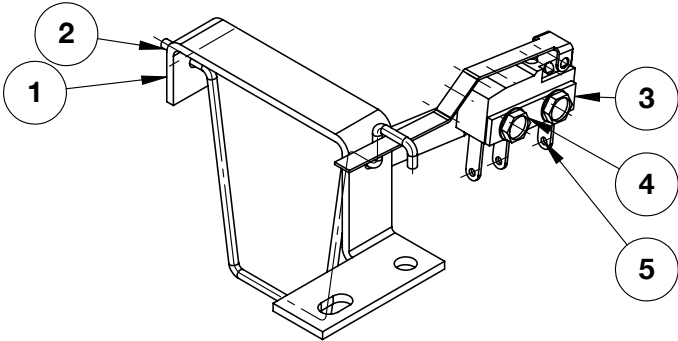
500-1016-00



ID	Part Number	Description	Qty
1	090-5054-ND	COIL W/ CORE, 31-1500, NO DIODE	1
2	232-5301-00	SCREW, 8-32 X 3/8" PPH SEMS	1
3	523-0013-00	FISCHE PAPER, LATCH MAGNET	1
4	535-7994-00	BRACKET, MAGNET ASSEMBLY	1

5.23 GATE ASSEMBLY

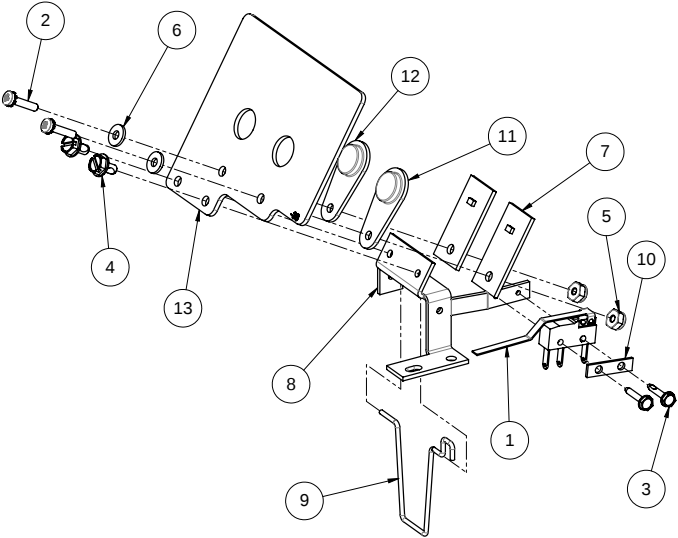
500-9936-04



ID	Part Number	Description	Qty
1	535-7756-01	BRACKET - GATE	1
2	535-7755-02	WIRE FORM	1
3	535-6539-00	SWITCH BODY PROTECT PLATE	1
4	237-5937-02	SCREW, 2-56 X 1/2" HWH MS	2
5	180-5087-00	SWITCH - GATE	1

5.24 PLAYFIELD PLASTIC ASSEMBLY -36

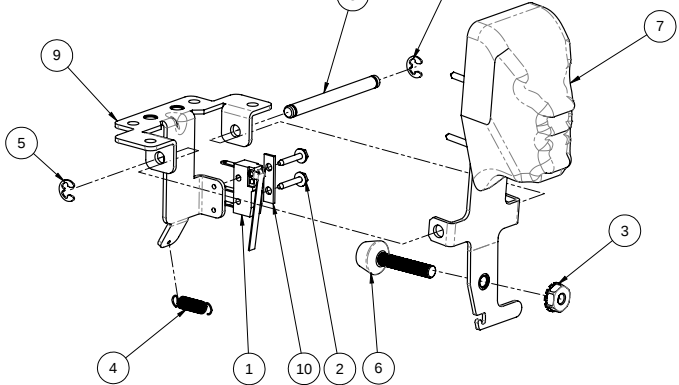
511-0040-36



ID	Part Number	Description	Qty
1	180-5087-00	SWITCH - GATE	1
2	237-5813-00	SCREW, 4-40 X 1/2" PPH SEMS	2
3	237-5937-02P	SCREW, 2-56 X 1/2" HWH MS, PATCH	2
4	237-5976-01P	SCREW, 6-32 X 1/4 HWH SWAGE, PATCH	2
5	240-5303-00	4-40 NYLON LOCK NUT	2
6	242-5002-00	#4 FLAT WASHER - 5/16" O.D.	2
7	520-5307-00	SINGLE LED PCB	2
8	535-4199-00	EXIT GATE BRKT - RIGHT SW - 80 DEGREES	1
9	535-6304-03	WIRE FORM	1
10	535-6539-00	SWITCH BODY PROTECT PLATE	1
11	550-7361-02	MIN DOME LED-RED	1
12	550-7361-06	MIN DOME LED-YELLOW	1
13	830-8589-36	PF PLASTIC -36; TWD R	1

5.25 PRISON ZOMBIE TARGET ASSEMBLY

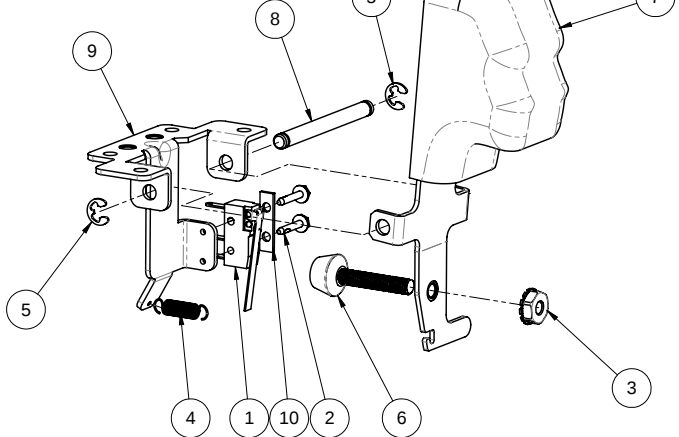
500-2967-00



ID	Part Number	Description	Qty
1	180-5010-04	MICRO-SWITCH	1
2	237-5937-02P	SCREW, 2-56 X 1/2" HWH MS, PATCH	2
3	240-5208-00	10-32 KEPS NUT	1
4	265-5090-00	EXT SPRING SS 0.188 OPEN HOOKS X 0.75 INSIDE LG	1
5	270-5001-00	RETAINING E-RING, 3/16" SHAFT OD	2
6	280-5014-00	ADJUSTABLE BUMPER/STOP	1
7	511-0051-00	PRISON ZOMBIE TARGET, RIVETED, TWD R	1
8	530-7812-07	PIVOT PIN-.188 DIA.	1
9	535-3339-00	SCULPT TARGET BASE, TWD R	1
10	535-6539-00	SWITCH BODY PROTECT PLATE	1

5.26 BICYCLE GIRL ZOMBIE TARGET ASSEMBLY

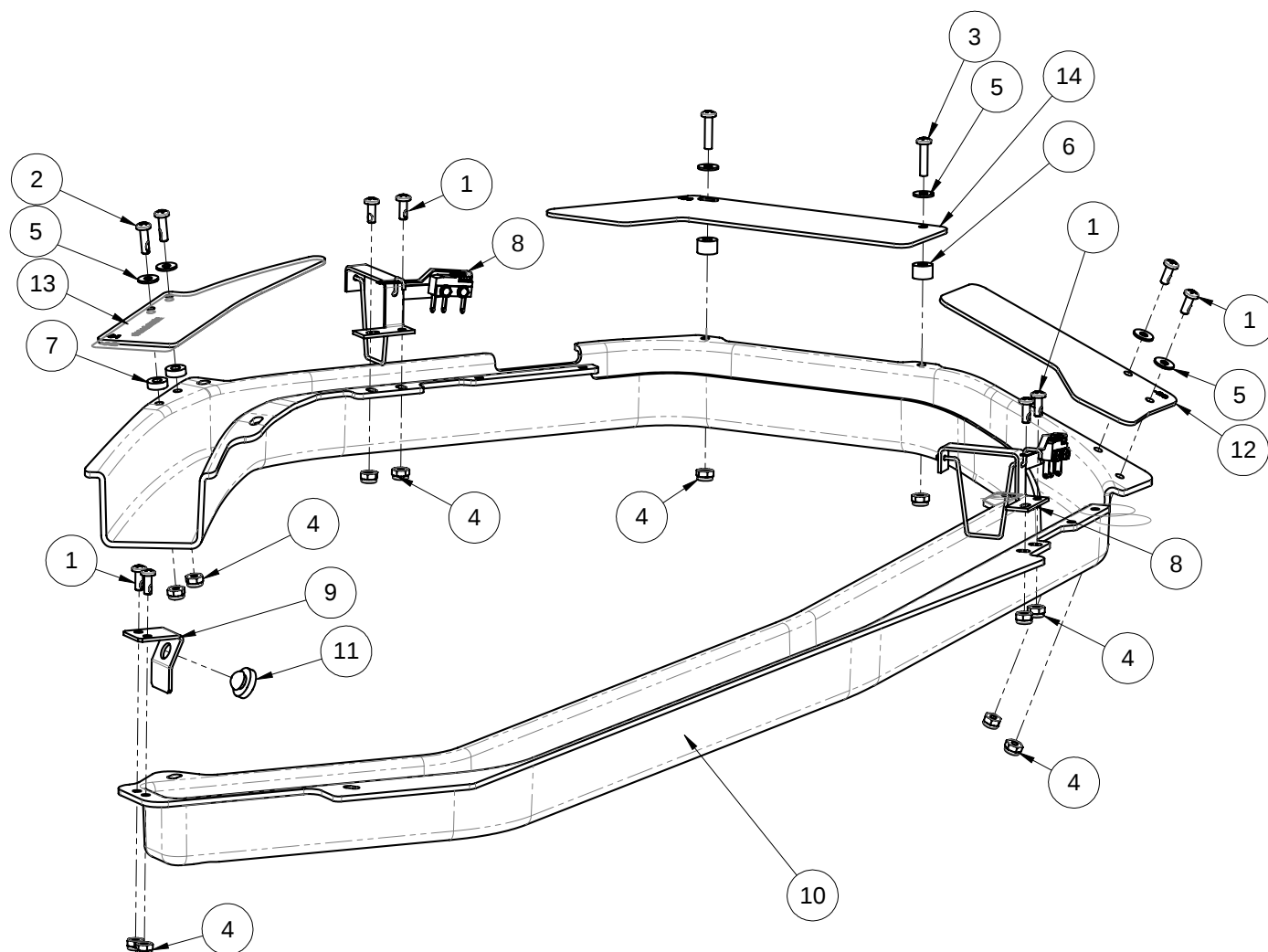
500-2967-01



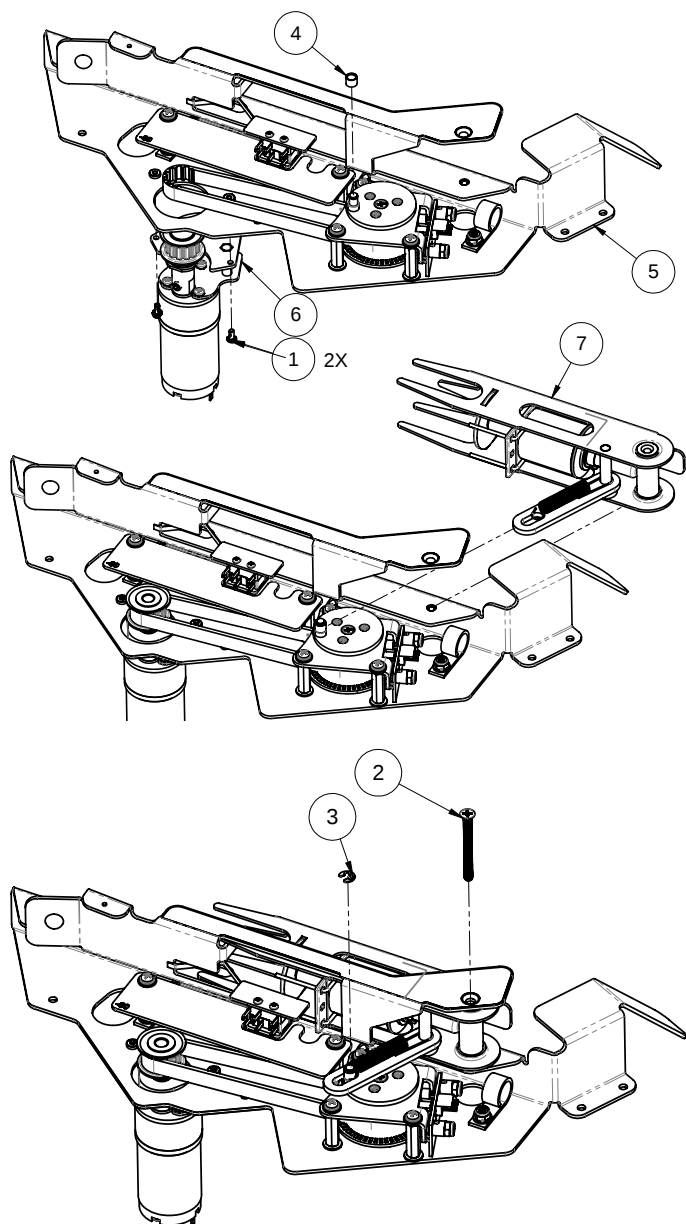
ID	Part Number	Description	Qty
1	180-5010-04	MICRO-SWITCH	1
2	237-5937-02P	SCREW, 2-56 X 1/2" HWH MS, PATCH	2
3	240-5208-00	10-32 KEPS NUT	1
4	265-5090-00	EXT SPRING SS 0.188 OPEN HOOKS X 0.75 INSIDE LG	1
5	270-5001-00	RETAINING E-RING, 3/16" SHAFT OD	2
6	280-5014-00	ADJUSTABLE BUMPER/STOP	1
7	511-0052-00	ZOMBIE TARGET ASSEMBLY, RIVETED	1
8	530-7812-07	PIVOT PIN-.188 DIA.	1
9	535-3339-00	SCULPT TARGET BASE, TWD R	1
10	535-6539-00	SWITCH BODY PROTECT PLATE	1

5.27 LEFT RAMP ASSEMBLY

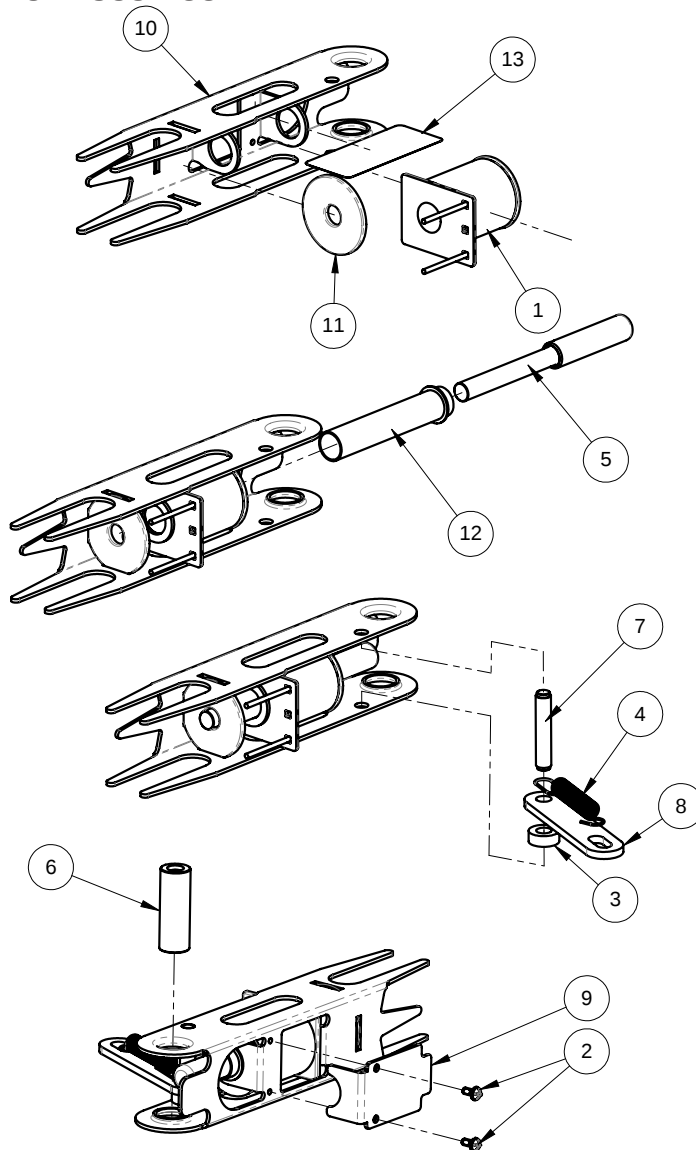
500-1207-00



ID	Part Number	Description	Qty
1	237-5501-00P	SCREW, 6-32 X 3/8" PPH MS ZINC, PATCH	8
2	237-5502-00P	SCREW, 6-32 X 1/2" PPH MS ZINC, PATCH	2
3	237-5503-00	SCREW, 6-32 X 5/8" PPH MS	2
4	240-5005-00	6-32 NYLON STOP NUT	12
5	242-5001-00	#6 WASHER	6
6	254-5000-09	NYLON SPACER - BLACK - 3/8 OD X .175 ID X 1/4"	2
7	254-5000-19	NYLON SPACER - BLACK - 3/8 OD X .175 ID X 1/8"	2
8	500-9936-04	GATE ASSEMBLY	2
9	535-3346-00	BRACKET, RAMP STOP, TWD R	1
10	545-2751-00	LEFT PLASTIC RAMP, TRIMMED, TWD R	1
11	545-5105-00	RUBBER BUMPER	1
12	830-8589-23	PF PLASTIC -23, TWD R	1
13	830-8589-34	PF PLASTIC -34, TWD R	1
14	830-8589-46	PF PLASTIC -46, TWD R	1

5.28 CROSSBOW ASSEMBLY**500-3642-00**

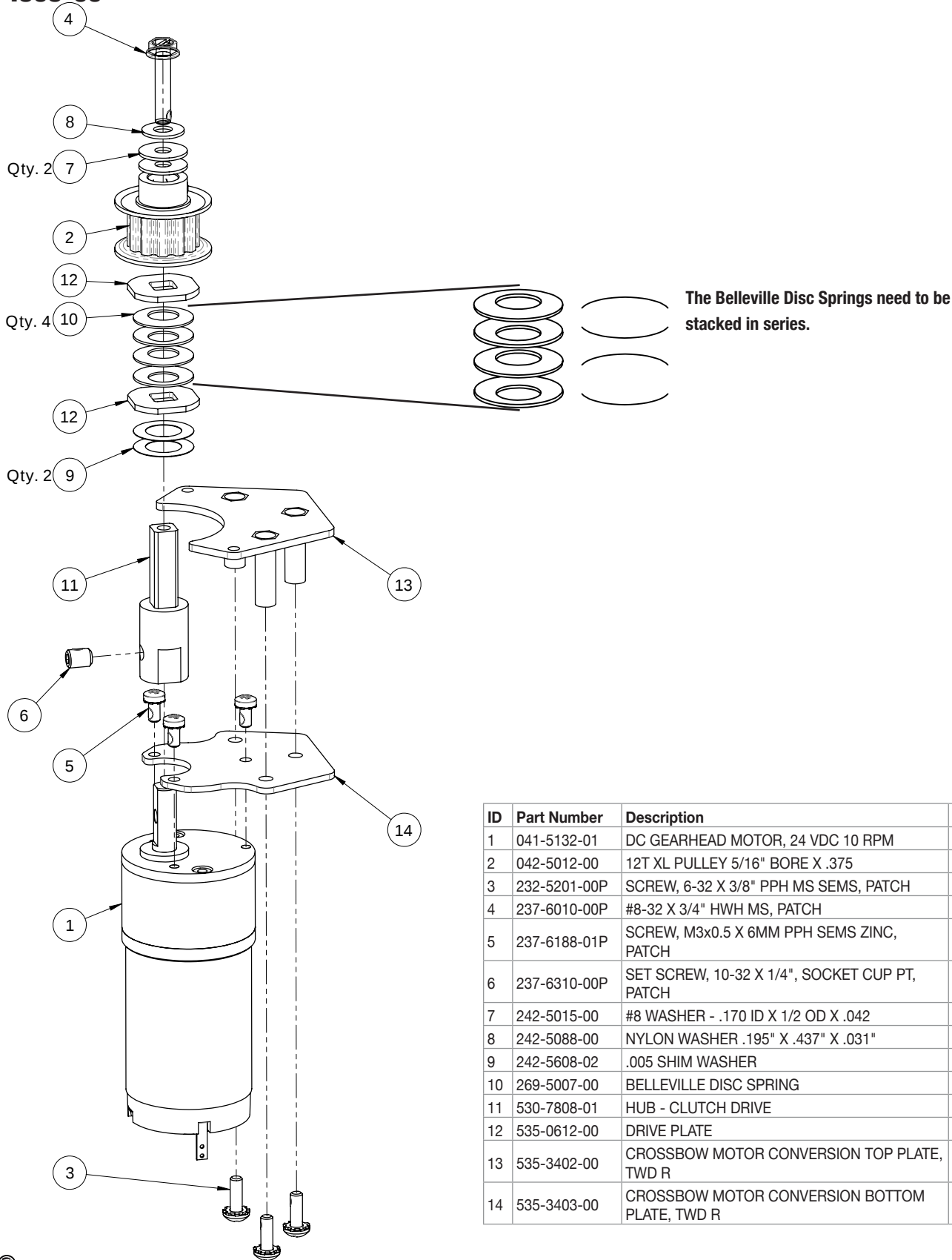
ID	Part Number	Description	Qty
1	237-5909-00P	SCREW, 4-40 X 1/4" PPH SEMS, PATCH	2
2	237-5953-00	SCREW, 8-32 X 1-3/4" PFH ZINC	1
3	270-5001-00	RETAINING E-RING, 3/16" SHAFT OD	1
4	283-5025-00	SLEEVE BEARING, 5MM X 6MM X 5MM	1
5	511-3665-00	CROSSBOW BASEPLATE ASSEMBLY, TWD R	1
6	511-4909-00	CROSSBOW ALT MOTOR ASSEMBLY, TWD R	1
7	511-3667-00	CROSSBOW KICKER ARM, TWD R	1

5.29 CROSSBOW KICKER ARM ASSEMBLY**511-3667-00**

ID	Part Number	Description	Qty
1	090-5088-00	COIL, 23-800, NO DIODE, LUGLESS	1
2	237-5909-00P	SCREW, 4-40 X 1/4" PPH SEMS, PATCH	2
3	254-5099-02	SPACER, NYLON, 1/4" ID	1
4	265-5061-00	SPRING, EXTENSION	1
5	515-7157-00	PLUNGER ASSEMBLY	1
6	530-5591-00	POST	1
7	530-9025-00	SHOULDER PIN	1
8	535-3338-00	KICKER LINK, TWD R	1
9	535-3372-00	DIRECTIONAL KICKER COIL SLEEVE HOLDER	1
10	535-3373-00	KICKER PLATFORM	1
11	535-8862-00	WASHER	1
12	545-5847-00	COIL SLEEVE	1
13	820-7991-00	CROSSBOW COIL DECAL, TWD R	1

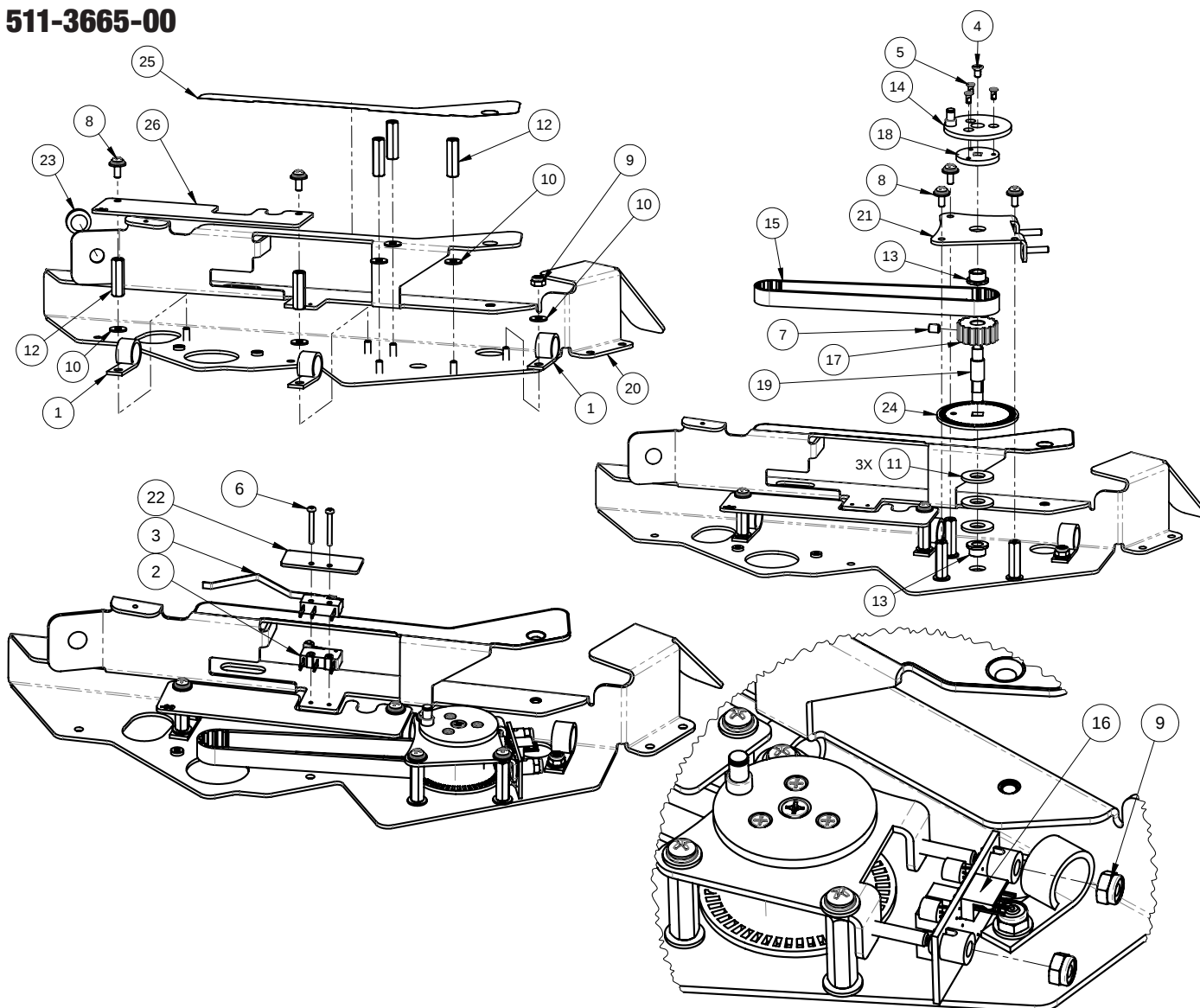
5.30 CROSSBOW MOTOR ASSEMBLY

511-4909-00



5.31 CROSSBOW BASEPLATE ASSEMBLY

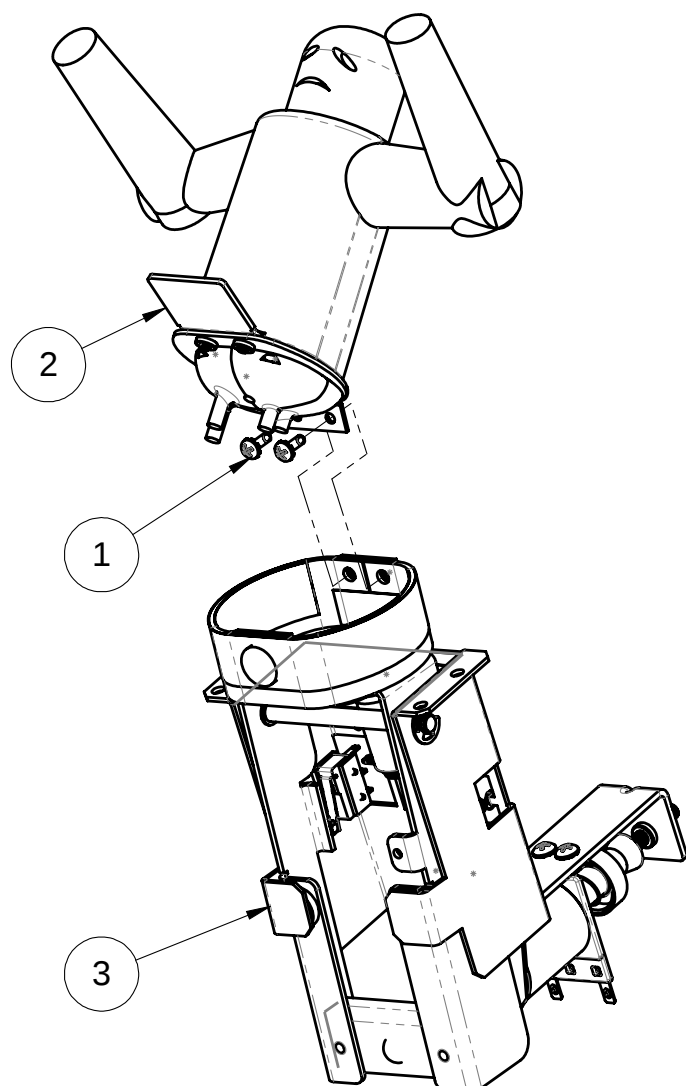
511-3665-00



ID	Part Number	Description	Qty
1	040-5000-06	1/2" CABLE CLAMP	3
2	180-5119-02	MICRO-SWITCH - LIGHT ACTUATION	1
3	180-5181-00	SWITCH	1
4	237-5853-00P	SCREW, 6-32 X 1/4" PFH ZINC	1
5	237-5983-04P	SCREW, 4-40 X 1/4" PFH MS, 82° UC, BLACK, PATCH	3
6	237-6064-00	2-56 x 3/4 PHILLIPS PAN HEAD ZINC	2
7	237-6310-00P	SET SCREW, 10-32 X 1/4", SOCKET CUP PT, PATCH	1
8	237-6378-00P	#6-32 X 3/8 PAN PHILLIPS w/DOUBLE SEMS, PATCH	5
9	240-5005-00	6-32 NYLON STOP NUT	3
10	242-5001-00	#6 WASHER	6
11	242-5673-00	WASHER 0.340 X 0.74 X 0.07 NYLON NATURAL	3
12	254-5008-05	HEX SPACER - 7/8 "	5

ID	Part Number	Description	Qty
13	283-5018-06	1/4 ID X 3/8 OD X 3/16 LG. BUNTING SAE 841 BRONZE FLANGED BEARING-PART #EF040603	2
14	515-3024-00	CAM PLATE ASSMBLY SQUARE SHAFT, TWD R	1
15	515-9754-XX	TIMING BELT-XL (.200 PITCH), 62 TEETH	1
16	520-7021-00	DUAL-ENCODER OPTO PCB	1
17	530-7879-XX	TIMING BELT PULLEY-XL(.200 PITCH)	1
18	530-7891-00	SQUARE SHAFT ADAPTOR	1
19	530-9669-00	CAM SHAFT, TWD R	1
20	535-0915-00	MOTOR PLATFORM UPDATED, TWD R	1
21	535-0916-00	CAM SHAFT BRACKET, TWD R	1
22	535-8861-00	SWITCH PLATE	1
23	545-5105-00	RUBBER BUMPER	1
24	550-7377-00	ENCODER OPTO SENSOR WHEEL	1
25	820-7981-50	DECAL -50, TWD R	1
26	830-8589-60	PF PLASTIC -60, TWD R	1

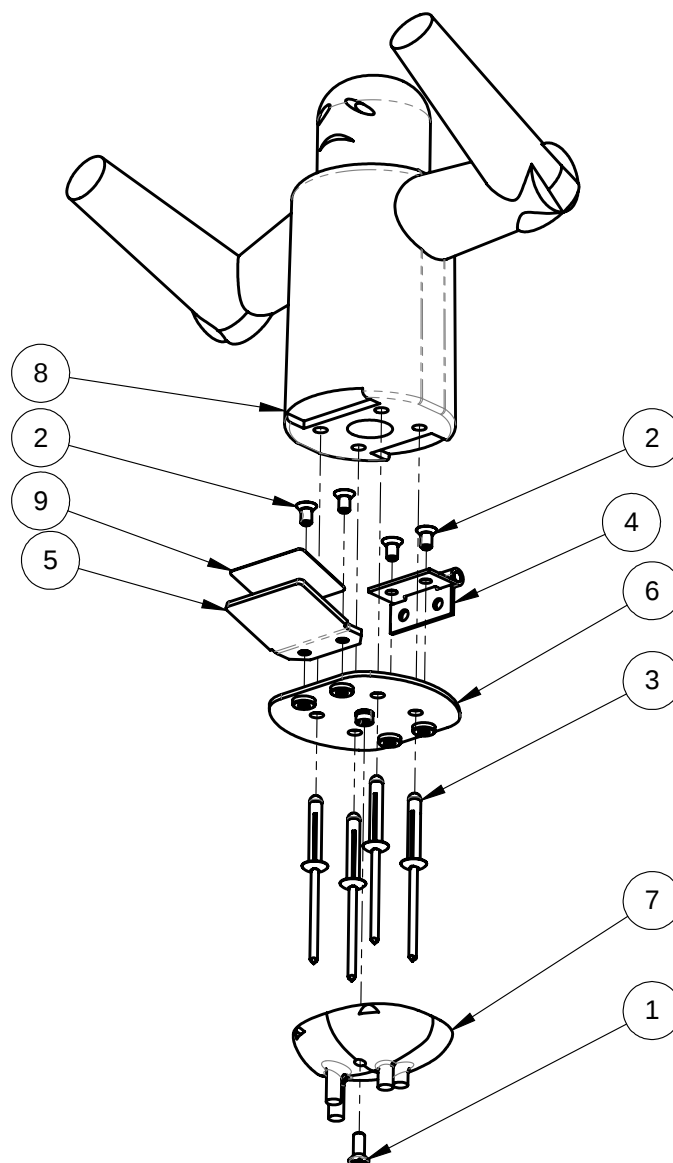
5.32 WELL ZOMBIE ASSEMBLY



ID	Part Number	Description	Qty
1	232-5201-00P	SCREW, 6-32 X 3/8" PPH MS SEMS, PATCH	2
2	511-0056-00	TOP WELL ASSEMBLY, TWD R	1
3	511-3113-00	BOTTOM WELL ASSEMBLY, TWD R	1

5.33 WELL ZOMBIE TOP ASSEMBLY

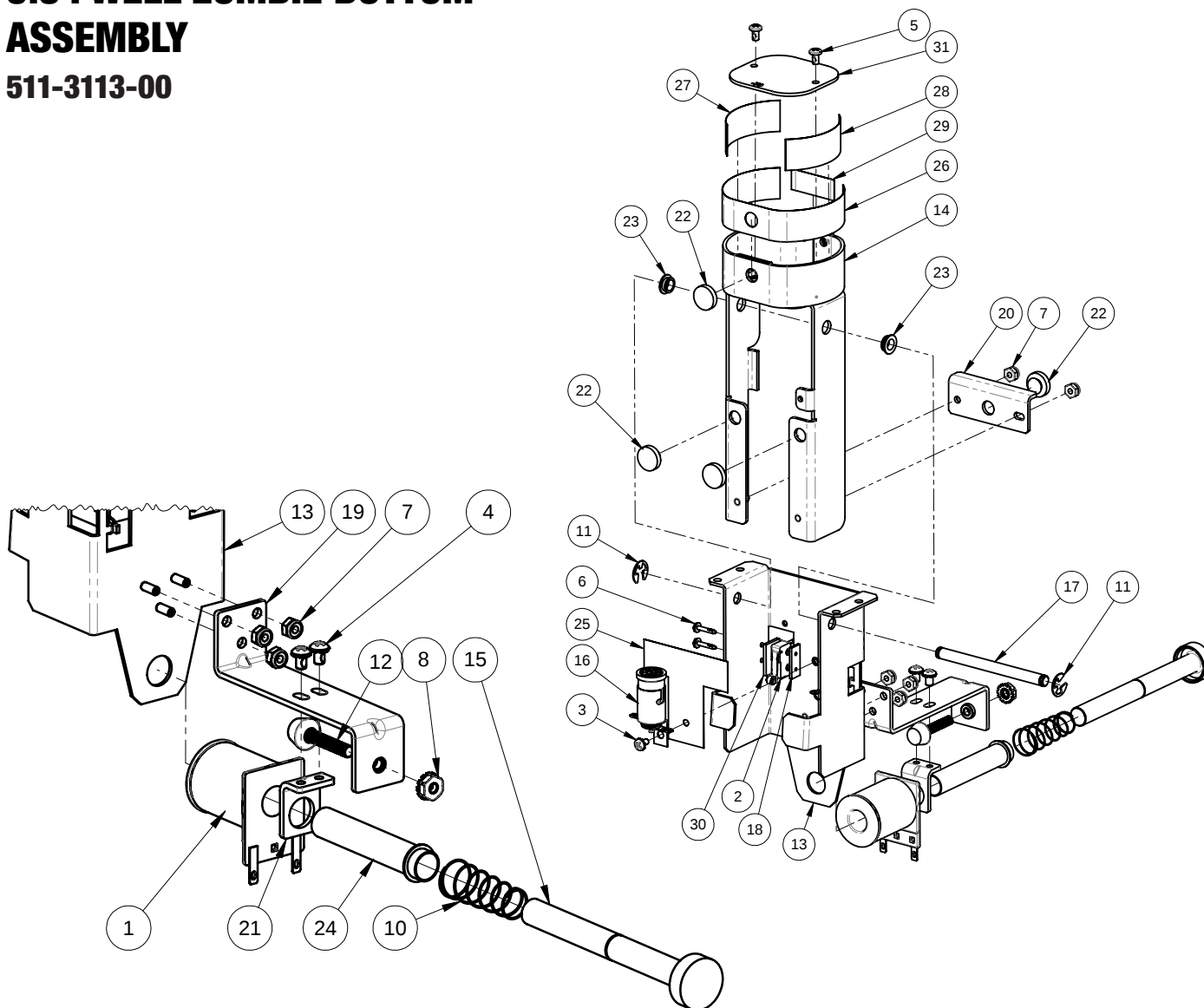
511-0056-00



ID	Part Number	Description	Qty
1	237-5850-01	SCREW, 6-32 x 3/8 PFH BLACK	1
2	237-5871-01P	6-32 X 0.25 PHFH 82 UC STL ZNC PATCHED	4
3	249-5032-02	BLIND RIVET 0.156 x 0.840 FOR SOFT MAT'L	4
4	390-5061-00	1" LEAF HINGE	1
5	535-1024-00	IMPACT PLATE	1
6	535-3364-00	WELL MOUNTING BRACKET, TWD R	1
7	545-6871-01	GUTS - TRIMMED, TWD R	1
8	545-6872-01	WELL SCULPTURE - TRIMMED, TWD R	1
9	820-7981-32	DECAL -32, TWD R	1

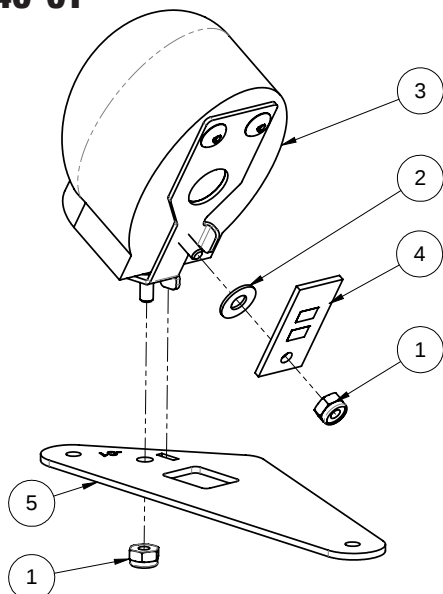
5.34 WELL ZOMBIE BOTTOM ASSEMBLY

511-3113-00

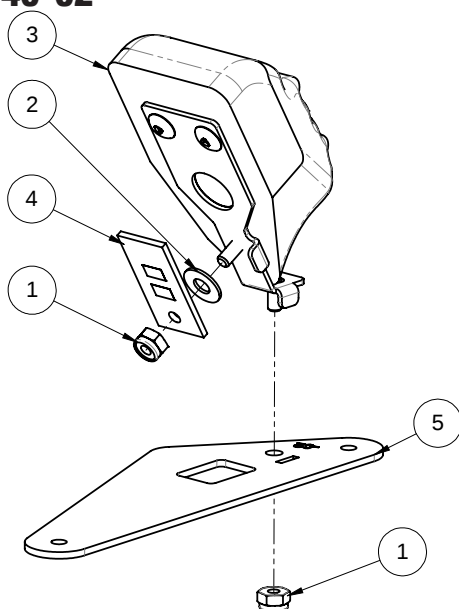


ID	Part Number	Description	Qty
1	090-5044-ND	COIL 26-1200 - NO DIODE	1
2	180-5119-02	MICRO-SWITCH - LIGHT ACTUATION	1
3	232-5200-00P	SCREW, 6-32 X 1/4" PPH SEMS, PATCH	1
4	232-5300-00P	SCREW, 8-32 X 1/4" PPH SEMS, PATCH	2
5	237-5500-01P	SCREW, 6-32 X 1/4" PPH MS BLACK	2
6	237-5937-02P	SCREW, 2-56 X 1/2" HWH MS, PATCH	2
7	240-5005-00	6-32 NYLON STOP NUT	5
8	240-5208-00	10-32 KEPS NUT	1
9	265-5003-00	TARGET RESET SPRING (Attaches 13 to 14)	1
10	266-5020-00	COMPRESSION SPRING-CONICAL	1
11	270-5002-00	RETAINING RING - 1/4"	2
12	280-5014-00	ADJUSTABLE BUMPER/STOP	1
13	515-6033-00	MAIN BRKT, WELL ASSY, TWD R	1
14	515-6034-00	WELL, TWD R	1
15	515-7299-00	PLUNGER ASSEMBLY	1
16	518-5045-08-LED	MULTI FLASHER 5V LED ASSEMBLY, WHITE	1

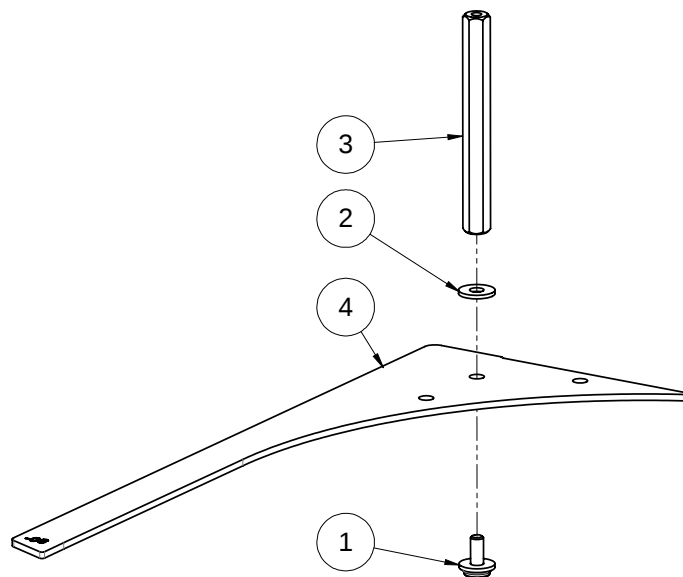
ID	Part Number	Description	Qty
17	530-7865-XX	PIVOT PIN-.250" DIA.	1
18	535-0652-01	SWITCH NUT PLATE	1
19	535-4165-00	WELL COIL BRKT, TWD R	1
20	535-4166-00	WELL PUSH BKT, TWD R	1
21	535-5203-03	COIL RETAINING BRACKET	1
22	545-5105-00	RUBBER BUMPER	4
23	545-5423-00	NYLINER, 1/4" SHAFT, 4L1-FF	2
24	545-5847-00	COIL SLEEVE	1
25	545-9778-00	FISCHE PAPER-WELL ZOMBIE	1
26	820-9318-73	DECAL -73, TWD R	1
27	820-7981-33	DECAL -33, TWD R	1
28	820-7981-35	DECAL -35, TWD R	1
29	820-7981-34	DECAL -34, TWD R	1
30	830-6117-00	SWITCH SPACER	1
31	830-8589-70	PF PLASTIC -70, TWD R	1

5.35 PLASTIC 01 ASSEMBLY**511-0040-01**

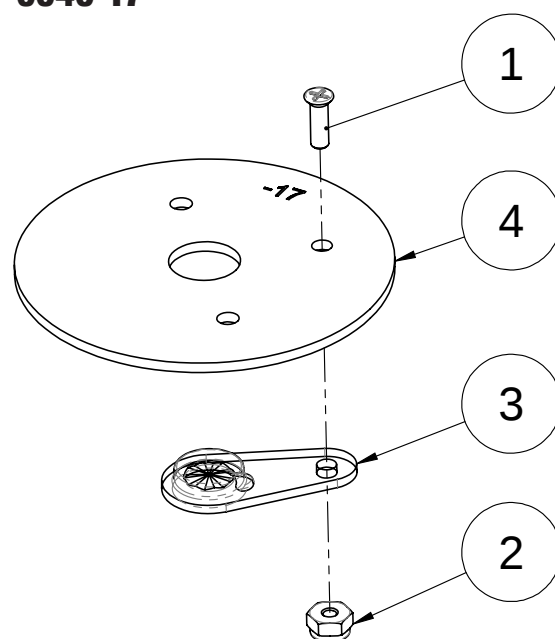
ID	Part Number	Description	Qty
1	240-5005-00	6-32 NYLON STOP NUT	2
2	242-5088-00	NYLON WASHER .195" X .437" X .031"	1
3	510-3650-01	LEFT SLING SCULPT RIVETED ASM, TWD R	1
4	520-7000-00	SINGLE FLASH LED BOARD	1
5	830-8589-01	PF PLASTIC -01, TWD R	1

5.36 PLASTIC 02 ASSEMBLY**511-0040-02**

ID	Part Number	Description	Qty
1	240-5005-00	6-32 NYLON STOP NUT	2
2	242-5088-00	NYLON WASHER .195" X .437" X .031"	1
3	510-3650-02	RIGHT SLING SCULPT RIVETED ASM, TWD R	1
4	520-7000-00	SINGLE FLASH LED BOARD	1
5	830-8589-02	PF PLASTIC -02, TWD R	1

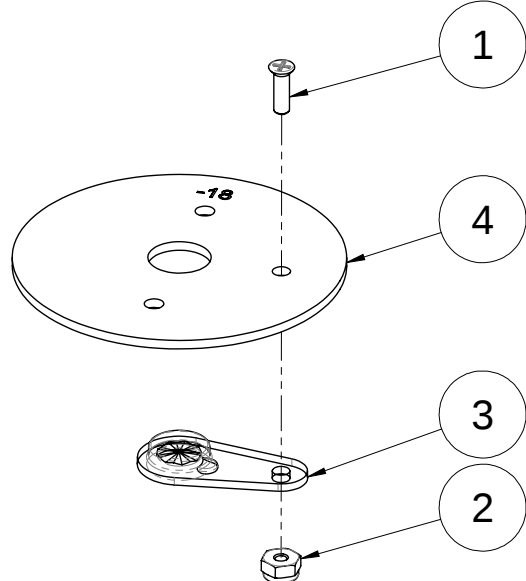
5.37 PLASTIC 06 ASSEMBLY**511-0040-06**

ID	Part Number	Description	Qty
1	237-6378-00P	#6-32 X 3/8 PAN PHILLIPS w/DOUBLE SEMS, PATCH	1
2	242-5001-00	#6 WASHER	1
3	254-5008-28	HEX SPACER - 2 3/8 "	1
4	830-8589-06	PF PLASTIC -06, TWD R	1

5.38 PLASTIC 17 ASSEMBLY**511-0040-17**

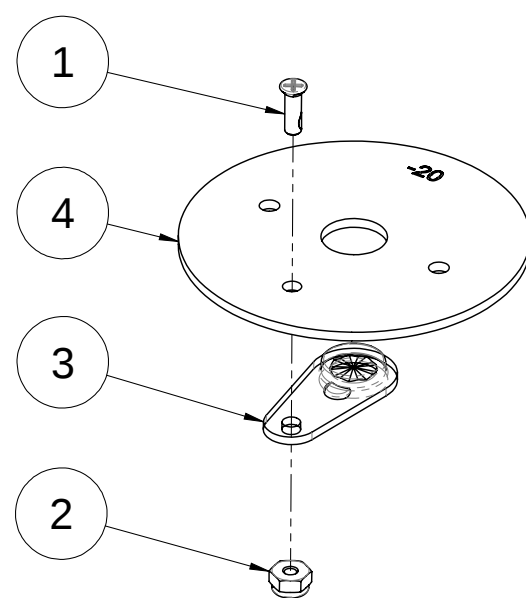
ID	Part Number	Description	Qty
1	237-5983-00P	SCREW, 4-40 X 3/8" PFH MS BLACK	1
2	240-5303-00	4-40 NYLON LOCK NUT	1
3	550-7361-01	MINI DOME LED, CLEAR	1
4	830-8589-17	PF PLASTIC -17, TWD R	1

5.39 PLASTIC 18 ASSEMBLY
511-0040-18



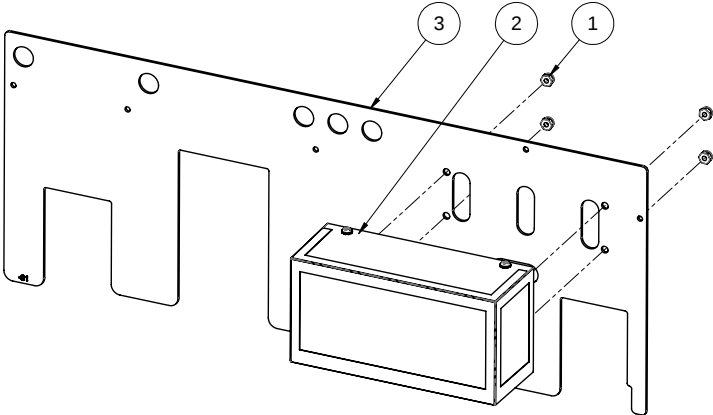
ID	Part Number	Description	Qty
1	237-5983-00P	SCREW, 4-40 X 3/8" PFH MS BLACK	1
2	240-5303-00	4-40 NYLON LOCK NUT	1
3	550-7361-01	MINI DOME LED, CLEAR	1
4	830-8589-18	PF PLASTIC -18, TWD R	1

5.40 PLASTIC 20 ASSEMBLY
511-0040-20



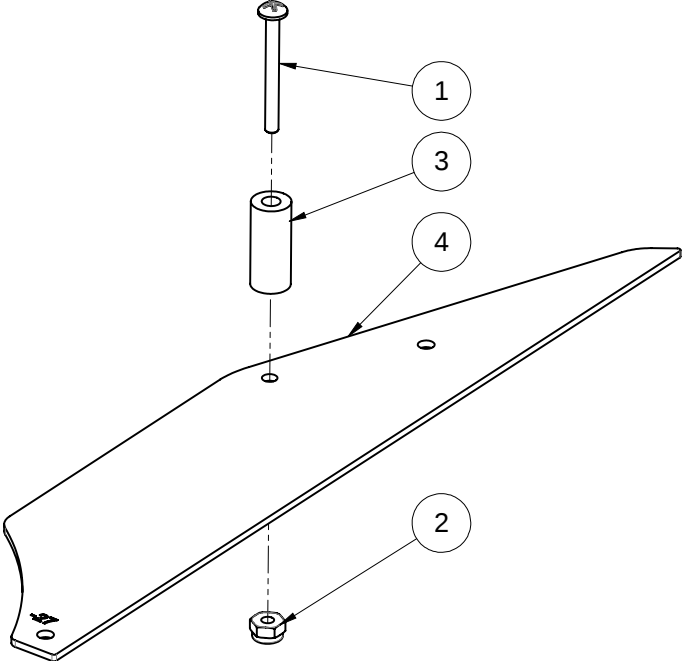
ID	Part Number	Description	Qty
1	237-5983-00P	SCREW, 4-40 X 3/8" PFH MS BLACK	1
2	240-5303-00	4-40 NYLON LOCK NUT	1
3	550-7361-01	MINI DOME LED, CLEAR	1
4	830-8589-20	PF PLASTIC -20, TWD R	1

5.41 PLASTIC 21 ASSEMBLY
(BACKPANEL)
511-0040-21

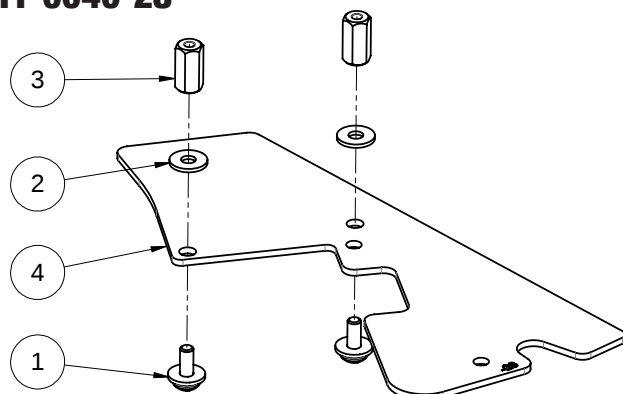


ID	Part Number	Description	Qty
1	240-5005-00	6-32 NYLON STOP NUT	4
2	511-3660-00	ASSEMBLY, TANK, TWD	1
3	830-8589-21	PF PLASTIC -21, TWD R	1

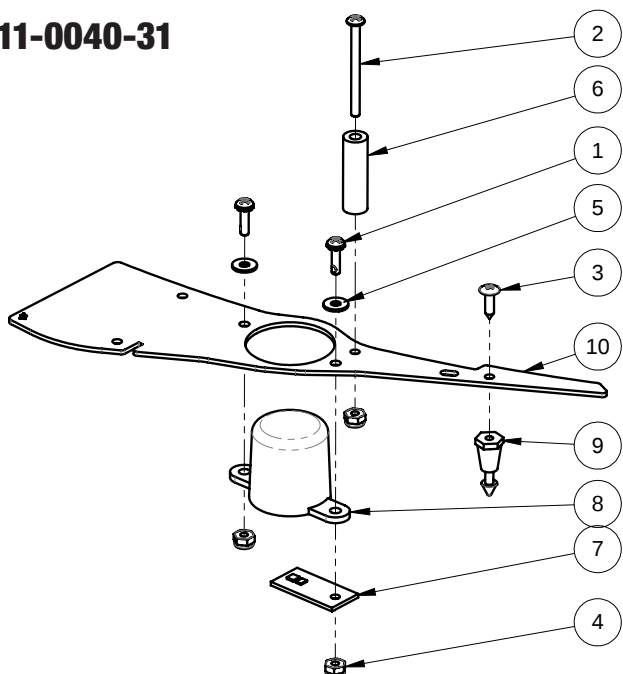
5.42 PLASTIC 27 ASSEMBLY
511-0040-27



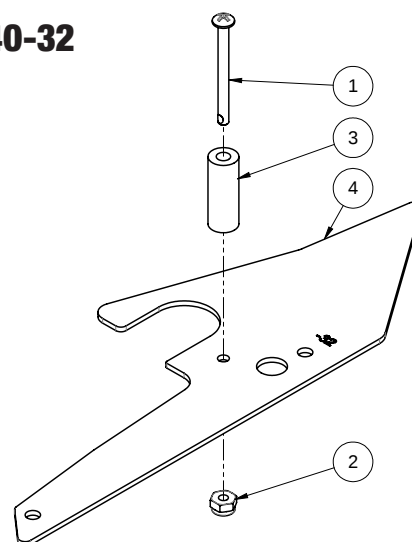
ID	Part Number	Description	Qty
1	237-5508-00P	SCREW, 6-32 X 1-1/4 PPH MS, PATCH	1
2	240-5005-00	6-32 NYLON STOP NUT	1
3	254-5000-11	NYLON SPACER - BLACK - 3/8 OD X .175 ID X 7/8"	1
4	830-8589-27	PF PLASTIC -27, TWD R	1

5.43 PLASTIC 28 ASSEMBLY**511-0040-28**

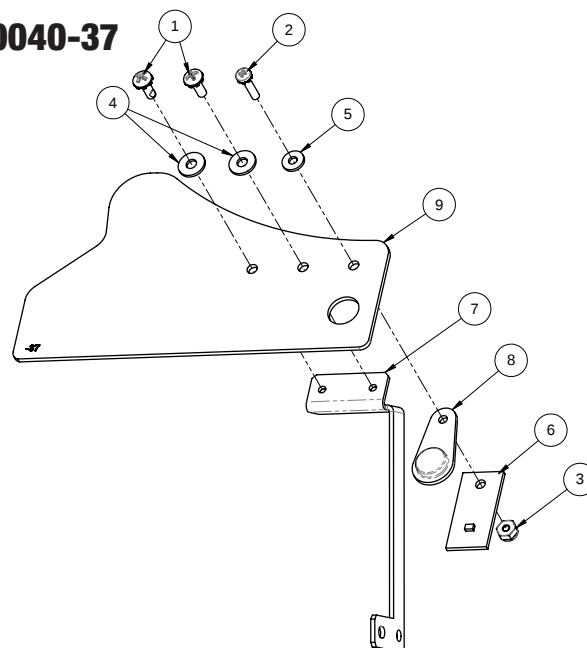
ID	Part Number	Description	Qty
1	237-6378-00P	#6-32 X 3/8 PAN PHILLIPS w/DOUBLE SEMS, PATCH	2
2	242-5001-00	#6 WASHER	2
3	254-5008-03	HEX SPACER - 1/2 "	2
4	830-8589-28	PF PLASTIC -28, TWD R	1

5.44 PLASTIC 31 ASSEMBLY**511-0040-31**

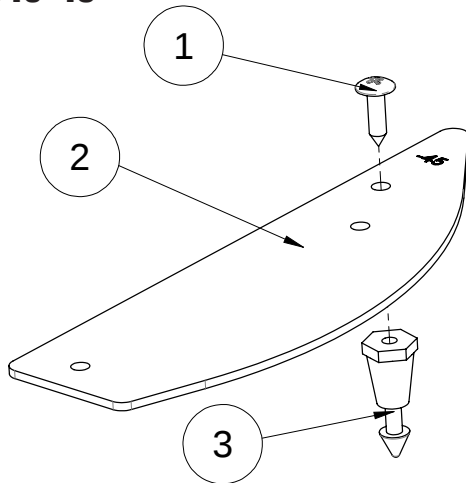
ID	Part Number	Description	Qty
1	232-5202-00P	SCREW, 6-32 X 1/2" PPH MS SEMS, PATCH	2
2	237-5516-00	SCREW, 6-32 X 1-5/8" PPH	1
3	237-5809-00	SCREW, #6 X 1/2" PTH A	1
4	240-5005-00	6-32 NYLON STOP NUT	3
5	242-5001-00	#6 WASHER	2
6	254-5000-05	NYLON SPACER - BLACK - 3/8 OD X .175 ID X 1-1/4"	1
7	520-7000-00	SINGLE FLASH LED BOARD	1
8	550-5031-02	MINI MARS W/ EARS - RED SB	1
9	550-5052-01	MINI POST - CLEAR	1
10	830-8589-31	PF PLASTIC -31, TWD R	1

5.45 PLASTIC 32 ASSEMBLY**511-0040-32**

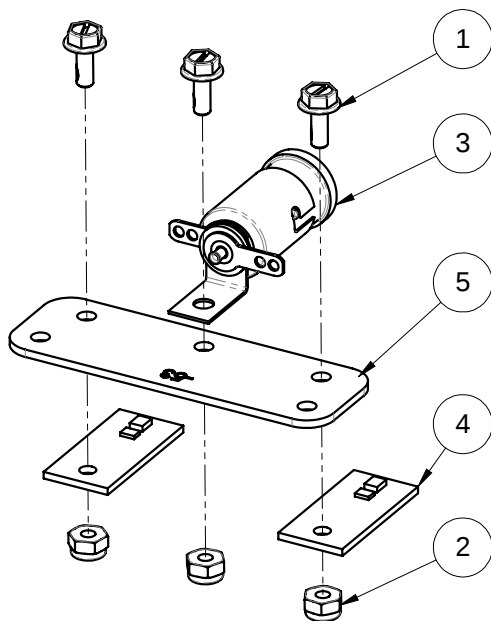
ID	Part Number	Description	Qty
1	237-5510-00P	SCREW, 6-32 X 1-1/2" PPH MS, PATCH	1
2	240-5005-00	6-32 NYLON STOP NUT	1
3	254-5000-04	NYLON SPACER - BLACK - 3/8 OD X .175 ID X 1"	1
4	830-8589-32	PF PLASTIC -32, TWD R	1

5.46 PLASTIC 37 ASSEMBLY**511-0040-37**

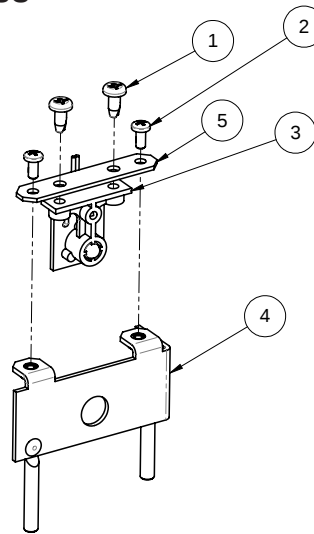
ID	Part Number	Description	Qty
1	232-5201-00P	SCREW, 6-32 X 3/8" PPH MS SEMS, PATCH	2
2	237-5813-00	SCREW, 4-40 X 1/2" PPH SEMS	1
3	240-5303-00	4-40 NYLON LOCK NUT	1
4	242-5001-00	#6 WASHER	2
5	242-5002-00	#4 FLAT WASHER - 5/16" O.D.	1
6	520-5307-00	SINGLE LED PCB	1
7	535-1051-00	BRACKET, LEFT RAMP SIGN, TWD	1
8	550-7361-05	MINI DOME LED, BLUE	1
9	830-8589-37	PF PLASTIC -37, TWD R	1

5.47 PLASTIC 45 ASSEMBLY**511-0040-45**

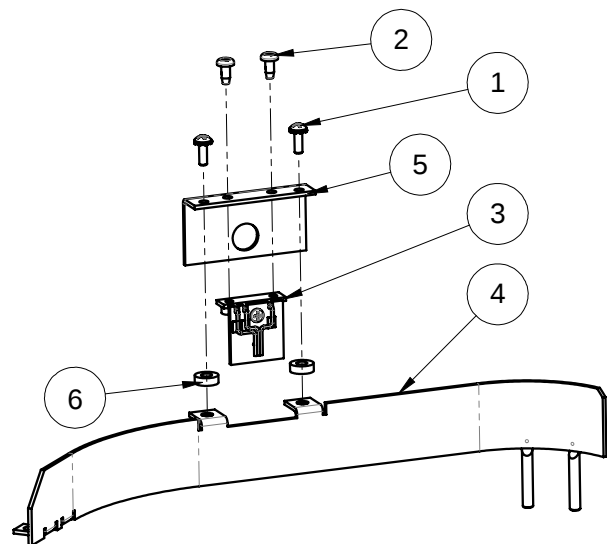
ID	Part Number	Description	Qty
1	237-5809-00	SCREW, #6 X 1/2" PTH A	1
2	830-8589-45	PLAYFIELD PLASTIC -45, TWD R	1
3	550-5052-01	MINI POST - CLEAR	1

5.48 PLASTIC 53 ASSEMBLY**511-0040-53**

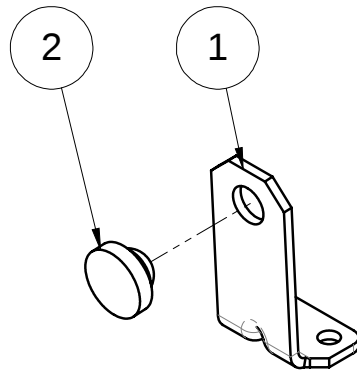
ID	Part Number	Description	Qty
1	237-5976-02P	SCREW, 6-32 X 3/8" HWH SWAGE, PATCH	3
2	240-5005-00	6-32 NYLON STOP NUT	3
3	518-5045-08-LED	MULTI FLASHER 5V LED ASSEMBLY, WHITE	1
4	520-8457-00	PCB, SINGLE FLOOD LED - RED	2
5	830-8589-53	PF PLASTIC -53, TWD R	1

5.49 BALL GUIDE 05 ASSEMBLY**511-0043-05**

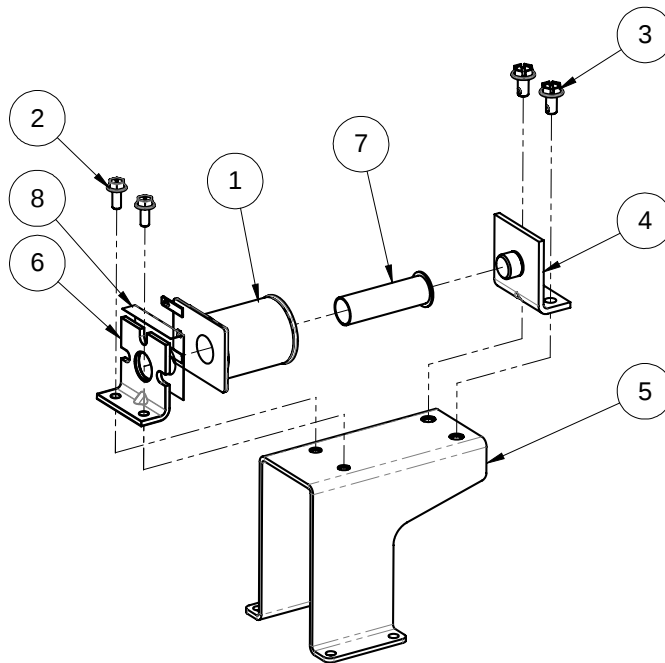
ID	Part Number	Description	Qty
1	237-5880-01	SCREW, #6 X 5/16 PPH T-25	2
2	237-6169-00P	SCREW, 4-40 X 1/4 PPH MS, PATCH	2
3	515-0215-00	LONG RANGE OPTO EMITTER ASSEMBLY	1
4	535-0963-05	BALL GUIDE - 05	1
5	535-8874-00	OPTO PLATE, BALL GUIDE	1

5.50 BALL GUIDE 06 ASSEMBLY**511-0043-06**

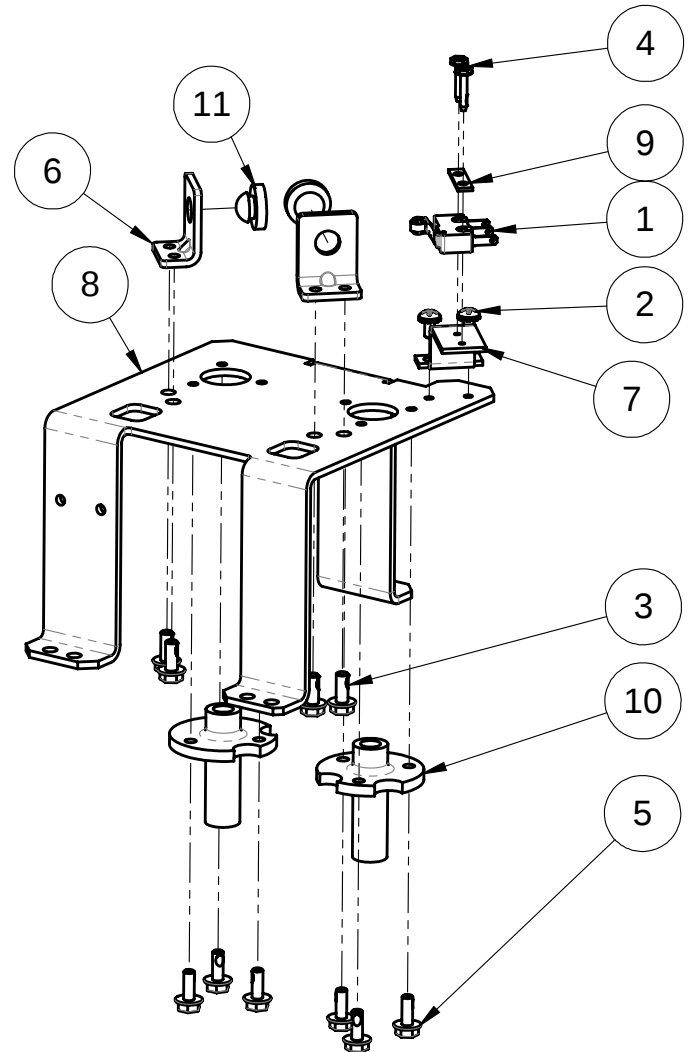
ID	Part Number	Description	Qty
1	232-5201-00P	SCREW, 6-32 X 3/8" PPH MS SEMS, PATCH	2
2	237-5880-01	SCREW, #6 X 5/16 PPH T-25	2
3	515-0215-01	LONG RANGE OPTO RECEIVER ASSEMBLY	1
4	535-0963-06	BALL GUIDE - 06	1
5	535-8873-00	OPTO BRACKET & GUARD-FLAT RAIL	1
6	254-5000-19	NYLON SPACER - BLACK - 3/8 OD X .175 ID X 1/8"	2

5.51 TARGET STOP ASSEMBLY**511-0053-00**

ID	Part Number	Description	Qty
1	535-3342-00	SCULPT STANDUP TARGET - STOP BRACKET	1
2	545-5105-00	RUBBER BUMPER	1

5.52 PRISON DOOR SOLENOID ASSEMBLY**511-3118-00**

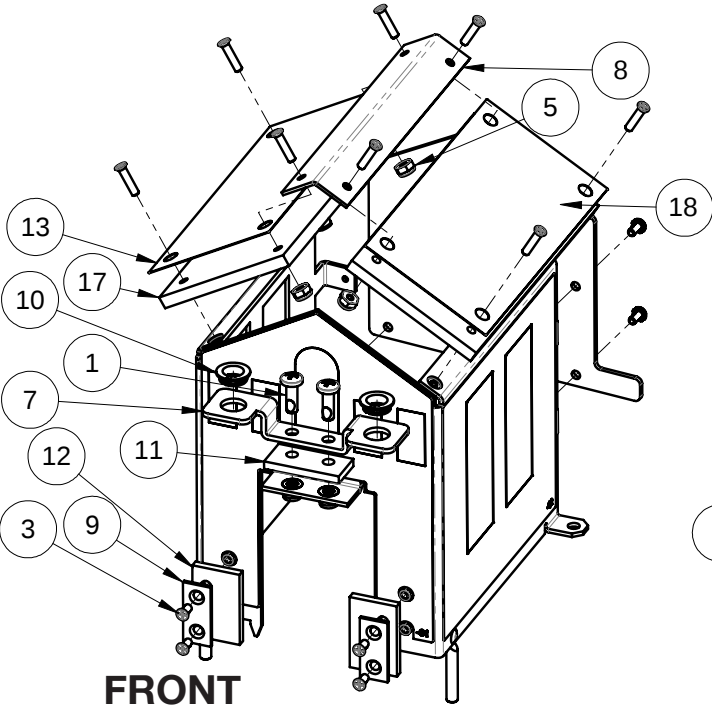
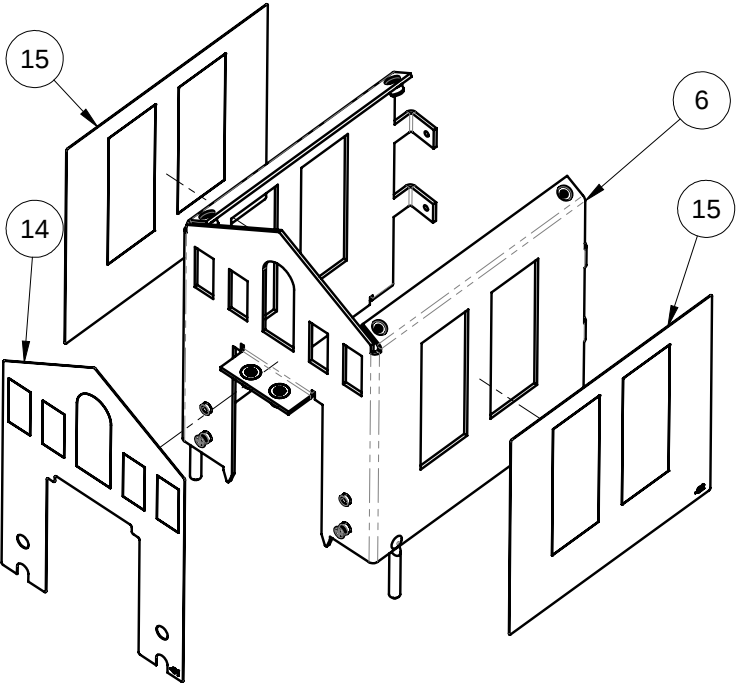
ID	Part Number	Description	Qty
1	090-5044-ND	COIL 26-1200 - NO DIODE	1
2	237-5903-00P	SCREW, 8-32 X 3/8" HWH, PATCH	2
3	237-5961-00P	SCREW, 10-32 X 3/8" HWH, PATCH	2
4	515-6308-01	COIL STOP ASSEMBLY	1
5	535-3341-00	PRISON DOOR COIL MOUNT, TWD R	1
6	535-7356-00	COIL BRACKET	1
7	545-5031-00	COIL SLEEVE	1
8	545-0762-00	FISCHE PAPER: AUTO-LAUNCHER	1

5.53 PRISON DOOR LOWER ASSEMBLY**511-3117-00**

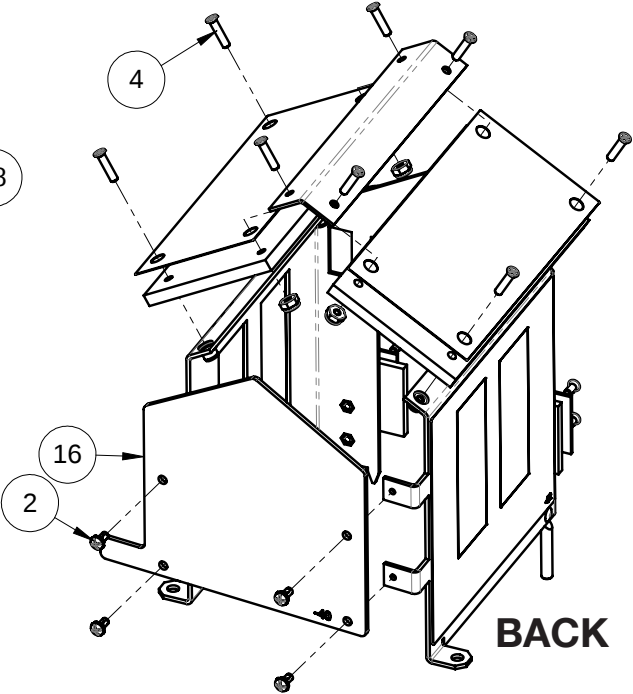
ID	Part Number	Description	Qty
1	180-5119-02	MICRO-SWITCH - LIGHT ACTUATION	1
2	232-5200-00P	SCREW, 6-32 X 1/4" PPH SEMS, PATCH	2
3	237-5903-00P	SCREW, 8-32 X 3/8" HWH, PATCH	4
4	237-5937-02P	SCREW, 2-56 X 1/2" HWH MS, PATCH	2
5	237-5976-02P	SCREW, 6-32 X 3/8" HWH SWAGE, PATCH	6
6	535-0692-01	PLUNGER STOP BRACKET	2
7	535-0766-00	PRISON SWITCH BRACKET 90 DEG - MICRO SWITCH	1
8	535-0995-01	PRISON DOOR MOUNT, TWD R	1
9	535-6539-00	SWITCH BODY PROTECT PLATE	1
10	545-5070-00	FLIPPER BUSHING	2
11	545-5105-00	RUBBER BUMPER	2
	270-5002-00	Retaining Ring - 1/4" Dia. (Not part of assembly. Clips to shafts from Prison Doors)	2

5.54 PRISON UPPER ASSEMBLY

511-3119-00



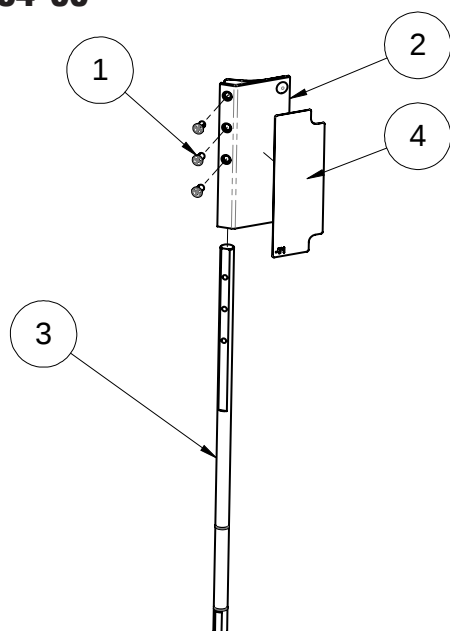
FRONT



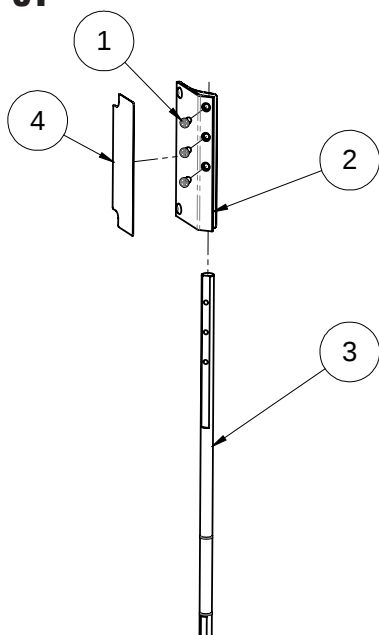
BACK

ID	Part Number	Description	Qty
1	237-5602-00P	SCREW, 8-32 X 1/2" PPH MS ZINC, PATCH	2
2	237-5909-00P	SCREW, 4-40 X 1/4" PPH SEMS, PATCH	4
3	237-5983-02P	SCREW, 4-40 x 1/4" PFH MS, BLACK, PATCH	4
4	237-5983-05	SCREW, 4-40 X 1/2" PFH MS BLACK OXIDE	8
5	240-5303-00	4-40 NYLON LOCK NUT	4
6	535-0761-00	PRISON BRACKET	1
7	535-1031-00	PRISON BEARING BRACKET	1
8	535-3336-00	PRISON ROOF CAP	1
9	535-9648-00	BUMPER HOLDER - FASTENED	2

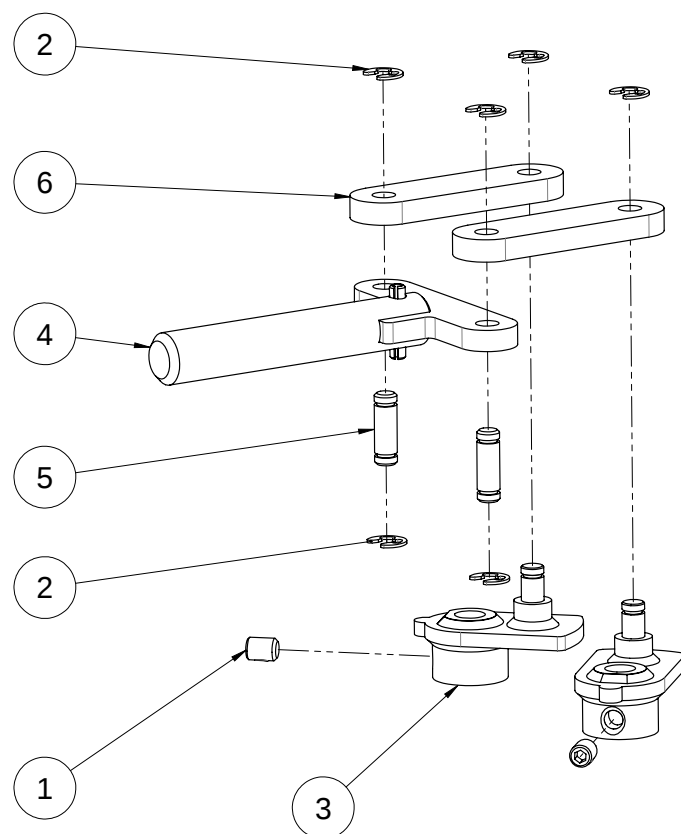
ID	Part Number	Description	Qty
10	545-5485-00	NYLINER-THOMSON 5/16 (5L1-FF)	2
11	626-5102-00	RUBBER BUMPER-PRISON	1
12	626-5102-01	RUBBER BUMPER-PRISON	2
13	820-7981-25	DECAL -25, TWD R	1
14	820-9320-61	PRISON DECAL -61, TWD R	1
15	820-9320-62	PRISON DECAL -62, TWD R	2
16	830-8589-40	PF PLASTIC -40, TWD R	1
17	830-6945-00	ROOF PLATE	2
18	820-7981-26	DECAL -26, TWD R	1

5.56 LEFT PRISON DOOR ASSEMBLY**511-3264-00**

ID	Part Number	Description	Qty
1	237-5983-02P	SCREW, 4-40 x 1/4" PFH MS, BLACK, PATCH	3
2	510-2650-00	PRISON DOOR RIVET ASSEMBLY	1
3	530-9671-00	DOOR SHAFT	1
4	820-9318-71	DECAL -71, TWD R	1

5.57 RIGHT PRISON DOOR ASSEMBLY**511-3264-01**

ID	Part Number	Description	Qty
1	237-5983-02P	SCREW, 4-40 x 1/4" PFH MS, BLACK, PATCH	3
2	510-2650-01	PRISON DOOR RIVET ASSEMBLY-RIGHT	1
3	530-9671-00	DOOR SHAFT	1
4	820-9318-72	DECAL -72, TWD R	1

5.55 PRISON DOOR LINKAGE ASSEMBLY**511-3674-00**

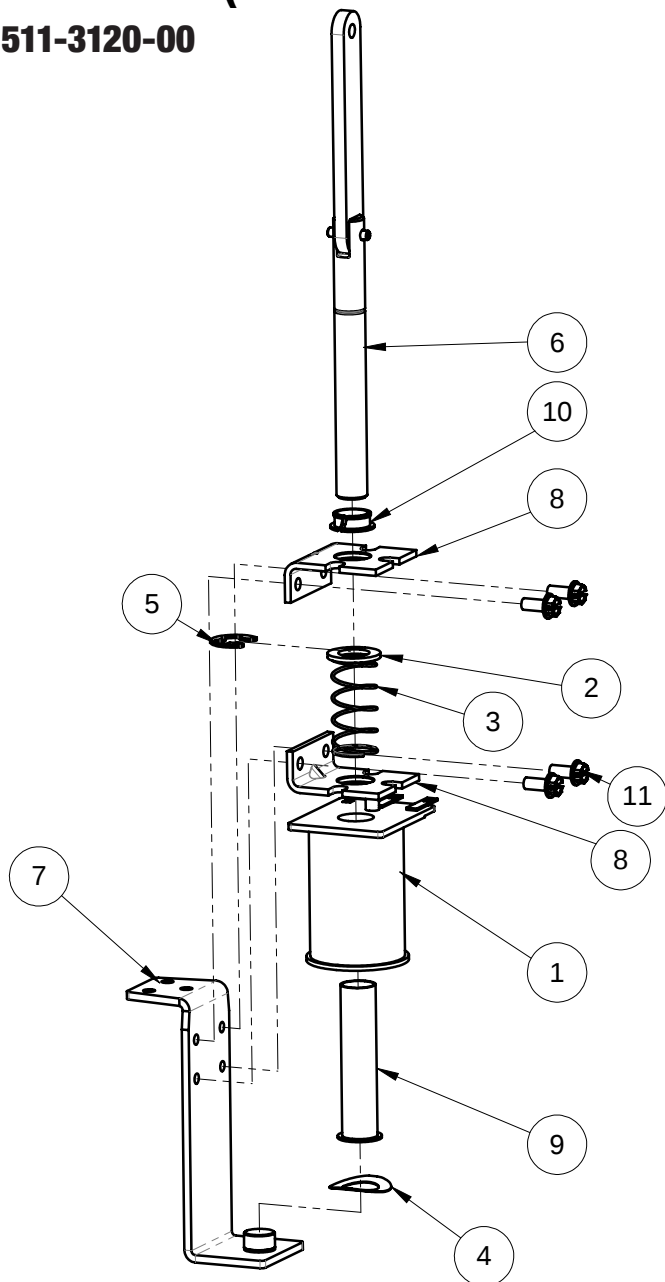
ID	Part Number	Description	Qty
1	237-6310-00P	SET SCREW, 10-32 X 1/4", SOCKET CUP PT, PATCH	2
2	270-5001-00	RETAINING E-RING, 3/16" SHAFT OD	6
3	515-6035-00	PRISON DOOR DRIVE LINKAGE	2
4	515-6036-00	PLUNGER / LINK ASSEMBLY	1
5	530-7812-06	PIVOT PIN-.188 DIA. 0.602 LG	2
6	545-7887-00	DRIVE LINKAGE-NYLON	2
*	242-5081-00	Nylon Washer .75 OD x .44 ID	1
*	266-5034-01	Compression Spring	1

* These parts are not part of the assembly.

The nylon washer and the compression spring go over the plunger - the washer first, then the spring. The plunger then gets inserted into the prison door solenoid.

5.58 RAMP PULL DOWN SOLENOID ASSEMBLY (FOR BICYCLE GIRL RAMP)

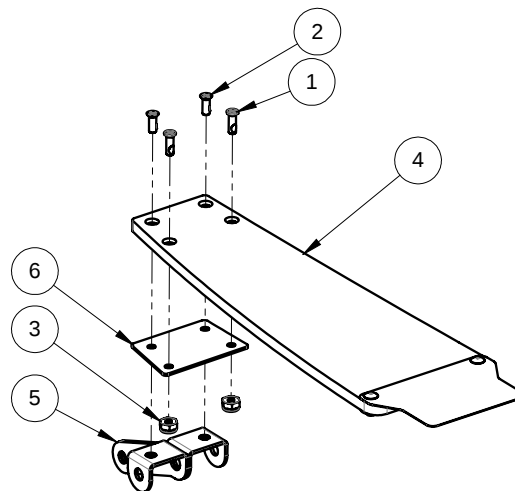
511-3120-00



ID	Part Number	Description	Qty
1	090-5030-ND	COIL - 23-1100 - NO DIODE	1
2	242-5081-00	WASHER - NYLON .75 OD x .44 ID	1
3	266-5076-04	SPRING, COMPRESSION	1
4	269-5002-00	SPRING WASHER	1
5	270-5005-00	RETAINING E-RING, 7/16" SHAFT OD	1
6	515-7744-00	PLUNGER ASSEMBLY-PULL DOWN	1
7	515-9747-00	COIL BRACKET ASSEMBLY	1
8	535-7356-00	COIL BRACKET	2
9	545-5388-00	COIL SLEEVE	1
10	545-5418-01	NYLINER - PLASTIC, 7/16"	1
11	237-5975-00	SCREW, 8-32 X 3/8" HWH SWAGE ZN	4

5.59 BICYCLE GIRL RAMP ASSEMBLY

511-3664-00



ID	Part Number	Description	Qty
1	237-5983-01P	SCREW, 4-40 X 3/8" PFH MS, SS, PATCH	2
2	237-6151-00P	SCREW, 4-40 X 5/16" PFH U/C MS	2
3	240-5303-00	4-40 NYLON LOCK NUT	2
4	510-8016-00	BICYCLE GIRL RIVETED RAMP	1
5	515-9774-00	RAMP CLEVIS WELDMENT	1
6	535-3345-00	BICYCLE GIRL RAMP SUPPORT PLATE	1
*	530-7812-07	PIVOT PIN-.188 DIA. 2.071 in LG	1
*	530-7812-08	PIVOT PIN-.188 DIA. 0.509 in LG	1
*	270-5001-00	Retaining Ring, 3/16" DIA.	4

* These parts are not part of the assembly.

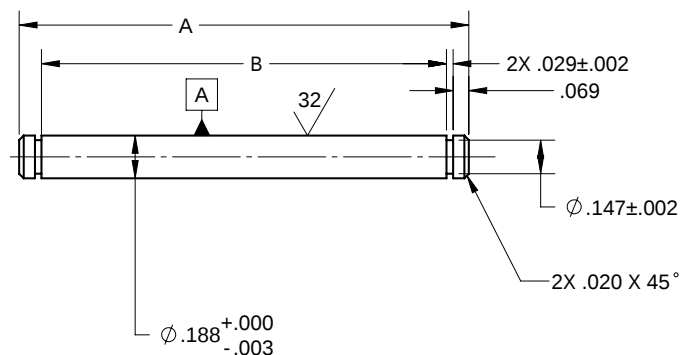
The smaller pivot pin goes through the smaller part of the ramp clevis weldment of this ramp and the plunger of the ramp pull down solenoid assembly.

The longer pivot pin goes through the wider section of the ramp clevis weldment of this ramp and the two "fence" ball guides on the side of the ramp.

Both pivot pins have a retaining ring on each side holding it in place.

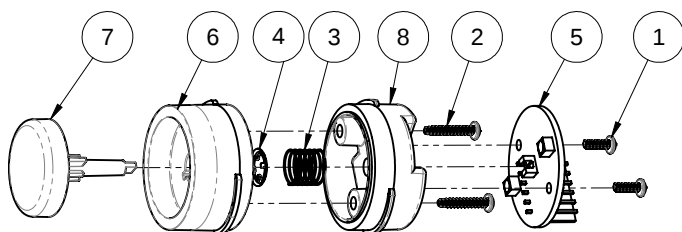
ALL DIMENSIONS AND TOLERANCES ARE IN INCHES.

PART NUMBER	A	B ±.003
530-7812-07	2.071	1.875
530-7812-08	.509	.313



5.60 ROLLOVER BUTTON ASSEMBLY

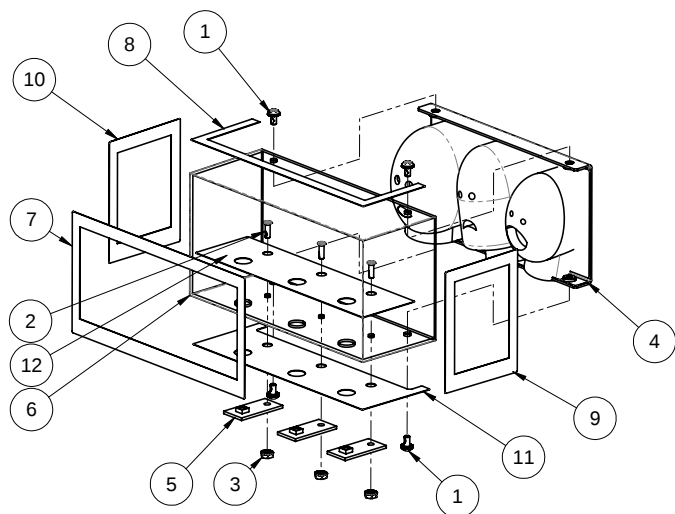
511-3268-01



ID	Part Number	Description	Qty
1	237-6312-04	PPH #2-28 x 1/4" PLASTIC CUTTING	2
2	237-6312-08	PPH #2-28 X 1/2" PLASTIC CUTTING	2
3	265-5076-00	SPRING: STAR ROLLOVER	1
4	270-5420-00	4mm PUSH ON RETAINING RING	1
5	520-8527-00	RGB LED, STAR R/O, SPIKE SYSTEM	1
6	544-2002-00	TOP: BUTTON ROLLOVER	1
7	544-2003-01	1" ROLLOVER BUTTON, BLACK	1
8	545-0896-00	BOTTOM: STAR ROLLOVER	1

5.61 TANK ASSEMBLY

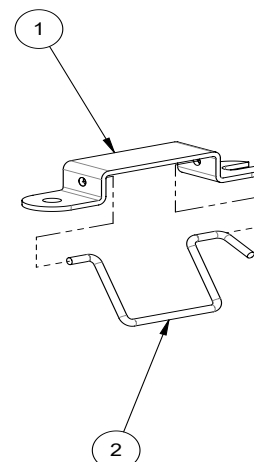
511-3660-00



ID	Part Number	Description	Qty
1	232-5200-00P	SCREW, 6-32 X 1/4" PPH SEMS, PATCH	4
2	237-5983-00P	SCREW, 4-40 X 3/8" PFH MS BLACK	3
3	240-5318-00	4-40 KEPS NUT	3
4	510-8017-00	RIVETED TANK ASSEMBLY, TWD R	1
5	520-5333-00	PCB - TRI-COLOR LED	3
6	545-7886-00	TANK, TWD	1
7	820-7981-91	DECAL -91, TWD R	1
8	820-7981-92	DECAL -92, TWD R	1
9	820-7981-93	DECAL -93, TWD R	1
10	820-7981-94	DECAL -94, TWD R	1
11	820-7981-95	DECAL -95, TWD R	1
12	820-7981-96	DECAL -96, TWD R	1

5.62 ONE WAY GATE ASSEMBLY

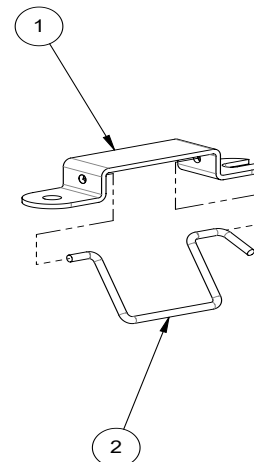
511-3651-00



ID	Part Number	Description	Qty
1	535-5191-01	BRACKET, GATE, TWD	1
2	535-1048-00	WIRE, ONE WAY GATE	1

5.63 SHOOTER LANE ONE WAY GATE ASSEMBLY

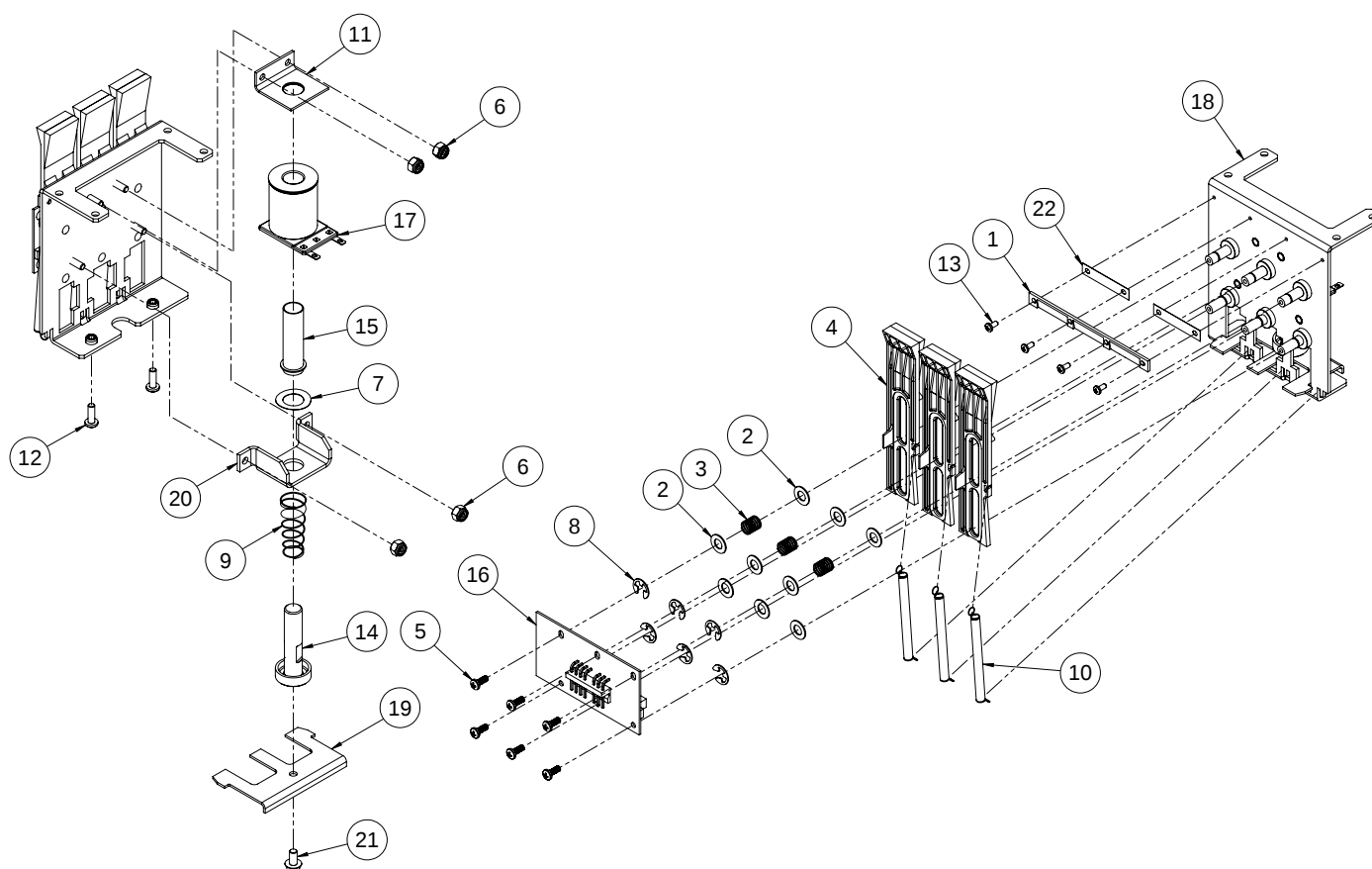
500-7152-00



ID	Part Number	Description	Qty
1	535-5269-09	BRACKET, GATE	1
2	535-0288-00	WIRE, ONE WAY GATE, CSI	1

5.64 3-BANK DROP TARGET ASSEMBLY

500-1110-03-0-1-2

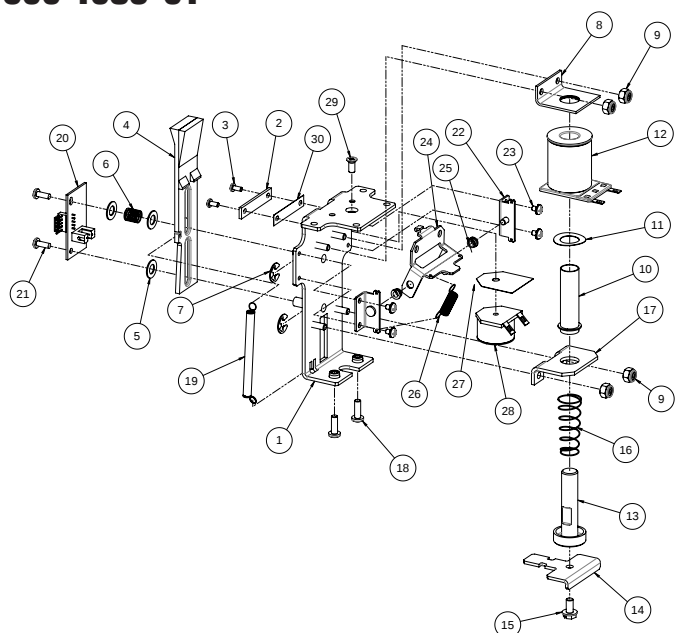


ID	Part Number	Description	Qty
1	545-6163-03	LEDGE, 3-BANK DROP TARGET	1
2	242-5091-00	WASHER, 1/2 X 17/64 X .03 - DT	9
3	266-5089-00	SPRING COMPRESSION - DT	3
4	545-6305-00	TARGET - ROLLOVER	3
5	237-5501-00	SCREW, 6-32 X 3/8" PPH MS ZINC	6
6	240-5102-00	8-32 NYLON LOCK NUT	4
7	269-5002-00	SPRING WASHER	1
8	270-5002-00	RETAINING RING - 1/4"	6
9	266-5020-00	COMPRESSION SPRING-CONICAL	1
10	265-5003-02	TARGET RESET SPRING	3
11	535-9959-00	STOP BRKT	1

ID	Part Number	Description	Qty
12	237-5602-00	SCREW, 8-32 X 1/2" PPH MS ZINC	2
13	237-6169-00	SCREW, 4-40 X 1/4 PPH MS	4
14	530-5757-00	PLUNGER - D.T. ASSY.	1
15	545-5076-01	COIL SLEEVE	1
16	520-8497-00	3 BANK DROP TARGET PCA	1
17	090-5034-ND	COIL 25-1240 - NO DIODE	1
18	515-9927-03	DROP TARGET FRAME ASSY - 3-BANK	1
19	535-9996-03	LIFT BRACKET - 3 BANK	1
20	535-9995-01	COIL BRACKET	1
21	237-5985-00	SCREW, 10-32 X 3/8" HWH SWAGE	1
22	545-6798-00	SHIM - FICHE PAPER - D.T. SINGLE	2

5.65 1-BANK DROP TARGET WITH TRIP COIL ASSEMBLY

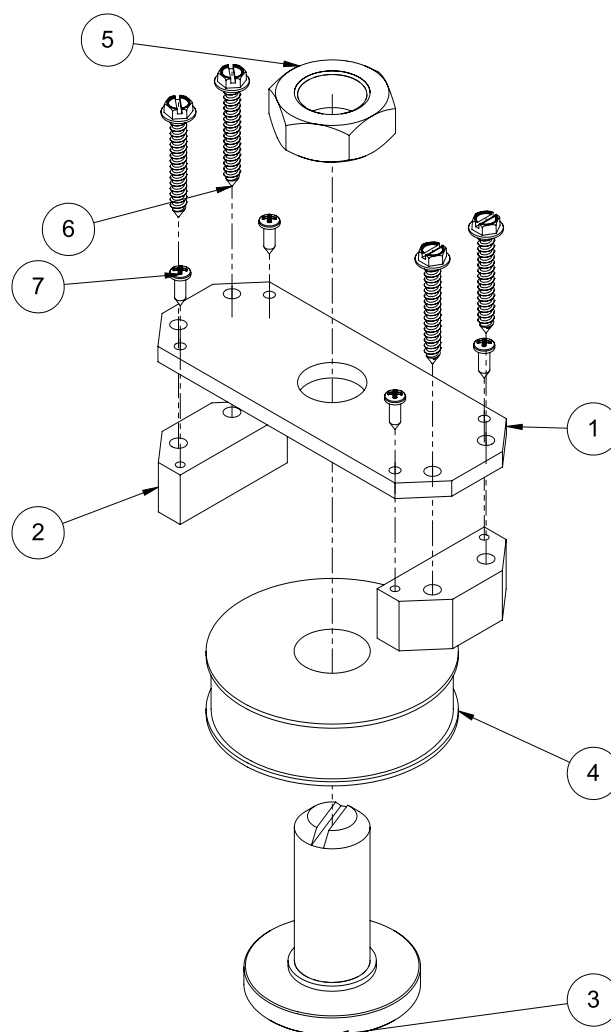
500-1083-01



ID	Part Number	Description	Qty
1	515-0185-00	BRACKET ASSEMBLY, 1-BANK DT W/ TRIP COIL	1
2	545-6163-01	LEDGE, 1-BANK DROP TARGET	1
3	237-6169-00	SCREW, 4-40 X 1/4 PPH MS	2
4	545-6305-00	TARGET - ROLLOVER - BLACK	1
5	242-5091-00	WASHER, 1/2 X 17/64 X .03 - DT	3
6	266-5089-00	SPRING COMPRESSION - DT	1
7	270-5002-00	RETAINING RING - 1/4"	2
8	535-9959-00	STOP BRKT	1
9	240-5102-00	8-32 NYLON LOCK NUT	4
10	545-5076-01	COIL SLEEVE	1
11	269-5002-00	SPRING WASHER	1
12	090-5034-ND	COIL 25-1240 - NO DIODE	1
13	530-5757-00	PLUNGER - D.T. ASSY.	1
14	535-9760-01A	LIFT BRKT - 1 BANK	1
15	237-5985-00	SCREW, 10-32 X 3/8" HWH SWAGE	1
16	266-5020-00	COMPRESSION SPRING-CONICAL	1
17	535-9777-01	COIL BRACKET-DT-OD	1
18	237-5602-00	SCREW, 8-32 X 1/2" PPH MS ZINC	2
19	265-5003-03	TARGET RESET SPRING	1
20	520-5357-00	PCB, INLINE DROP TARGET OPTO	1
21	237-5501-00	SCREW, 6-32 X 3/8" PPH MS ZINC	2
22	515-9960-00	PIVOT BRACKET - RESET D.T.	2
23	232-5209-00	SCREW, 6-32 X 3/16" PPH SEMS	4
24	535-1660-00	BRACKET, 1-BANK DT TRIP	1
25	545-9794-00	SPLIT BEARING - 4MM	2
26	265-5002-00	TRIP SPRING - TARGET	1
27	545-9930-00	FISH PAPER	1
28	090-5031-00-ND	COIL, 32-1800, NO DIODE	1
29	237-5902-00	8-32 x 3/8 PFH MS	1
30	545-6798-00	SHIM - FICHE PAPER - D.T. SINGLE	1

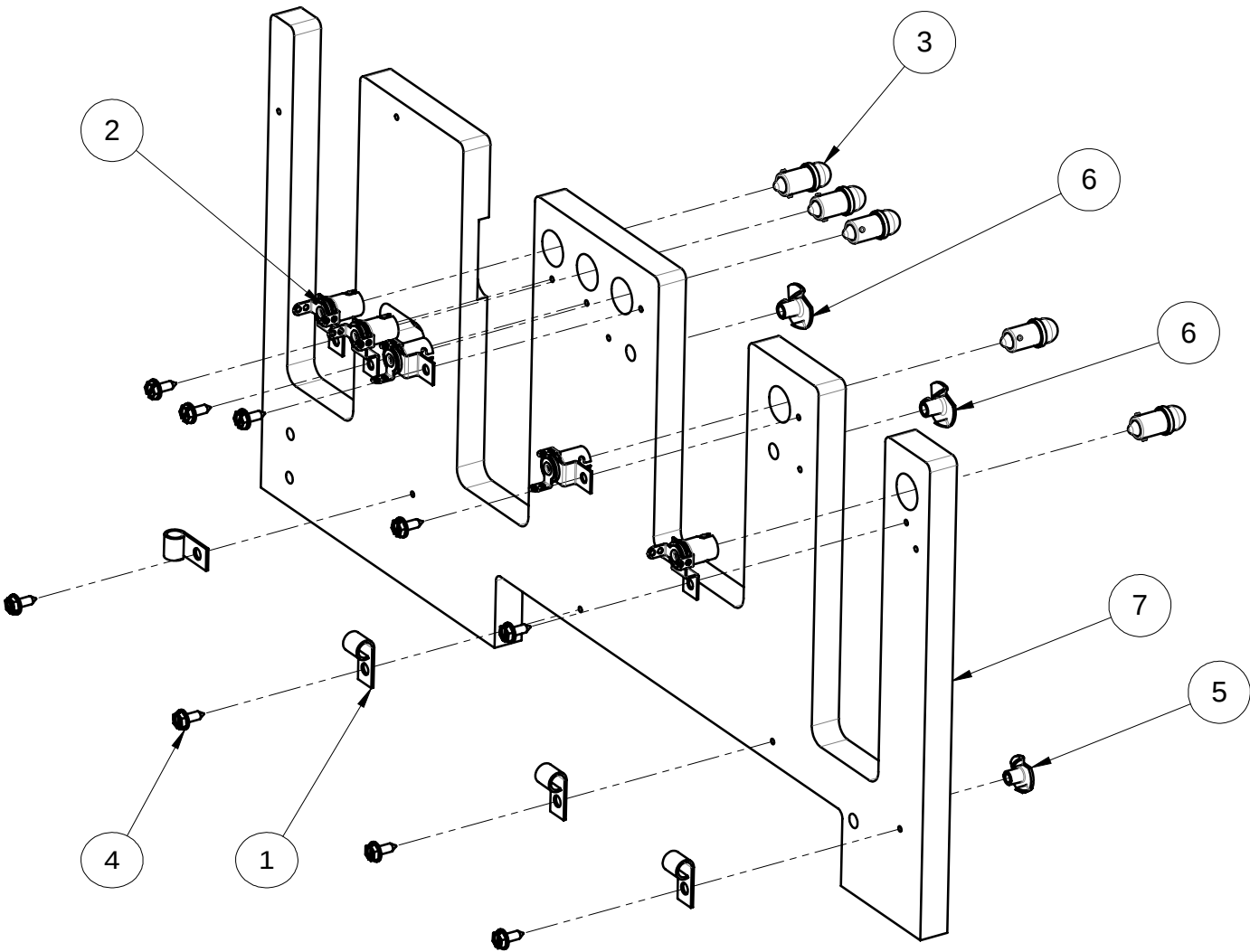
5.66 MAGNET ASSEMBLY (PLAYFIELD)

511-7596-01



ID	Part Number	Description	Qty
1	535-1050-00	MAGNET MOUNTING PLATE	1
2	545-9781-00	MAGNET MOUNTING BLOCK	2
3	530-5320-07	MAGNET CORE W/ STAINLESS PROTECTOR	1
4	511-7505-00	MAGNET / CONNECTOR ASSY, 22-650	1
5	240-5315-00	3/4-16 HEX JAM NUT	1
6	234-5105-01	#8 x 1 1/4 HWH SLOTTED SERRATED AB ZINC	4
7	237-5815-00	SCREW, #4 X 3/8" PPH AB	4

5.67 BACKPANEL ASSEMBLY
500-1206-00



ID	Part Number	Description	Qty
1	040-5000-03	1/4" CABLE CLAMP	4
2	077-5223-00	SOCKET, 2-LUG VERTICAL, SHORT	5
3	112-5034-02F	RED, FROSTED	5
4	234-5000-00	SCREW, #6 X 3/8" HWH	9
5	240-5101-00	8-32 T-NUT	1
6	240-5204-00	#10-32 T-NUT	2
7	525-9810-00	BACKPANEL, TWD R	1

6. SPECIFICATIONS

500-55AM-01

SPECIFICATIONS, MECHANICAL, GAME SETUP

Specification	Imperial	Metric
Weight	210 lbs	96 kg
Max dimensions, leg levers extended (h, w, d)	78 x 27.75 x 57 in	198 x 70.5 x 145 cm
Minimum game dimensions (h, w, d)	76 x 27.75 x 57 in	193 x 70.5 x 145 cm
Minimum room dimensions per game (h, w, d)	80 x 36 x 84 in	203 x 91 cm x 214 cm

- (h, w, d) = height, width, depth.

SPECIFICATIONS, MECHANICAL, BOXED

Specification	Imperial	Metric
Weight, boxed (without pallet)	230 lbs	105 kg
Box dimensions (h, w, d)	56.5 x 31 x 31 in	144 x 79 x 79 cm
Minimum dimensions (h, w, d)	76 x 26 x 57 in	193 x 66 x 145 cm

- (h, w, d) = height, width, depth.

SPECIFICATIONS, ELECTRICAL

Specification	North America - 120VAC	International - 240VAC
Line Voltage, Nominal	120 VAC	240 VAC
Line Voltage Range	90 VAC - 250 VAC	90 VAC - 250 VAC
Line Frequency *	60 Hz	50 Hz, 60 Hz
Line Power, Current - attract mode	70 W, 0.6 A @ 120 VAC	70 W, 0.3 A @ 240 VAC
Line Power, Current - nominal	360 W, 3 A @ 120 VAC	360 W, 1.5 A @ 240 VAC
Line Power, Current - peak, <100 ms	540 W, 4.5 A @ 120 VAC	540 W, 2.25 A @ 240 VAC

* NOTE: Games designed for 60hz operation (e.g. North America games) will not function correctly on 50hz power and vice versa.

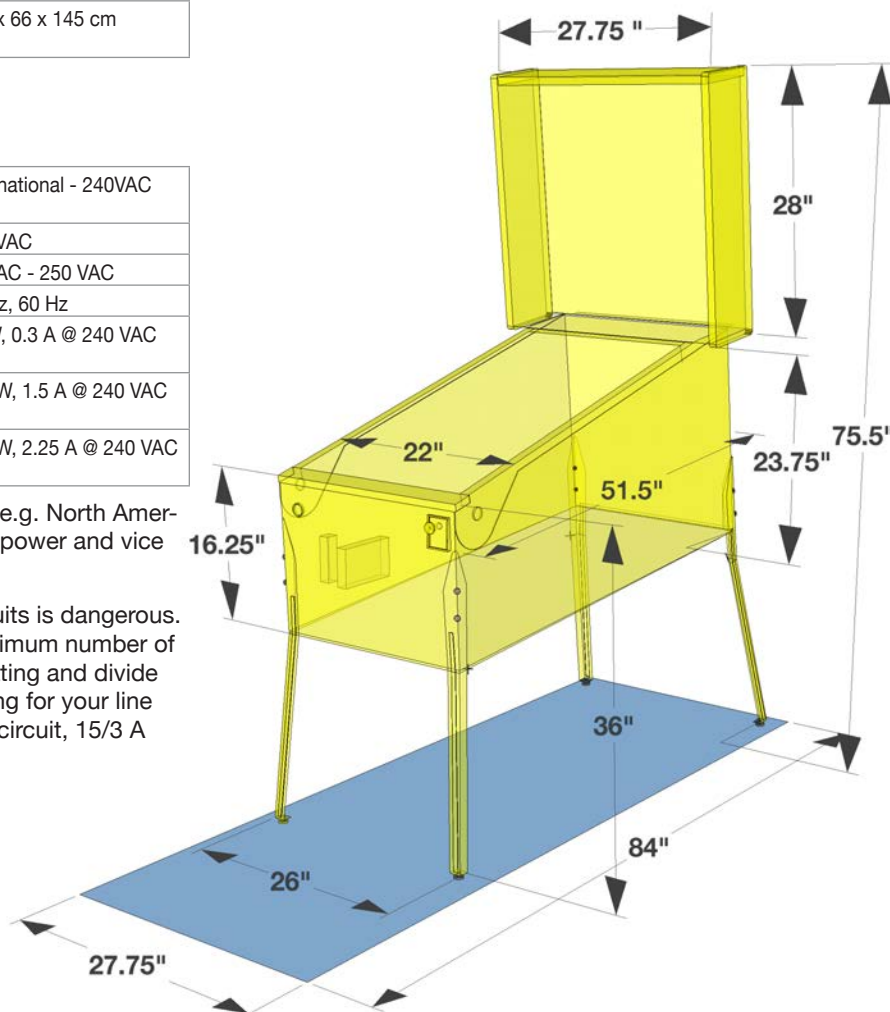
WARNING: Overloading electrical supply circuits is dangerous. Do not overload circuits. To calculate the maximum number of games for a circuit, check circuit amperage rating and divide by the game Nominal Line Power Current rating for your line voltage. For example, a 15A 120V household circuit, $15/3 \text{ A}$ (nominal current) = 5 games maximum.

SPECIFICATIONS, ENVIRONMENT

	Minimum	Maximum
Temperature, Operating	32 °F / 0 °C	104 °F / 40 °C
Temperature, Storage	32 °F / 0 °C	104 °F / 40 °C
Relative Humidity, Operating	5%	95% non-condensing
Relative Humidity, Storage	5%	95% non-condensing

- (a) "The appliance has to be placed in a horizontal position."
- (b) If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified person in order to avoid hazard.

6.1 GAME DIMENSIONS



6.2 WARRANTY

Stern Pinball machines are assembled in Elk Grove Village, Illinois, USA; each pinball machine has unique characteristics that make it a one-of-a-kind American-made product. Each machine will have variations in appearance resulting from differences in the machine's particular wood parts, individual silk screened art and mechanical assemblies. Stern Pinball has inspected each game element to ensure it meets stringent quality and playability standards.

STERN PINBALL INC LIMITED WARRANTY

For warranty information, please visit:

sternpinball.com/support/warranty

ATTENTION! IMPORTANT WARRANTY INFORMATION

The electronics system, node network architecture, mechanical devices and associated software control systems in this pinball machine are designed to work with genuine Stern Pinball accessories and devices.

Installation of non-authorized accessories, lamps, LED's, motors or other devices or modification of electro-mechanical devices may damage the system and may void your warranty.

820-6617-00

6.3 WARNINGS, COMPLIANCE, AND LEGAL NOTICES

PHOTOSENSITIVE SEIZURES HEALTH WARNING



A very small percentage of people may experience a seizure when exposed to certain visual images, including flashing lights or patterns. Even people with no history of seizures of epilepsy may have an undiagnosed condition that can cause "photosensitive epileptic seizures" due to certain visual images, flashing lights or patterns. Symptoms can include lightheadedness, altered vision, eye or face twitching, jerking or shaking of arms or legs, disorientation, confusion, momentary loss of awareness, and loss of consciousness or convulsions that can lead to injury from falling down or striking nearby objects.

IMMEDIATELY STOP PLAYING AND CONSULT A DOCTOR IF YOU EXPERIENCE ANY OF THESE SYMPTOMS.

PARTS SUBSTITUTIONS



For safety and reliability, substitute parts and equipment modifications are not recommended and may void any and all warranties. Use of Non-Stern Pinball Inc Parts or Modifications of game circuitry may adversely affect game play or game safety. Transport pinball machines with hinged backbox in the down position only! Always take great care when servicing any game. Always read the service manual before replacing or servicing components. Substitutions of parts or equipment modifications may void FCC type acceptance.

Always disconnect the line voltage before servicing. Some parts may remain energized when unplugged. Take great caution when servicing any electrical components.

FCC CLASS A SUBPART J COMPLIANCE



This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

RF INTERFERENCE NOTICE

The cable harness placements, ground strap routing, and other shielding have been designed to keep RF radiation and conduction within levels accepted by FCC rules. To maintain these levels, factory harness position, shielding, and ground straps must be installed in their factory locations should they become disconnected during maintenance.

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