Alice Cooper's Nightmare Castle

Service Manual

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1) Introduction

At the heart, Alice Cooper's Nightmare Castle is about tracking down and killing monsters, you know, the usual. The end goal is to survive your encounters with all nine monsters, reaching a finale where you can escape from the castle with a billion dollar treasure.

- Game Design: Charlie Emery
- Programmer: Fawzma
- Rules Direction: Bowen Kerins
- Animations: David "Bunyip" van Es
- Music: Matt "Piggy D" Montgomery
- Soundtrack: Alice Cooper
- Sounds: Scott Danesi
- Artwork: Jeff Zornow
- Toy Sculpts: Matt / Back Alley Creations

For technical service please reach out to

Service@SpookyPinball.com

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2) Game Assembly and Setup

Thank you for purchasing a game from the smallest, happiest, goofiest little pinball company on the planet! Your support means everything to our family and business.

Here are a few quick notes to help you get your new game set up.

Ideal playfield pitch is 6.5 degrees

2.1 Unboxing and parts inspection

Tools required for initial machine assembly

Utility knife or razor blade
Ratchet with ⅝" socket or ⅝" wrench
Small bubble level (side to side and incline)
Wire cutters

Parts List

1 Set of coin door keys
1 Tilt plump bob
1 Backbox (head) bolt
4 Pinball legs
4 Pinball leg levelers with nut
8 ⅝" Headed pinball leg bolts
4 Pinballs
1 Power cable (line cord) for your country's electrical system

#1 - Your coin door keys are located inside this leg box. All the pinballs, a power cord, legs, leg bolts, and head bolt & washer, are in the same package. Your backbox key is inside the coin door. Please take a minute to inspect to make sure you have all the parts and that they are not damaged.

#2 - If your game came in a box then there are a couple of ways to begin. If your game did not come in a box, then continue on to step

#3. Begin by opening the flaps on the top of the box. Be mindful to make sure you remove the staples from the flaps so you don't get scratched or misplaced any of them. **DO NOT CUT THE PLASTIC STRAP JUST YET!**

    A) With some assistance, lay the machine flat on the floor on the side that is marked "Truck this side only." Grab the plastic strap and pull the game from the box. Once the game has been removed from the box (and with the assistance of a helper), stand the game back upright on its back.
        OR
    B) Using your utility knife, carefully cut down the sides of the box that are labeled "Truck this side only," making sure that your knife DOES NOT come in contact with the game cabinet itself. Once both sides are cut you will be able to access the pinball cabinet itself.

#4 - Start by threading the leg leveler nut onto each of the levelers. Once that is complete then you can thread the leg leveler into the bottom of each of the pinball legs. Let's begin with all of the levelers adjusted to their lowest positions (threaded all the way in).

2.2 Leg installation and backbox assembly

#5 - Using 2 of the ⅝" headed pinball legs bolts per leg, start with either of the front legs. Thread the leg bolts into the corresponding holes on the corners of the front of the cabinet. Using your ratchet or wrench, tighten adequately to make sure the leg is attached to the machine. With the assistance of a friend or helper slowly tip the game forward until the two from legs are resting on the floor. Now, as a team, pick up the rear of the cabinet and attach the back two legs in the same fashion as the front. You may want to find a stool or other sturdy support system to rest the game on while attempting this. Once the rear legs bolts are inserted and tightened you can set the game down on its legs.

#6 - Using your wire cutters, cut the plastic strap that runs the length of the game. ATTENTION!, be careful there is some tension on this strap and it may release with some force. Once the strap is free, now you can lift the backbox into position. Be mindful to make sure none of the wiring gets pinched while lifting the backbox. Use the clasp on the backbox and the cabinet to temporarily hold the backbox upright. This should not be used as a permanent fastener. Using the keys from the parts box, open the coin door and retrieve the backbox keys. With these keys, unlock the backbox lock and remove the backglass by gently lifting up on the "lift channel" and then swing the glass out and down from the channels it is supported in. Now, using the head bolt and washer provided, secure the backbox to the base cabinet. At this time thoroughly check for any loose or disconnected connection(s) in your backbox. When you are done, reinstall the backglass and engage the lock. Place the backbox key back on the hook in the coin door.

#7 - With the coin door open, grasp the lever located at the top right of the door frame and pull it to the left. This will release the mechanism that holds the "lockdown bar" in place. Set the lockdown bar aside in order to remove the playfield glass. Now close your coin door to keep it out of the way of the playfield glass. In order to remove the playfield glass, simply slide the glass down the front of the machine. This is tempered glass, so please take care not to hit the edges of it on anything as it may shatter. With the glass safely stored off to the side, we are ready to level the machine.

2.3 Pitch and Level Adjustments

#8 - With your small bubble level you can level the side to side action of your game. Placing the level on the playfield itself will give you the most accurate results. First level the back of the game. With your friend or helper watching the level, crawl under the machine and rotate the leg leveler counterclockwise to make the leveler "longer." Do this until your bubble is between the two lines on your level. Repeat this process for the bottom of the playfield. Once that is done, you can use your pitch level to adjust the pitch of the game. The steeper the pitch, the faster the game will play. We recommend a pitch of 6.5°. The pitch can be increased by raising the back of the game. This is accomplished by making the leg levelers on the back legs longer. Once the proper pitch is established, recheck the level of the playfield.

2.4 Ball Installation

#9 - Now remove the pinballs from their package. Please take a minute to inspect them for any nicks or scratches. Also, this is a good time to wipe them off before installing them into the game. Once you are satisfied that they are acceptable, place them on the lower playfield and let them naturally fall into the trough. Please install all 4 balls that come with the game.

2.5 Tilt

#10 - The tilt plump bob is a metal cone, that when makes contact with the ring it is inside of, will issue a "Tilt Warning." After repeated "tilts" the machine's coils will shut down and the player will lose their current ball. To install the tilt plump bob (hereafter referred to as simply tilt bob) open the coin door on the front of the game. Located on the inside left of the base cabinet you will find a long metal rod inside a metal closed hoop. Insert the narrow end of the tilt bob onto the metal rod and then tighten the nut on the side of the tilt bob. The farther up the metal rod you go, the less movement will be necessary to "tilt" the machine. After playing a couple of games you can adjust this to your liking.

2.6 Volume and Amp Adjustments

#11 - The volume for Alice Cooper's Nightmare Castle is controlled by the two black buttons mounted to the inside of the coin door. The amplifier has been set from the factory. PLEASE DO NOT adjust the amplifier directly.

2.7 Power up and First Impressions

NOTE: IMPORTANT! This game auto ranges from 50 to 60 Hz! 110 / 220 switch is on the back of the 48v power supply. DO NOT ADD A CONVERTER / TRANSFORMER!

#12 - Using the line cord from your parts box, plug the female end into the receptacle on the back of the base cabinet and the male end into your wall socket. Turn the switch on (under the bottom of the cabinet, right front side). Please take this moment to check for proper function for the basics of the machine. If the machine does not seem to function properly see the troubleshooting guide at the end of this manual or contact Service@SpookyPinball.com

#13 - Your game is factory set to free-play... HAVE FUN! :-)

For more information, apron cards you can print, and links to even more technical info/parts... go to:
www.SpookyPinball.com/game-support
FOR TECHNICAL HELP, PLEASE EMAIL: Service@SpookyPinball.com
FOR SALES HELP, PLEASE EMAIL: Squirrel@SpookyPinball.com
You will get a prompt reply.

Thanks from the Entire Spooky Pinball family!

SPOOKY PINBALL LLC
184 Ridge Ave.
Benton, WI 53803

3) Game Rules and Features

Here are a few game walkthroughs from the community.

Tilt Pinball Forum   http://tiltforums.com/t/alice-cooper-nightmare-castle-rulesheet/3950
This Week In Pinball   https://www.thisweekinpinball.com/alice-coopers-nightmare-castle-deep-dive-in-depth-overview-of-the-machine-features-rules-and-code/

Features:

- 2 ball locking Frankenstein Castle mech
- Left ramp accessible from two directions with a lock diverter
- Working "ball chopping" guillotine ramp
- Three ramp shots
- "Danesi style" "Cold Ethyl" drop target lock system, inline style with subway access
- Four subway access points, including a castle turret from the upper playfield to the subway
- Three drop targets
- 4 ball multiball
- Three flippers
- Balcony drop lock
- Magneat-O Save
- Vortex of Doom habitrail
- Comic book style animations
- Over 700 speech calls from Alice Cooper himself

As of code version 1.07

At the heart, Alice Cooper's Nightmare Castle is about tracking down and killing monsters, you know, the usual. The end goal is to survive your encounters with all nine monsters, reaching a finale where you can escape from the castle with a billion-dollar treasure.

Tracking down monsters starts in the foyer, where you can hit the center bank to change the target monster. Shooting left and right orbits advance you through the castle's rooms, and you can see your position on the map at the bottom of the screen. The "X" shows your location, and the "M" shows the location of the monster. You can also advance directly to the monster through a mystery award or by opening the secret passage.

Once you've reached a monster, you play an untimed battle, and each monster's battle is different. For example, in the Werewolf battle you must hit a lit shot to load your gun, then hit the center targets to fire. If you defeat the monster you earn a frenzy bonus, a timed round with unlimited ball save and extra scoring opportunities, followed by a chance to cash in again with a final hurry-up. All of this is meant to celebrate your victory.

Each monster you battle, win or lose, raises the value of all other monsters by 20%. This means you should plan ahead: do you want to play your favorite battle first, or save it for later when it will be worth even more?

SKILLSHOT

Launch the ball and attempt to shoot the ramps, orbits, or crypt lock to light the secret passage and the outlane ball save. The right ramp will award the skill shot even if the ball only goes half way up. Hitting any other shot, or the slings, will fail the skillshot.

ROOM TRAVEL

At the beginning of the game, and after any monster battle, you start out at the entrance to the castle, in the lowest room of the grid.

While at the entrance you can select the monster you want to battle by shooting the center 3 target. This will cycle through the available monsters.

Shooting the left or right orbit when strobing will move up+left or up+right, respectively. If there is no room in that direction on the grid, the orbit will not be lit.

As soon as you shoot one of the outside orbits you lock in your monster and get into the first room. Depending on the settings the first orbit may move you two rooms at once.

In each room there are items you can collect that will help with your monster battle later on.

MONSTER BATTLES

There are four ways to start a monster battle:

1. Reach the topmost room in the grid via the orbits.
2. Shoot the secret passage (to the right of the left ramp) when lit. Shoot the center 3 targets three times once a monster has been selected to light the secret passage. Can also be lit via skillshot or mystery.
3. As a mystery award. Early mystery awards have a high tendency of immediately starting the battle, even if the monster isn't locked in.
4. As a pity award on the last ball. If a player doesn't reach a monster at some point in their game; launching the 3rd ball will put you in the monster room that was currently selected (even if it has not been locked in)

MYSTERY AWARDS

Shoot the middle scoop (left of 3 center targets) to build mystery. When the award is ready the left scoop arrow will do a color cycle animation to indicate its ready to collect. This will commonly award monster progress, such as "move one room", "move two rooms", or "advance to monster", and sometimes point values. (are there other awards?) If not collected, the mystery will eventually time out and need to be lit again.

MULTIBALLS

CRYPT MB

Lock a ball in the crypt (to the left of right ramp), by either shooting into it from the lower playfield, or by dropping into it via the rightmost of the three upper lanes. Once a ball is locked, the crypt shot will light blue(?), and shooting it again (via either playfield) will start Crypt Multiball.

During Crypt MB, shoot the crypt for jackpots. This multiball can be stacked with any monster battle (including Frank MB); you can make progress through the rooms while in multiball, or start it while already in a battle.

After you exit multiball, repeated shots (how many?) into the crypt from the lower playfield (upper does not give credit?) will reactivate the lock (note there is no indication that the lock is ready besides that the backdrop target will be up).

FRANK MB

Shoot left via the left ramp into the physical lock. Then get to the upper playfield and knock down the drop target and shoot the upper left ramp behind it to start multiball. This mode will block the start of any other monster and can be started as many times as you are able to.

During Frank MB, shoot either lower ramp for a jackpot. After three jackpots, the upper right ramp (guillotine) will light for supers. (does it ever unlight?)

ETHYL MB

Ethyl Multiball, a two-ball multiball played during the Cold Ethyl battle.

UPPER LANES

Complete the two 'X' lanes to activate light the lower right target (above right lane/outlane) for a bonus multiplier. Use flippers for lane change.

COMBOS

Shooting some shots (which?) will temporarily flash other shots orange for a combo.

SUPER SPINNER

Shoot the spinner, not much to say about that other than its activated after about 40 spines then there it ended after no activity over a certain about of time.

SUPER SLINGS

Same deal as spinners… but you have to hit the slings about 5 times within x amount of seconds for it to activate.

EXTRA BALL

Extra ball can be lit by shooting the upper right ramp 10 times ('chops' displayed on display).

Will also be lit after starting third monster battle (including frank)

Extra ball will light at the extra ball target on the left side of the upper playfield.

BALL SAVES

Ball save is activated when you complete the 4 bottom lanes. The outlanes will then light purple for a period of time. Draining on the outside lane when lit activates the drain magnet and will fling the ball back up the playfield, or at least is should. This mod is being coined Mag-Neat-O save. If you complete the fourth lane as you drain, the ball save will activate and be immediately used. During multiball the magnet is not active, and another ball will be auto-plunged instead.

MONSTER BATTLES

At the beginning of each battle, the ball save will activate. Complete the mode's objective to start a 25(?) second 'frenzy' with unlimited ball save. Sometimes these frenzies seem to be unique modes, sometimes the mode will just run again during this time (may change with new code?). After the frenzy ends, the left target (above mystery scoop) will light for a hurry-up based on your mode performance (?), then you will be returned to the entrance to begin the next battle.

FRANK

See FRANK MB

ETHYL

From the upper playfield drop ball into the crypt via the rightmost lane. Another ball bill be auto-launched. Shoot first lower drop target or the rightmost lane again to release, then keep shooting the drop targets/scoop to collect jackpots. Mode ends when you drain one of the balls. (how to win?)

IGOR

Complete three sets of lit shots. First set will be three shots, then four, then five(?)

VAMPIRE

Stake/dismember the vampire by hitting the back target on the upper playfield four (?) times.

ALICE

Get to upper playfield and shoot past guillotine 2 times. The guillotine lowers a bit. Shoot a 3rd time to capture the ball in the guillotine. Theatrics play and Alice's head gets chopped off.

WEREWOLF

Shoot any green shot to load the gun, then shoot the three bank to fire the gun and damage the monster. Shots will light green again, but the ones you've already shot will be red instead. Shooting a red shot will damage the player. Health bars are shown on the screen. Defeat the wolf before it defeats you (usually 5 hits?).

ZOMBIE

One roaming shot will move back and forth across the playfield on the orbits, ramps, center scoop, and inner orbit (secret passage). Value will decrease on a timer until the shot is made. Complete 5 shots to finish the mode.

<u>INSECT</u>

Random shots and targets will be lit. Shoot 10 to complete mode.

<u>PIT CREATURE</u>

The mystery scoop, center scoop, and crypt will flash. Behind one (random?) is the pit creature. Once found, most shots will light, and a countdown timer will start. The timer will only count down while the ball is 'hidden' from view, such as being in a scoop/subway, or going through one of the orbits under the upper playfield. Count the timer down to zero to finish the mode.

<u>BILLION DOLLAR BABY</u>

Wizard mode, not implemented yet. But becomes available when you complete all other modes. This mode will be what is says and will have billion point shots.

4) Menu System

4.1 Basic Menu Functions

All settings to the game are done via the menu system.

From left to right

Red - Back out one step
Black (left) - navigate to the left
Black (right) - navigate to the right
Green - "Go" into the menu further

- Home
  - Settings
    - Gameplay (Features)
    - Machine (Coils)
    - Machine (Pricing)
    - Machine (Replay)
    - Machine (Standard)
    - Sound

  - Tests
    - Switch Test
    - Led Test (Single)
    - Coil Test
    - Music
    - Shaker

  - Statistics
    - Audits
    - Coin Op Audits
    - Last Score Data
    - Reactor Audits

  - Utilities
    - Servo Settings
    - Clear Credits
    - Reset Audits
    - Factory Settings
    - Set Date/Time

  - Software Info
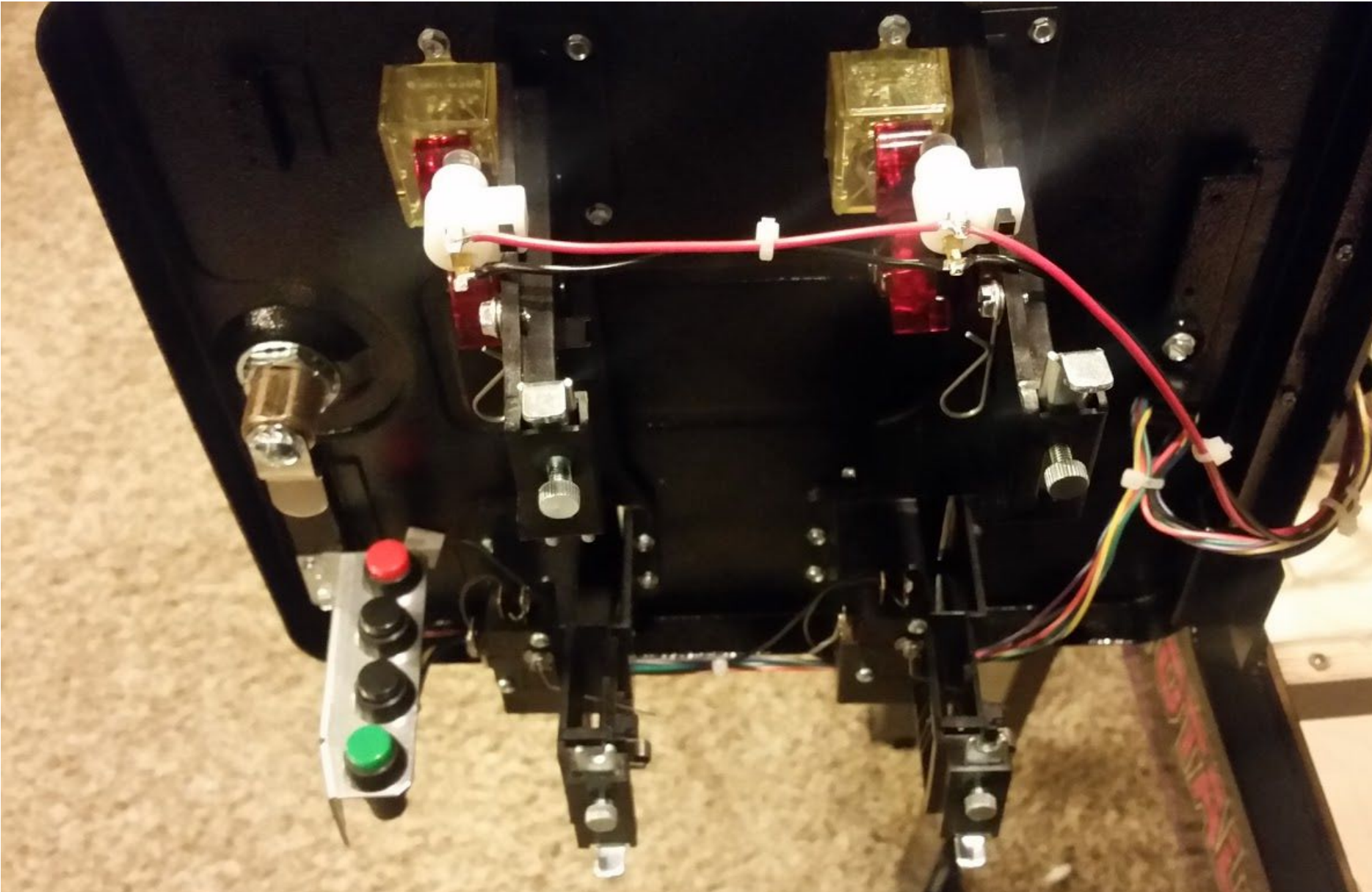
4.2 Settings

4.2.1 Gameplay Features				
Setting	Description	Factory	Min	Max
Match Routine	End of game match sequence	On	On	Off
Co-Op Mode	Allows the ability to play co-op mode	Yes	Yes	No
Save Magnet Pattern	Different patterns used for the "SAVE" magnet	Original	Original	Pattern 3
Upper Magnet Pattern	Different patterns used for the upper magnet	Original	Original	Spooky
Save Magnet Resistor	Check to see if your game has the gold resistors	On	On	Off
Allow Extra Balls	Allows for the earning of extra balls	Yes	Yes	No
Adv Secret Passage	How many hits for secret passage advance	3	1	
Lock Reward		On	On	Off
Ball Save Timer	Time given to save the ball if drained	13	1	90
Difficulty	Overall difficulty of options	Schools Out	Easy Action	Welcome to My Nightmare
Extra Ball Knocker Enabled	Deploys knocker if extra ball earned	Yes	Yes	No
Left Scoop Processing Speed	Speed at which scoop returns ball	Fast	Lame	Fast
Lock Reward		On	On	Off
Monster Multi Save		No	Yes	No
Monster Start	How monsters are selected	Random	Random	"your choice of monster"
Save Mystery Lit		Yes	Yes	No
Save Player Lane Data		Yes	Yes	No
Shaker Intensity	How intense does the shaker vibrate	Normal	Low	Normal
Shaker Motor	is the shaker installed	On	On	Off
Skillshot Autoplunge Timer	auto-plunge after a period of time	15	1	30
Special	earning special awards	Normal	Audits, Off, Points, Normal	

4.2.2 Machine (Coils)				
Setting	Description	Factory	Min	Max
Auto Plunger	Auto Plunger Coil	20	1	
Trough	Ball Trough Coil	25	1	
Flipper (Lower Left Main)	Left Flipper	40	1	
Flipper (Lower Right Main)	Right Flipper	40	1	
Flipper (Upper Main)	Upper Flipper	13	1	
Left Scoop	Left Scoop	21	1	
Slingshot (Left)	Left Slingshot	15	1	
Slingshot (Right)	Right Slingshot	15	1	
Drop Target 1 Knockdown	Drop Target 1	50	1	
Drop Target 2 Knockdown	Drop Target 2	50	1	
Drop Target 3 Knockdown	Drop Target 3	50	1	

4.2.3 Machine (Pricing)

Setting	Description	Factory	Min	Max
Bonus Credit After		0	0	
Coins Per Credit		1	1	8
Free Play		Yes	Yes	No
Left Coin Value		1	1	8
Right Coin Value		1	1	8

4.2.4 Machine (Replay)

Setting	Description	Factory	Min	Max
Replay Award		Credit	Credit	Extra Ball
Reply Back Down Amount		500,000	500,000	2,000,000
Replay Increase Amount		1,500,000	1,000,000	2,000,000
Replay Losing Streak Thresh		3	1	
Replay Minimum Score		1,000,000	500,000	15,000,000
Replay Score		2,500,000	1,500,000	30,000,000
Replay Score Enabled		Yes	Yes	No
Replay Type		Auto-Adjust	Auto-Adjust	Fixed

4.2.5 Machine (Standard)

Setting	Description	Factory	Min	Max
Recycle After Game		Disable	On, Off, Disable	
Flipper Hold Boost Level		3	1	5
Start Button Restart Enabled		Yes	Yes	No
Match Boost Percentage		30	10	100
Balls Per Game		3	1	
Quick Bonus Mode		True	True	False
Attract-Mode Sounds		Off	On	Off
Attract-Mode Music		Off	On	Off
Tilt Warnings		2	1	
Tilt Bob Setting Time (ms)		1500	1000	10000
Tilt Switch Sensitivity (ms)		5	1	30
Language		US	US	UK

4.2.6 Machine (Sound)

Setting	Description	Factory	Min	Max
Initial Volume		5	1	20
Music Volume Offset		0	-0.4	0.4

4.3 Tests

4.3.1 Switch Test
The switch test will show switch activity on the game. Each switch event will be accompanied by a sound and an indicator at the end of the switch name. The indicator (A) stands for the switch becoming active and the indicator (I) shows when the switch becomes inactive.

4.3.2 LED Test (single)
The single LED test will cycle through each LED in the system and display its associated name and LED number. This test is useful for identifying any miss-mapped LEDs in case they were plugged back into the wrong LED harness position.

4.3.3 LED Test (All)
This LED test will cycle all LEDs in a Red-Green-Blue-Whitish pattern. This test is useful to see if any LEDs are out or any channels on your LEDs are out.

4.3.4 Coil Test
This is a pretty standard coil test mode used to check the functionality of the game coils. The coil pulses can be started and stopped by pressing the start button or the enter button on the coin door. A coil will continue to pulse until the test is existed or the start/enter button is pressed to stop the cycle.

4.3.5 Music Test
The music test will play game music and is useful for testing and tuning the audio system. The music can be changed by pressing the start button or the enter button on the coin door. The volume can also be adjusted during this mode by using the volume up and volume down buttons on the coin door.

4.3.6 Shaker Test
The shaker test will cycle through a few different shaker intensities. This is just used to test the proper functionality of the shaker outside of the coil test. This works better.

4.3.7 Burn-In

The burn-in is used by the Spooky Pinball LLC. Factory to make sure the entire game is physically functioning properly. It will cycle through all the coils, play music, play animations, turn on the backglass LEDs, and make all the LEDs on the playfield whitish.

4.4 Statistics

The statistics pages are set up to give you important data about your machine. From audits to last score, there is a lot of information available to those that want it.

4.4.1 Audits

The audit screen will give you data on many features of the game. Average ball time to how many drains down each side.

4.4.2 Coin-Op Audits

The coin-op audits screens show information for the operators of the game. This is mainly designed for the coin door use and shows coin count (for each coin slot), service credits, current credits, etc.

4.4.3 Error Report

If you find a "credit dot" on your machine, this is the screen that will explain what is going on.

4.4.4 Last Score Data

The last score data (last scoredata) screen will show you the previous games scores for all 4 players. This is useful for tournaments and casual play alike.

4.5 Utilities

This section is for the utility functions of the game. Clear Credits, Reset Audits, Factory Settings and Set Date/Time.

4.5.1 Clear Credits

If your game is set to coin play, then this is the menu that you would use to clear any remaining credits on the machine.

4.5.2 Reset Audits

If you are in need of clearing your credits (taking your game to a show, having a party, etc) in order to get a more accurate reading for an event, this is where that will be done.

4.5.3 Factory Reset

A factory reset can be useful if you have changed a lot of settings and would like to start fresh, or if you just purchased a used game and would like to get back to the way the game shipped.

4.5.4 Set Date/Time

Your pinball machine has an internal clock. This is used for event logs, errors, etc. You can set the accurate date and time in this submenu.

4.6 Software Info

This is the screen used to give you an up to date display of what version of software you are running. Always check to make sure you are running the latest version in order to have the most up to date system.

5) Game Parts

work in progress

6. Troubleshooting

Here are some links to videos in case you run into any issues. If you need more assistance please contact us at Service@SpookyPinball.com

Basic Spooky Pinball (spans more than one game)

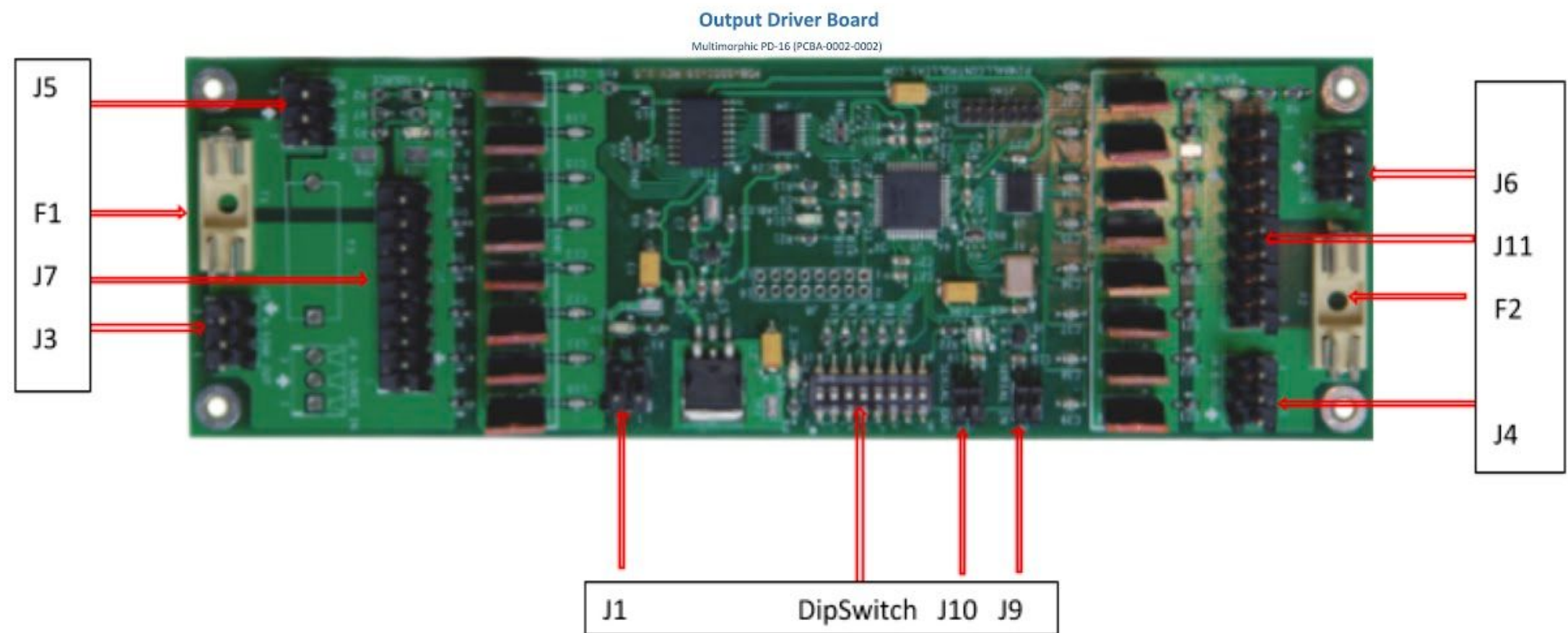Code updates - https://www.youtube.com/watch?v=e7llE4hbQJQ

Pinball Glass Removal - https://www.youtube.com/watch?v=UJjq6_SpIGg

Playfield Slide Rail Bump - https://www.youtube.com/watch?v=qzrrqX7lleU

Coil Adjustments - https://www.youtube.com/watch?v=OltW0IjTo-M

7) Layouts

7.1 Coil Layout

Board 01 (Top Board)

Dipswitch		J3	Coil Feed Bank A		coil #		J4	Coil Feed Bank B		coil #
1	Off	1	48V +	Orange			1	48V +	Orange	
2	On	2	Key				2	Key		
3	On	3	GND	Black			3	GND	Black	
4	Off	J5	Input Power Bank A				J6	Input Power Bank B		
5	Off	1	48V +	Purple			1	48V +	Orange	
6	Off	2	Key				2	Key		
7	Off	3	GND	Black			3	GND	Black	
8	On									

J1	Logic Power		J7	Coil Drivers Bank A		coil #		J11	Coil Drivers Bank B		coil #	
1	5V +	Red	1	Drop Target 1 Reset	Violet/White	1	26-800	1	Flipper - Lower Left Main	Orange/Black	8	fl-11629
2	GND	Black	2	Key				2	Left Flipper Hold	Orange/Green	9	fl-11629
			3	Drop Target 3 Reset	Violet/Grey	2	26-1200	3	Key			
J9	Control Data	From Driver 1	4	Flipper - Upper Main	Violet/Black	3	fl-11629	4	Left Scoop	Orange/Violet	10	23-800
			5	Drop Target 2 Reset	Violet/Red	4	26-1200	5	Lower Magnet	Orange/Grey	11	
J10	Control Data		6	Upper Flipper Hold	Violet/Green	5	fl-11629	6	Drop Target 1 Knockdown	Orange/Blue	12	26-600
			7	Drop Target 3 Knockdown	Violet/Blue	6	26-600	7	Sling - Left	Orange/White	13	26-800
			8	Loop Magnet	Blue/Grey	7		8	Drop Target 2 Knockdown	Orange/Red	14	26-600
			9	Not Used				9	Not Used			

Board 02 (Bottom Board)

Dipswitch		J3	Coil Feed Bank A			J4	Coil Feed Bank B		coil #
1	On	1	12V +	Yellow		1	Key		
2	Off	2	Key			2	48V +	Orange	
3	On	3	GND	Black		3	48V +	Blue	
4	Off	J5	Input Power Bank A			J6	Input Power Bank B		
5	Off	1	48V +	Yellow		1	48V +	Orange	
6	Off	2	Key			2	Key		
7	Off	3	GND	Black		3	GND	Black	
8	Off								

J1	Logic Power		J7	Coil Drivers Bank A			J11	Coil Drivers Bank B		coil #	
1	5V +	Red	1	Launch Light	Brown/Green		1	Trough	Blue/White	15	26-1200
2	GND	Black	2	Key			2	Sling - Right	Blue/Red	16	26-800
			3	Start Light	Brown/Violet		3	Key			
J9	Control Data	From MPU	4	Backbox Lights	Black		4	Flipper - Lower Right Main	Blue/Black	17	fl-11629
			5	RGB Speaker (red)	White/Blue		5	Ball Launch	Blue/Violet	18	23-800
J10	Control Data	To Driver 1	6	RBG Speaker (Green)	White/Green		6	Lower Right Flipper Hold	Blue/Green	19	fl-11629
			7	RGB Speaker (Blue)	White/Red		7	Knocker	Brown/Yellow	20	23-800
			8	Not Used			8	Shaker	Brown/Black	21	
			9	Not Used			9	Not Used			

F1	Coil Bank A	4A 250v Slo-Blo	F2	Coil Bank B	4A 250v Slo-Blo	D2	5V + Control	D3	3.3V + Control	D5	Coil Bank B +48v	D14	Watchdog Dead

Number	Description
01	Drop Target 1 Reset
02	Drop Target 3 Reset
03	Flipper - Upper Main
04	Drop Target 2 Reset
05	Flipper - Upper Hold
06	Drop Target 3 Knockdown
07	Loop Magnet
08	Flipper - Lower Left Main
09	Flipper - Lower Left Hold
10	Left Scoop
11	Lower Magnet (Save Magnet)
12	Drop Target 1 Knockdown
13	Sling - Left
14	Drop Target 2 Knockdown
15	Trough Eject
16	Sling - Right
17	Flipper - Lower Right Main
18	Ball Launch (Auto-Launch)
19	Flipper - Lower Right Hold
20	Knocker
21	Shaker
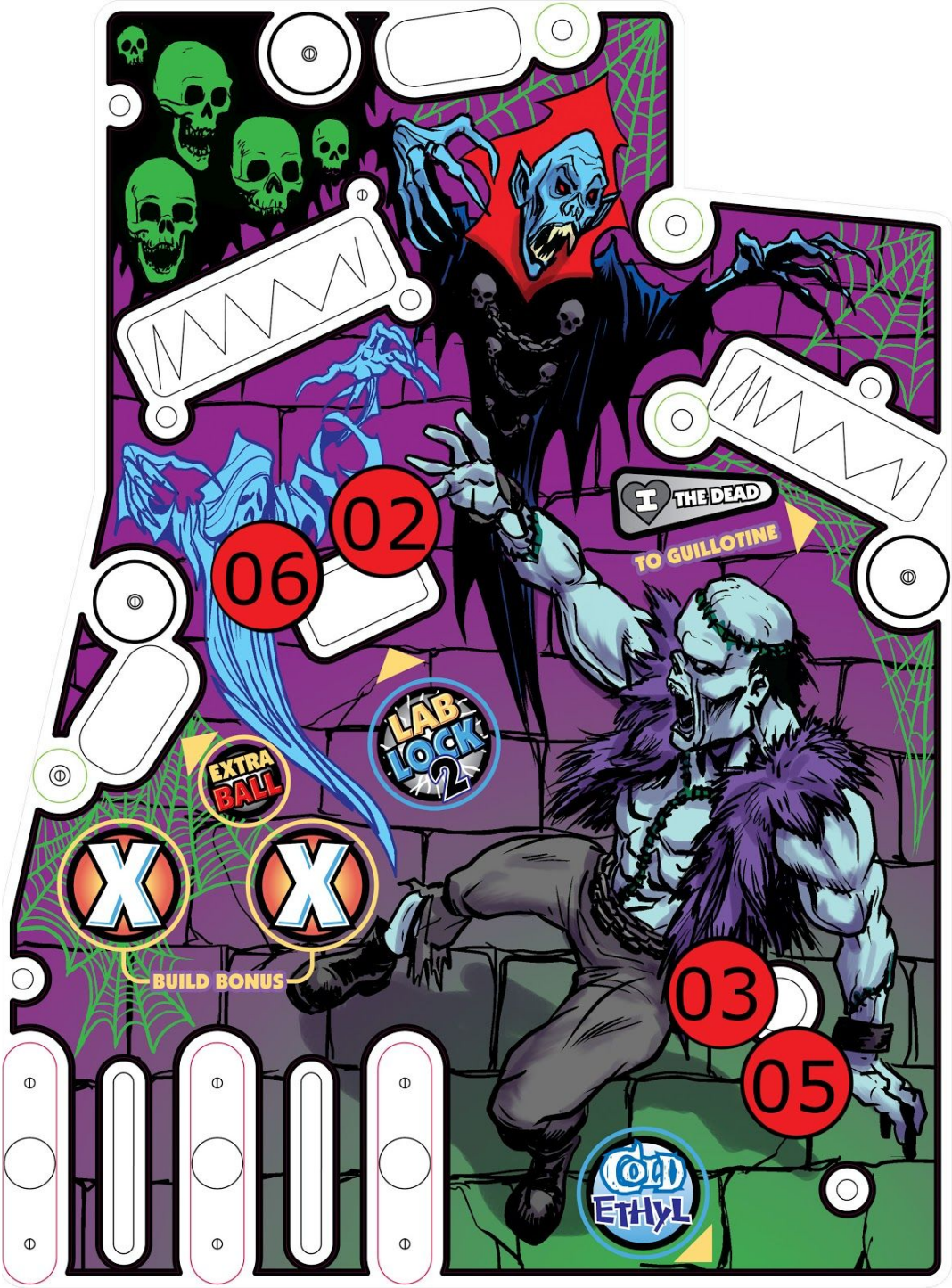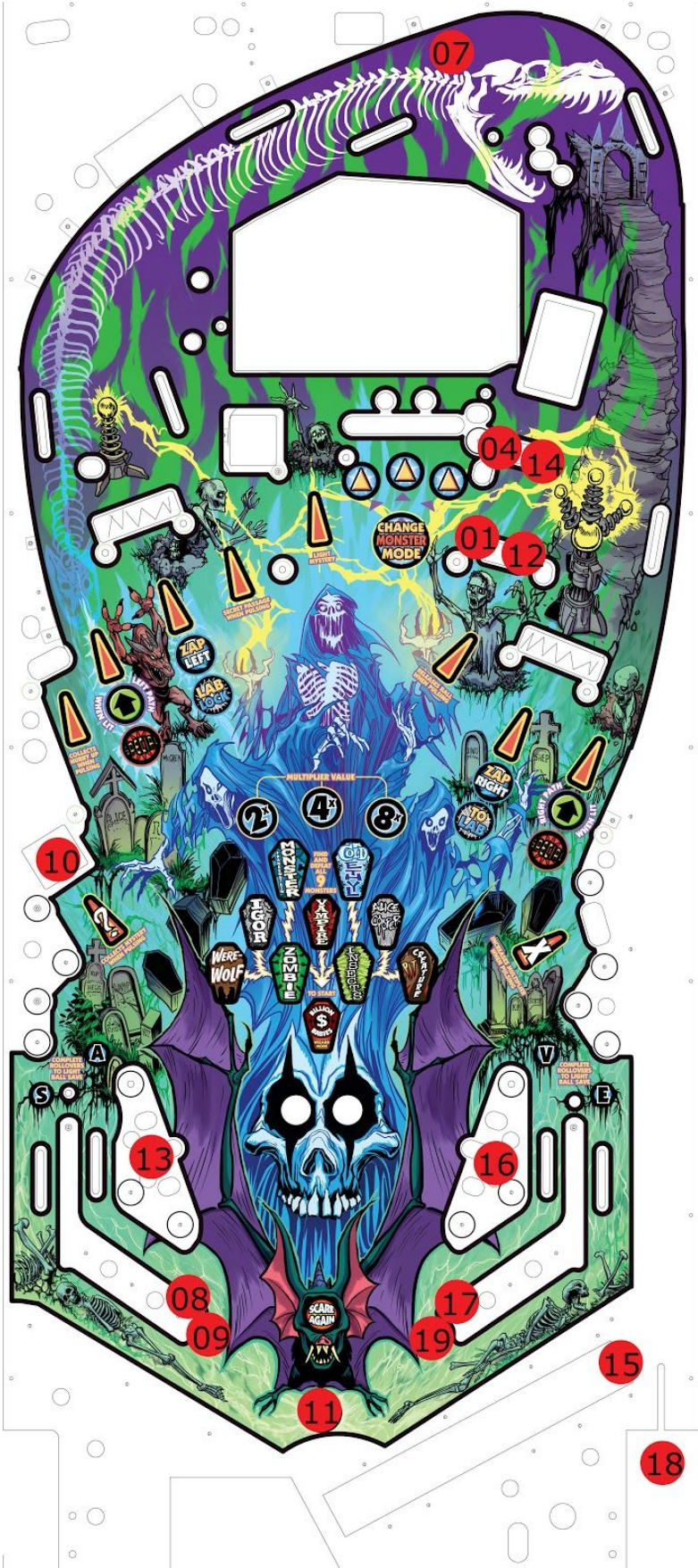
7.2 Switch Layout

SW-16 Switch Board
PCBA-0006-0004

Labels: J6, J2, J1, J4, J3, Dipswitch Bank

Board 01 (Located inside left, front of lower cabinet)

Dipswitch				Color	Function	No.
D	1	Off	J2			
i	2	Off	1			
p	3	Off	2	Grey/White	coin 1	0
s	4	Off	3			
w	5	Off	4			
i	6	Off	5	Purple/White	coin 2	3
t	7	Off	6	Blue/White	coin door enter	4
c	8	Off	7	Green/White	coin door up	5
h			8	Yellow/White	coin door down	6
J1	Power Input		9	Orange/White	coin door exit	7
1	Key		10	Black	ground	
2	12V DC	Yellow				
3	Ground	Black	J6			
			1			
J3	Serial Input		2	Grey/White	flipper upper right	9
1	Ground	Red	3	Pink	flipper lower right	10
2	Serial +	White	4			
3	Serial -	Black	5	Purple/White	launch button	11
			6			
J4	Serial Output		7	Green/White	tilt	13
1	Ground	Red	8	Yellow/White	flipper lower left	14
2	Serial +	White	9	Orange/White	start button	15
3	Serial -	Black	10	Black	ground	

Board 02 (Located on the underside, rear of the playfield)

Dipswitch				Color	Function	No.
D	1	On	J2			
i	2	Off	1			
p	3	Off	2			
s	4	Off	3			
w	5	Off	4	Red/White	balcony	18
i	6	Off	5	Purple/White	upper right exit	19
t	7	Off	6	Blue/White	upper left exit	20
c	8	Off	7	Green/White	extra ball	21
h			8	Yellow/White	target 3	22
J1	Power Input		9	Orange/White	back upper pf target	23
1	Key		10	Black	ground	
2	12V DC	Yellow				
3	Ground	Black	J6			
			1			
J3	Serial Input		2	Grey/White	left ramp opto	24
1	Ground	Red	3	Pink	outside left orbit	25
2	Serial +	White	4	Red/White	left castle lock	26
3	Serial -	Black	5	Purple/White	right castle lock	27
			6	Blue/White	left magnet	28
J4	Serial Output		7	Green/White	top of inner orbit	29
1	Ground	Red	8	Yellow/White	chop opto	30
2	Serial +	White	9	Orange/White	right magnet	31
3	Serial -	Black	10	Black	ground	

Board 03 (Located on the underside, mid-right side of playfield)

Dipswitch				Color	Function	No.
D	1	Off	J2			
i	2	On	1			
p	3	Off	2			
s	4	Off	3			
w	5	Off	4	Red/White	right ramp optp	34
i	6	Off	5	Purple/White	right subway	35
t	7	Off	6	Blue/White	back drop target	36
c	8	Off	7	Green/White	front drop target	37
h			8	Yellow/White	right outer orbit	38
J1	Power Input		9	Orange/White	increase multiplier	39
1	Key		10	Black	ground	
2	12V DC	Yellow				
3	Ground	Black	J6			
			1			
J3	Serial Input		2			
1	Ground	Red	3			
2	Serial +	White	4			
3	Serial -	Black	5			
			6	Blue/White	monster select left	44
J4	Serial Output		7	Green/White	monster select middle	45
1	Ground	Red	8	Yellow/White	monster select right	46
2	Serial +	White	9	Orange/White	sling right	47
3	Serial -	Black	10	Black	ground	

Board 04 (Located on the underside, top-left of the playfield)

Dipswitch				Color	Function	No.
D	1	On	J2			
i	2	On	1			
p	3	Off	2	Grey/White	inlane right	48
s	4	Off	3	White	outlane right	49
w	5	Off	4	Red/White	shooter lane	50
i	6	Off	5	Purple/White	trough jam	51
t	7	Off	6	Blue/White	trough 1	52
c	8	On	7	Green/White	trough 2	53
h			8	Yellow/White	trough 3	54
J1	Power Input		9	Orange/White	trough 4	55
1	Key		10	Black	ground	
2	12V DC	Yellow				
3	Ground	Black	J6			
			1			
J3	Serial Input		2	Grey/White	left subway	56
1	Ground	Red	3	Pink	inner left orbit	57
2	Serial +	White	4	Red/White	spinner	58
3	Serial -	Black	5	Purple/White	hurry up	59
			6	Blue/White	left scoop	60
J4	Serial Output		7	Green/White	sling left	61
1	Ground	Red	8	Yellow/White	inlane left	62
2	Serial +	White	9	Orange/White	outlane left	63
3	Serial -	Black	10	Black	ground	

No.	Description	No.	Description	No.	Description
00	Coin 1	24	Left Ramp Opto	47	Sling Right
03	Coin 2	25	Outside Left Orbit	48	Inlane Right
04	Coin Door Enter	26	Left Castle Lock	49	Outlane Right
05	Coin Door Up	27	Right Castle Lock	50	Shooter Lane
06	Coin Door Down	28	Left of Magnet	51	Trough Jam
07	Coin Door Exit	29	Top of Inner Orbit	52	Trough 1
09	Flipper Upper Right	30	Chop Opto	53	Trough 2
10	Flipper Lower Right	31	Right of Magnet	54	Trough 3
11	Launch Button	34	Right Ramp Opto	55	Trough 4
13	Tilt	35	Right Subway	56	Left Subway
14	Flipper Lower Left	36	Drop Target 2	57	Inner Left Orbit
15	Start Button	37	Drop Target 1	58	Spinner
18	Balcony	38	Right Outer Orbit	59	Hurry Up
19	Upper Right Exit	39	Increase Multiplier	60	Left Scoop
20	Upper Left Exit	44	Monster Select Left	61	Sling Left
21	Extra Ball Target	45	Monster Select Middle	62	Left Inlane
22	Drop Target 3	46	Monster Select Right	63	Left Outlane
23	Back Upper PF Target				
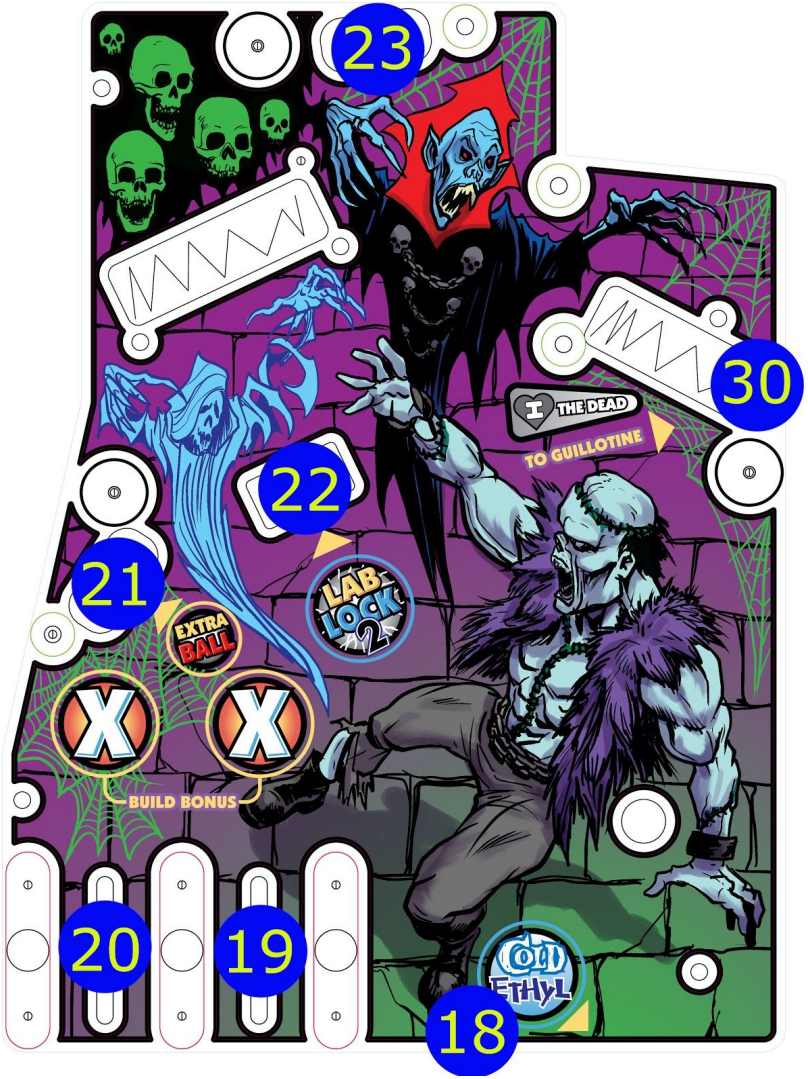
7.3 RBG Layout (Lighting)
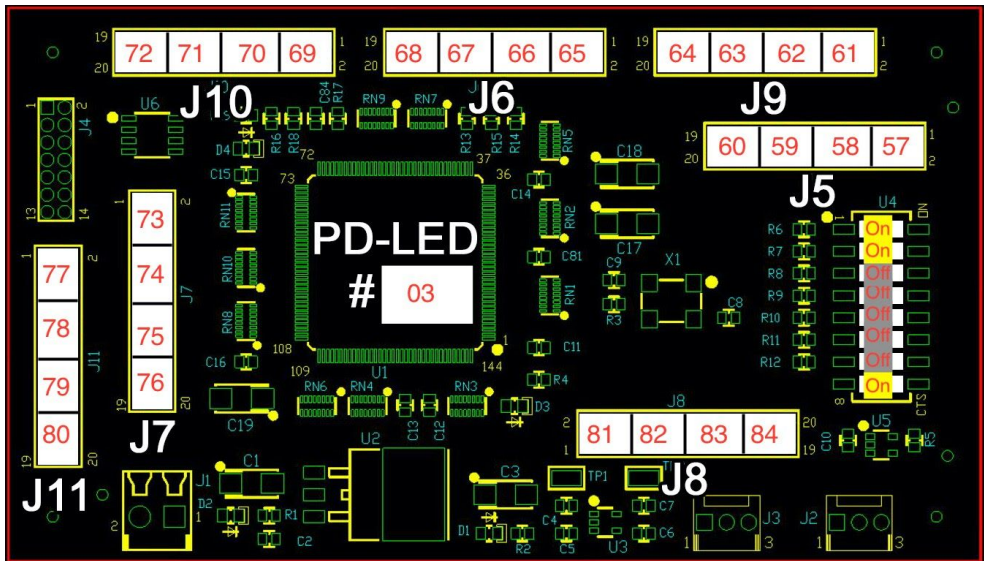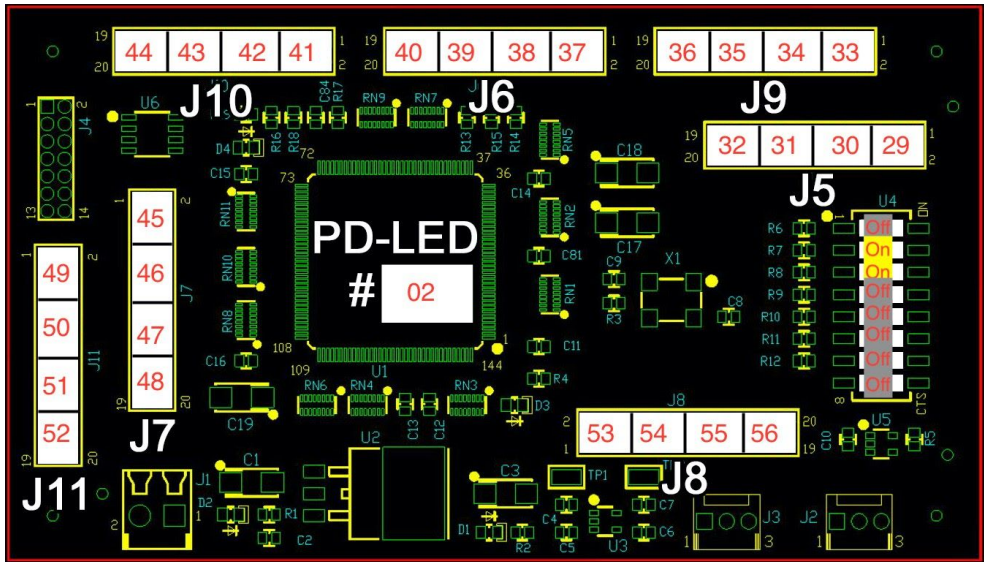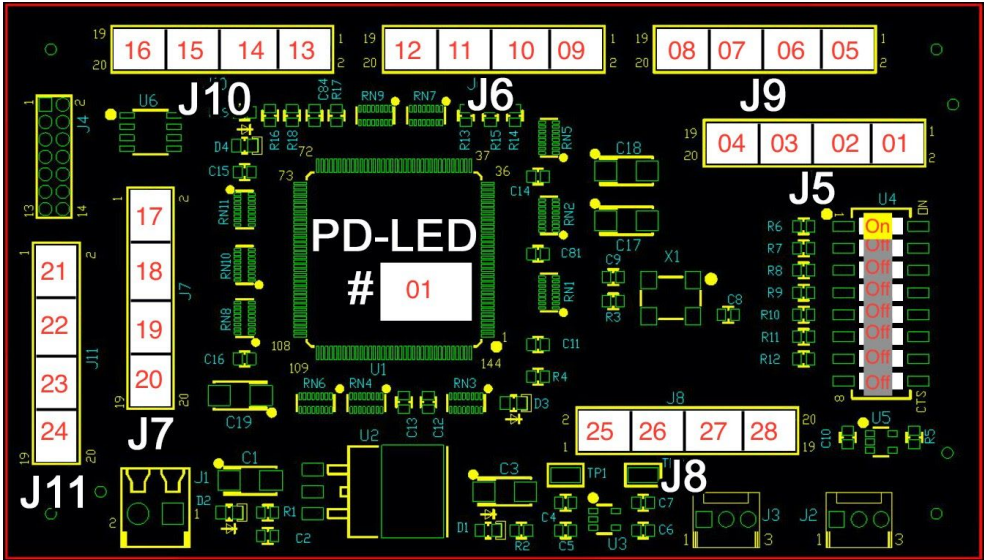
PD-LED #1		PD-LED #2		PD-LED #3	
1	left ramp arrow	29	upper playfield flasher	57	release ball
2	left ramp group 1	30	gi mode target right	58	right ramp group 1
3	left ramp group 1	31	gi mode target left	59	right ramp group 2
4	left ramp group 3	32	center target 3	60	right ramp group 3
5	gi back left 1	33	secret passage	61	build mystery
6	gi back left 2	34	zap left	62	select monster
7	gi back left 3	35	left outer orbit	63	center target 1
8	gi back left 4	36	left path	64	cetner target 2
9	gi upper lane right	37	igor	65	billion dollar baby
10	gi upper lane middle	38	frank	66	right eye
11	gi upper lane left	39	vampire	67	left eye
12	upper left lane	40	alice	68	save light
13	upper right lane	41	wolf	69	gi sling upper left
14	extra ball	42	zombie	70	gi sling upper right
15	lab lock 2	43	insect	71	left gi flipper right
16	i love the dead	44	pic creature	72	left gi flipper left
17	ethyl	45	insert e (savE)	73	outer right orbit
18	vampire stake	46	insert v (saVe)	74	right ramp
19	back board 5	47	gi lower right	75	right path
20	back board 6	48	multiplier	76	zap right
21	back board 4	49	right gi flipper left	77	special right
22	back board 3	50	right gi flipper right	78	to lab
23	back board 2	51	gi sling lower right	79	8x multiplier
24	back board 1	52	gi sling upper right	80	cold ethyl
25	ignore	53	4x multiplier	81	insert s (Save)
26	above left scoop	54	2x multiplier	82	insert a (sAve)
27	hurry up	55	special left	83	gi lower left o
28	spinner	56	lab lock	84	collect mystery

No.	Description	No.	Description	No.	Description	No.	Description
01	left ramp arrow	22	back board 3	43	insect	64	cetner target 2
02	left ramp group 1	23	back board 2	44	pic creature	65	billion dollar baby
03	left ramp group 1	24	back board 1	45	insert e (savE)	66	right eye
04	left ramp group 3	25	ignore	46	insert v (saVe)	67	left eye
05	gi back left 1	26	above left scoop	47	gi lower right	68	save light
06	gi back left 2	27	hurry up	48	multiplier	69	gi sling upper left
07	gi back left 3	28	spinner	49	right gi flipper left	70	gi sling lower left
08	gi back left 4	29	upper playfield flasher	50	right gi flipper right	71	left gi flipper right
09	gi upper lane right	30	gi mode target right	51	gi sling lower right	72	left gi flipper left
10	gi upper lane middle	31	gi mode target left	52	gi sling upper right	73	outer right orbit
11	gi upper lane left	32	center target 3	53	4x multiplier	74	right ramp
12	upper left lane	33	secret passage	54	2x multiplier	75	right path
13	upper right lane	34	zap left	55	special left	76	zap right
14	extra ball	35	left outer orbit	56	lab lock	77	special right
15	lab lock 2	36	left path	57	release ball	78	to lab
16	i love the dead	37	igor	58	right ramp group 1	79	8x multiplier
17	ethyl	38	frank	59	right ramp group 2	80	cold ethyl
18	vampire stake	39	vampire	60	right ramp group 3	81	insert s (Save)
19	back board 5	40	alice	61	build mystery	82	insert a (sAve)
20	back board 6	41	wolf	62	select monster	83	gi lower left o
21	back board 4	42	zombie	63	center target 1	84	collect mystery
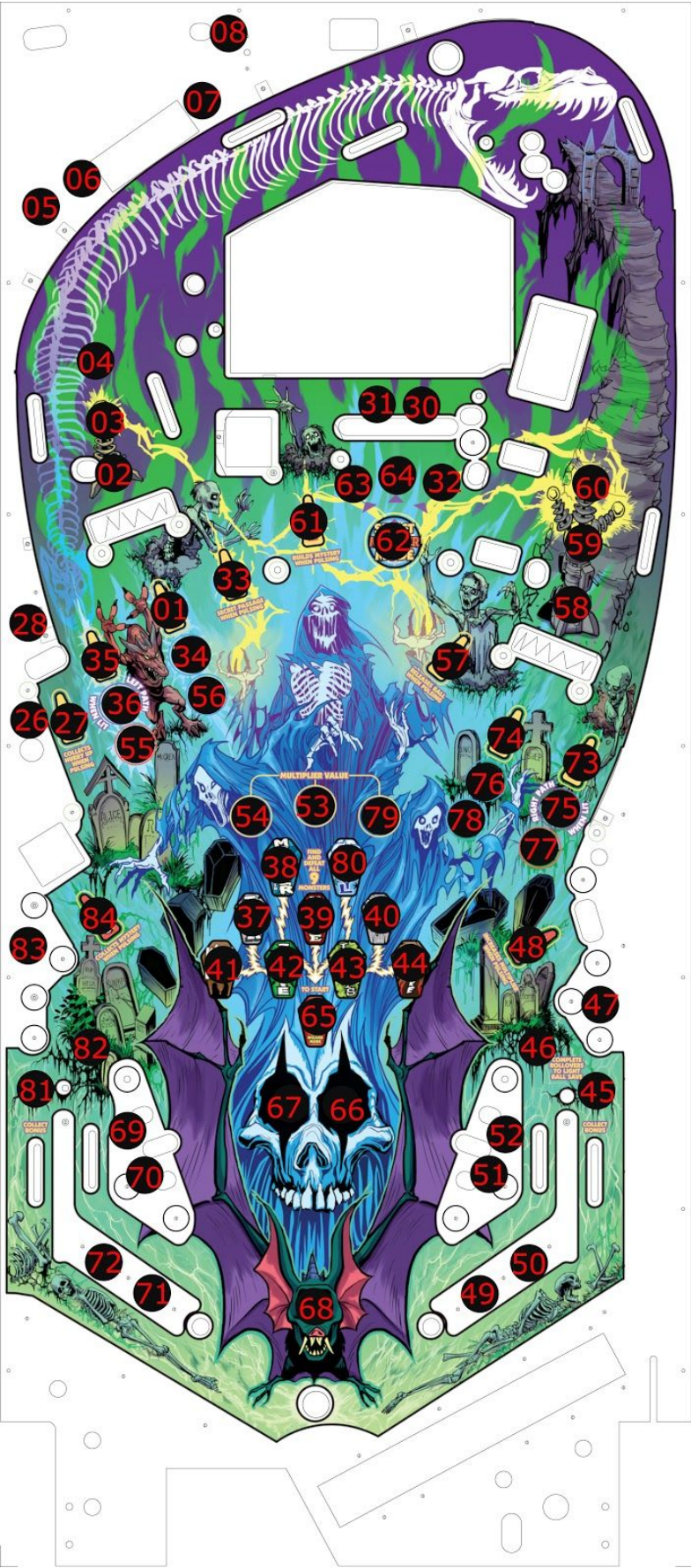
Number	Description
09	GI Upper Lane Right
10	GI Upper Lane Middle
11	GI Upper Lane Left
12	Upper Lane Left
13	Upper Lane Right
14	Extra Ball
15	Lab Lock 2
16	I Love the Dead
17	Ethly
18	Vampire Stake
19	Back Board 5
20	Back Board 6
21	Back Board 4
22	Back Board 3
23	Back Board 2
24	Back Board 1
29	Upper Playfield Flasher
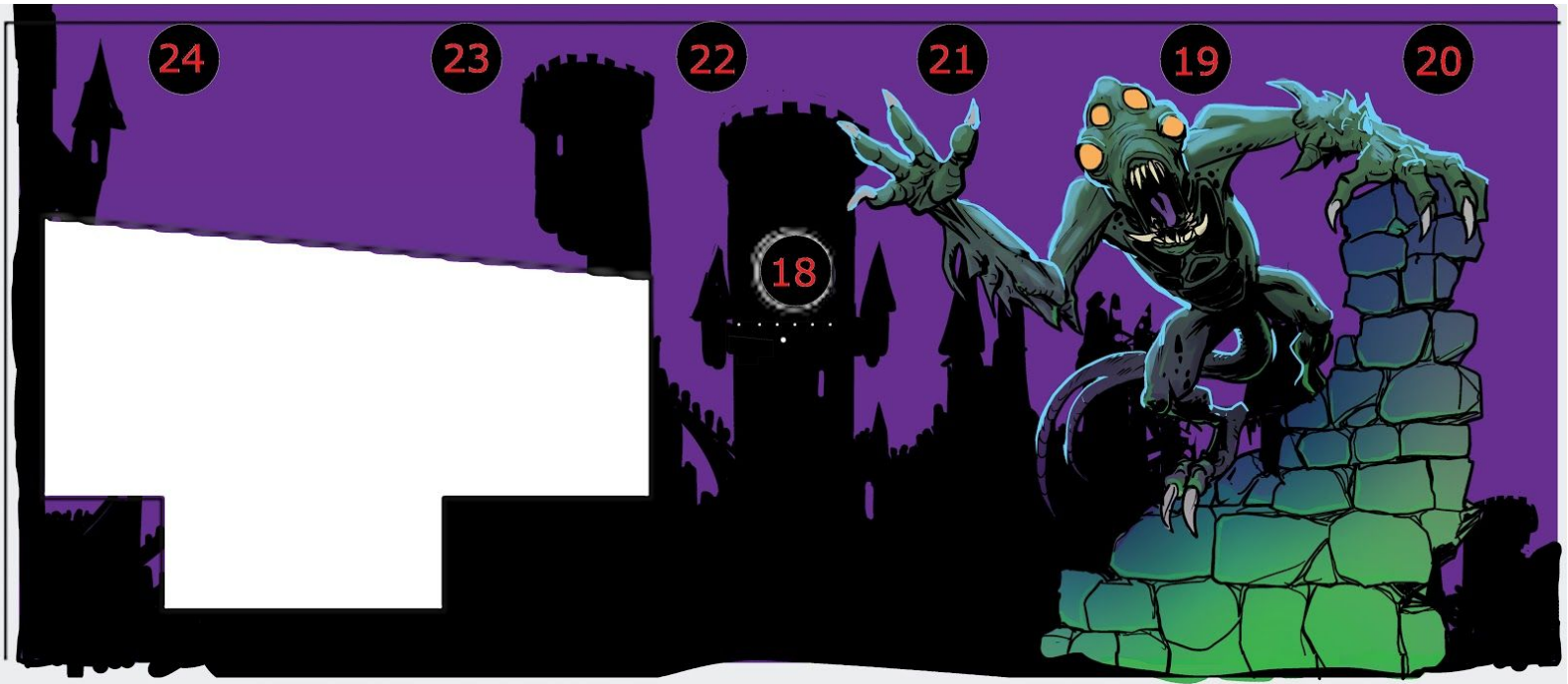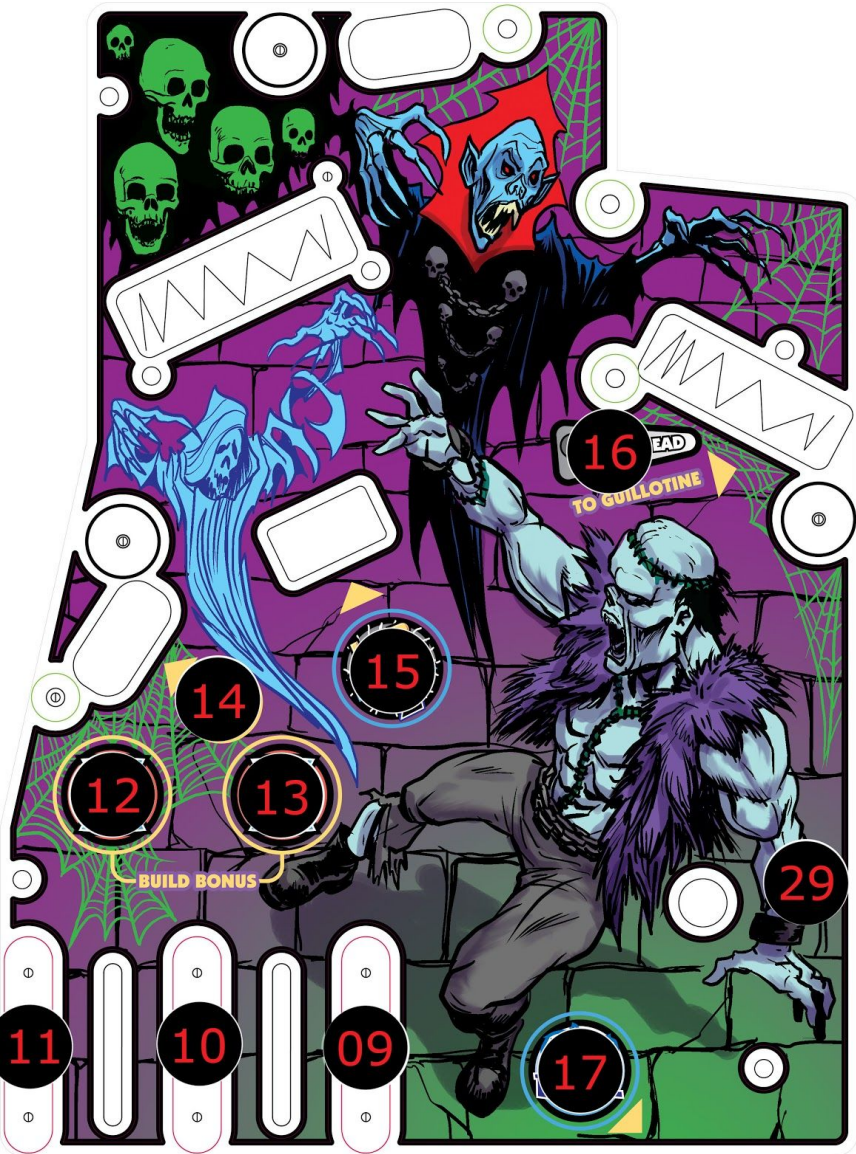
7.4 Rubber Ring Size and Layout

- 10x - 3/8" Bumper Post Rings
- 2x - 2-1/2" Rubber Rings
  > This is for the lower slings. 2" or 2-1/4" can be used to further minimize the risk of balls
  > getting stuck behind these slingshot rubbers.
- 3x - 2" Rubber Rings
- 1x - 1-1/4" Rubber Ring
- 5x - 1" Rubber Rings
- 3x - 1-1/16" Thin (Stern Compatible) Rubber Post Sleeves
- 1x - 5/16" Bumper Post Ring
- 2x - 3/8" OD Mini Post Rubbers
- 2x - Flipper Rubber - Standard Size – Purple
- 1x - Flipper Rubber - 1" Mini Size – Red
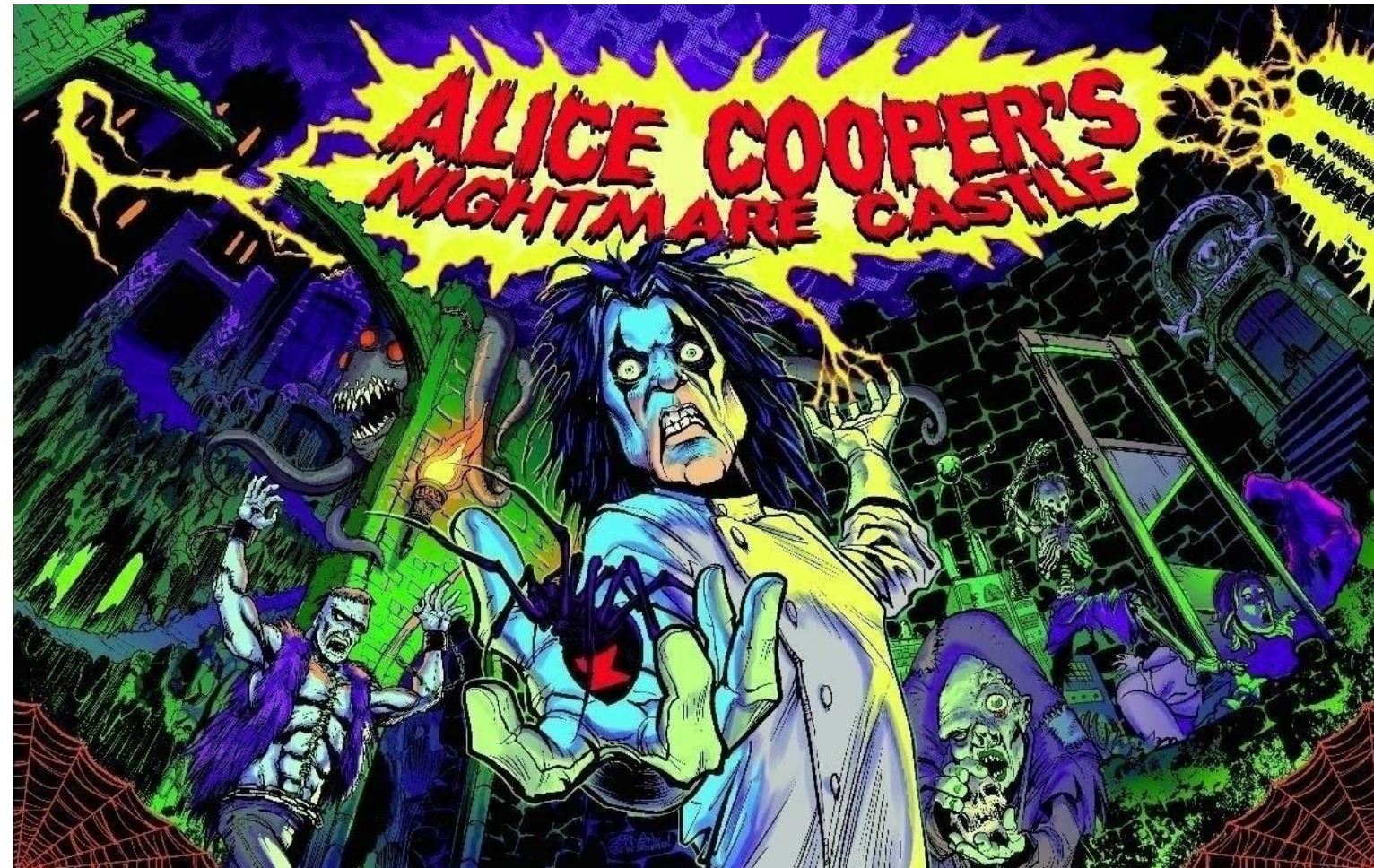
Spooky Pinball LLC
184 Ridge Ave
Benton, WI 53803
Service@SpookyPinball.com

This manual was made in collaboration with Spooky Pinball.