



# **PRODUCT REFERENCE & INSTALLATION MANUAL**

PINLIGHTS CLASSIC EDITIONS

## Table of Contents

[Table of Contents](#)

[What's In The Box](#)

[Installing the Controller Board](#)

[Installing the plastic protector](#)

[Power](#)

[GI and Flasher Cables](#)

[Comet Matrix Connectors](#)

[Stern Shaker Connectors](#)

[Installing Pinlights with Magnet Strips](#)

[Surface Prep](#)

[Installing the Wire Clips](#)

[Mounting the Light Bars](#)

[Installing Pinlights with Low Profile Magnet Mounts](#)

[Surface Prep](#)

[Installing the Brackets](#)

[Installing the Wire Clips](#)

[Mounting the Light Bars](#)

[App Functions](#)

[Game List](#)

[Game Settings](#)

[Troubleshooting](#)

[I can't find the Pinlights controller when trying to add the game in the mobile app](#)

[My Pinlights app isn't showing any options for adjustment when I click my game](#)

[My Pinlights device says "Other" for the model and all of the adjustments appear to be missing](#)

[My unit doesn't power on, or the power seems flaky](#)

[My Pinlights stay on after the game powers off](#)

[Testflight is prompting me for a redemption code when trying to install the iOS app](#)

[Where do I install/connect my Pinlights GI or Flasher cables for game X?](#)

[LED Controller Blink Codes](#)

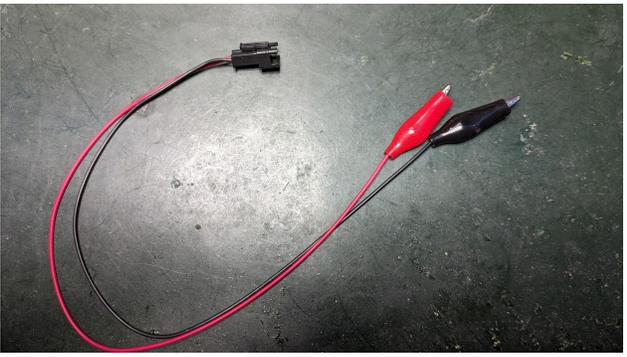
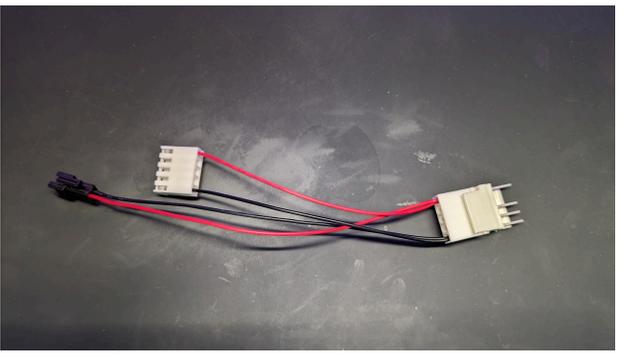
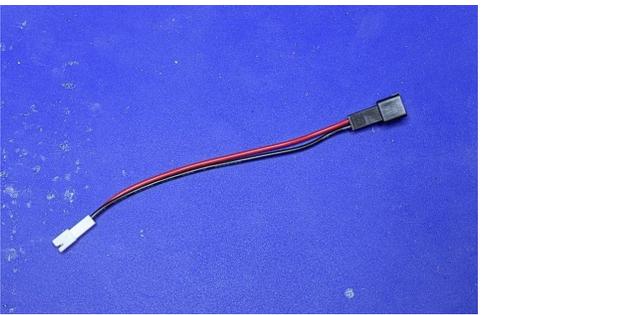
[Contact Information](#)

## What's In The Box

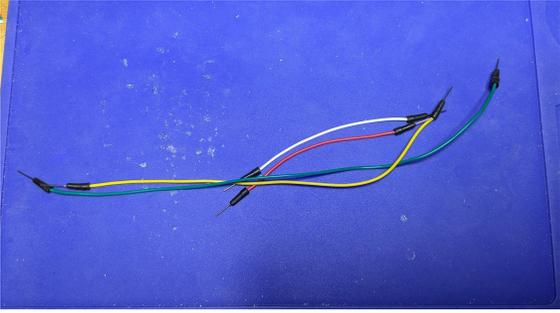
Your set of Pinlights Classic Editions includes everything you need to get started quickly. For reference, here's what you'll find in the box:

- A pair of light bars featuring cool white, warm white and purple flasher diffused lights
- A 12V DC power supply with wall plug
- 4x wire taps (small wires with metal ends, useful for connecting to connectors under the playfield or on the coin door lights)
- 2x long black lightbar power cables (with white 5 position Molex connectors on the end)
- 2x red/black alligator clips (useful for clamping to lamp socket lugs or GI strands, or clipping to the above wiretaps)
- 2x Comet Matrix interface cables (useful for eliminating the need for alligator clips if you have Comet Matrix connector bulbs installed. Simply connect to a GI bulb wire harness or a flasher wire harness)
- 2x red/black sensor cables (long pair of wires with a white 2 position Molex connector on one end)
- Protector plastics for the control board (one for the top, one for the bottom)
- A smaller bag containing
  - 2x alcohol wipes (important for surface preparation)
  - 4x brass standoffs (for securing the plastic protectors)
  - 8x M.3 machine screws (for securing the plastic protectors)
  - 2x plastic ratcheting wire clips (for securing the power harness cables behind the playfield backboard)
- A single Pinlights Classic controller board
- An assortment of zip ties (great for tidying up cables under the playfield and in the cabinet)
- OPTIONAL (IF ORDERED) - A set (2x) of low profile metal mounts
- OPTIONAL (IF ORDERED) - A WPC service port adapter cable
- OPTIONAL (IF A STERN GAME WAS SELECTED WHEN ORDERING) - A 5 pin shaker connector interface cable with z-connector (for securely triggering your UV flashers from the shaker motor)

# PINLIGHTS CLASSIC - MANUAL

A		<p>(2x) - 5ft long sensor cable connector. The white/clear molex connectors connect to the FL and GI ports on the Pinlights controller board. The black ends connect to either the alligator clip wire connectors (B), the Stern shaker motor connector (C) or the Comet Matrix lamp connector (D)</p>
B		<p>(2x) - Alligator clip connectors Useful for attaching to lamp and flasher sockets or small motors.</p> <p>The black connector end connects with (A)</p> <p>Can be used with wire taps (E) to get into tight spaces.</p>
C		<p>(1x <b>OPTIONAL</b>) - Stern Shaker Motor connector</p> <p>Included when the game selected is a late model Stern. Connects to the 5 pin shaker port on your Stern cabinet node board at CN16.</p> <p><b>DO NOT USE WITH AFTERMARKET SHAKERS.</b></p> <p>Not required for every game.</p>
D		<p>(1x) - Comet Matrix lamp connector</p> <p>Provided an easy "plug and play" way to plug into GI or Flasher lamps if using Comet Matrix-compatible lamps. The black connector connects to (A), the white connector connects to the lamp. Polarity doesn't matter.</p> <p>Not required for every game.</p>

# PINLIGHTS CLASSIC - MANUAL

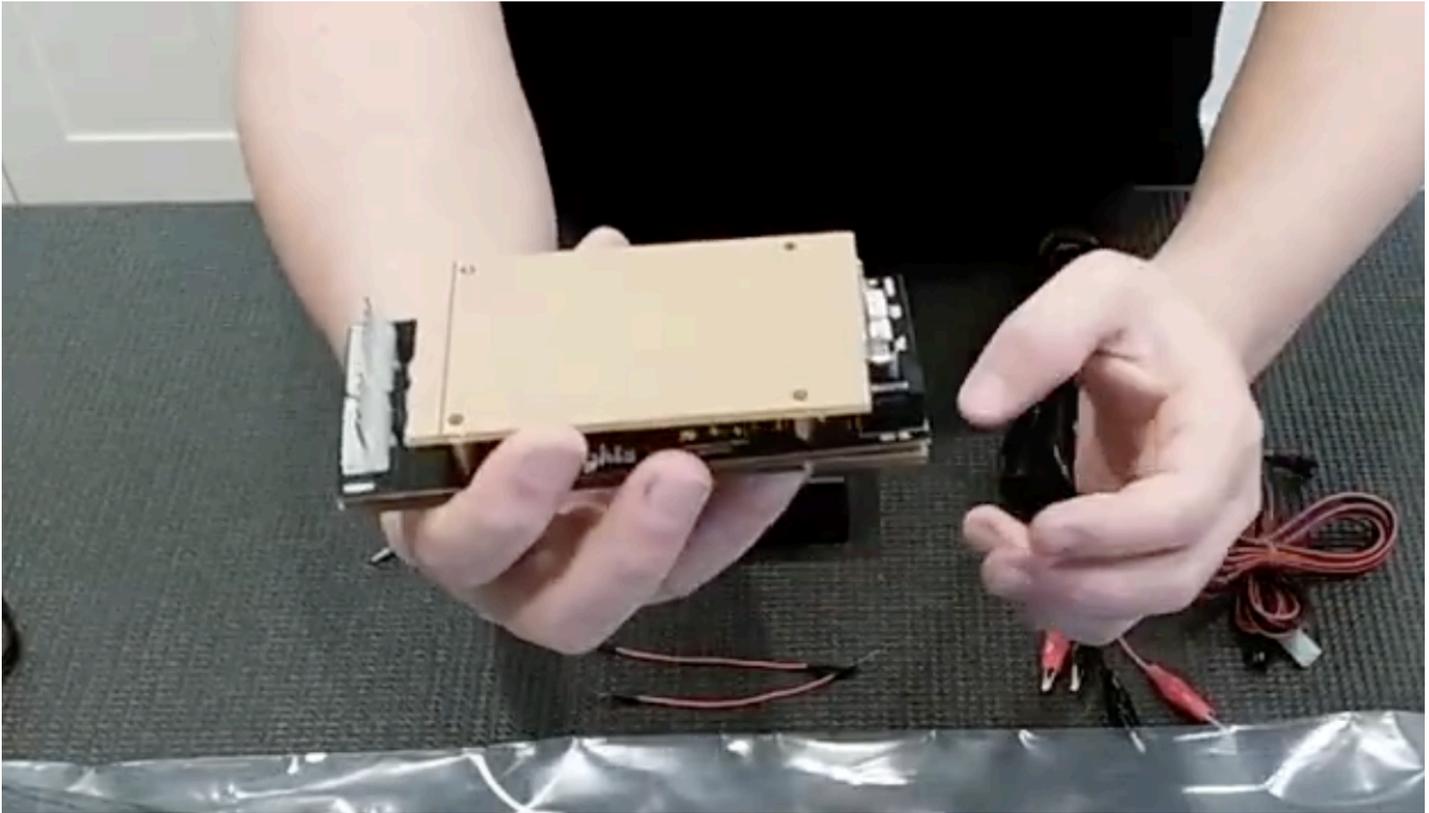
E		<p>(4x) - Wire taps</p> <p>Useful for connecting to the back of Molex connectors or spade connectors. The other end should be used with an alligator clip (B)</p> <p>Not required for every game.</p>
F		<p>(2x) - Light Bar Connector Cables</p> <p>Connect from the 2 5 pin ports on the Pinlights controller board to the light bars.</p> <p>(May also be rainbow colored, but work exactly the same)</p>

## Installing the Controller Board

### Installing the plastic protector

The Pinlights controller boards ship with a set of plastics for the top and bottom of the board to protect it from shorting out. Secure the bottom (larger) plastic through the bottom of the board with 4 machine screws. Secure the other side of the screw using 4 of the included brass standoffs.

Install the top (smaller) plastic on the top 4 standoffs. Secure the plastic with the remaining 4 machine screws. Make sure that the plastic is not blocking the GI and Flasher connectors.



### Power

Pinlights ship with a dedicated 12V power supply that plugs into the service port of your game. If you do not have an available service port, you can plug the power supply into an external wall outlet. Pinlights will still turn on and off with your game.

# PINLIGHTS CLASSIC - MANUAL

Plug the Pinlights AC adapter into your game's service port, and plug the other end into the Pinlights controller. Make sure the AC cable is securely connected to the power brick.

## GI and Flasher Cables

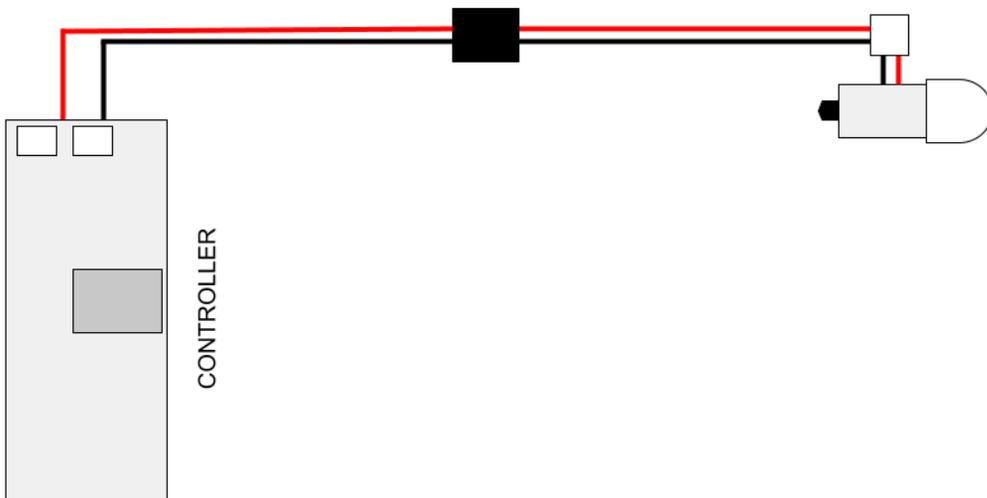
There are several ways you can connect your GI and Flasher connections. The universal solution is to use Alligator Clips and wire taps (both included). For more secure connections, you can use our Comet Matrix compatible connectors (included). Using the Comet Matrix connectors is a great solution, you can use compatible bulbs for the flasher and/or GI connections.

For Stern Spike I/II games (if you selected one during checkout), your kit should include a Stern shaker motor connector.

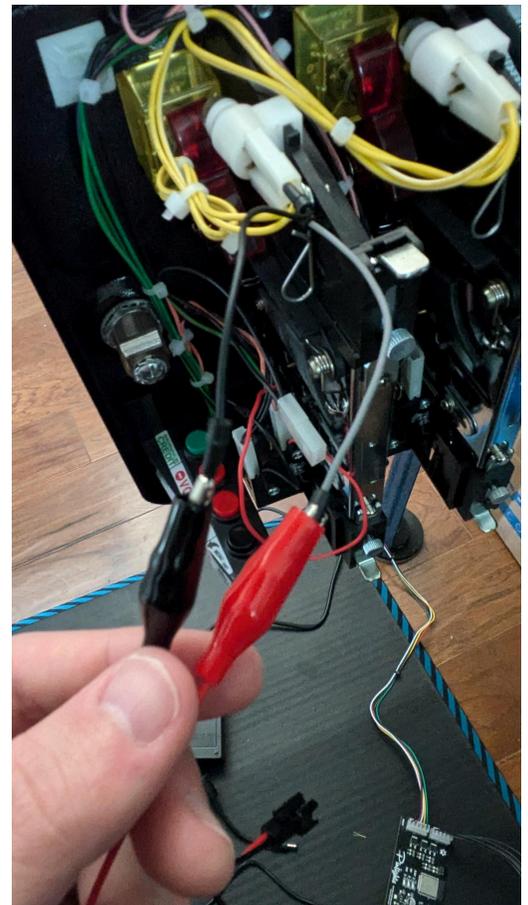
If you're installing Pinlights on a game that uses RGB LEDs for GI and flashers, a common method is to install the GI connectors to the coin door lamps.

### Comet Matrix Connectors

Connect a compatible [bayonet or wedge bulb](#) to your game's GI and/or Flashers. Connect the other end of the cable to our red/black long sensor cable. Connect the white Molex connector on our sensor cable into the GI or Flasher connector on the controller



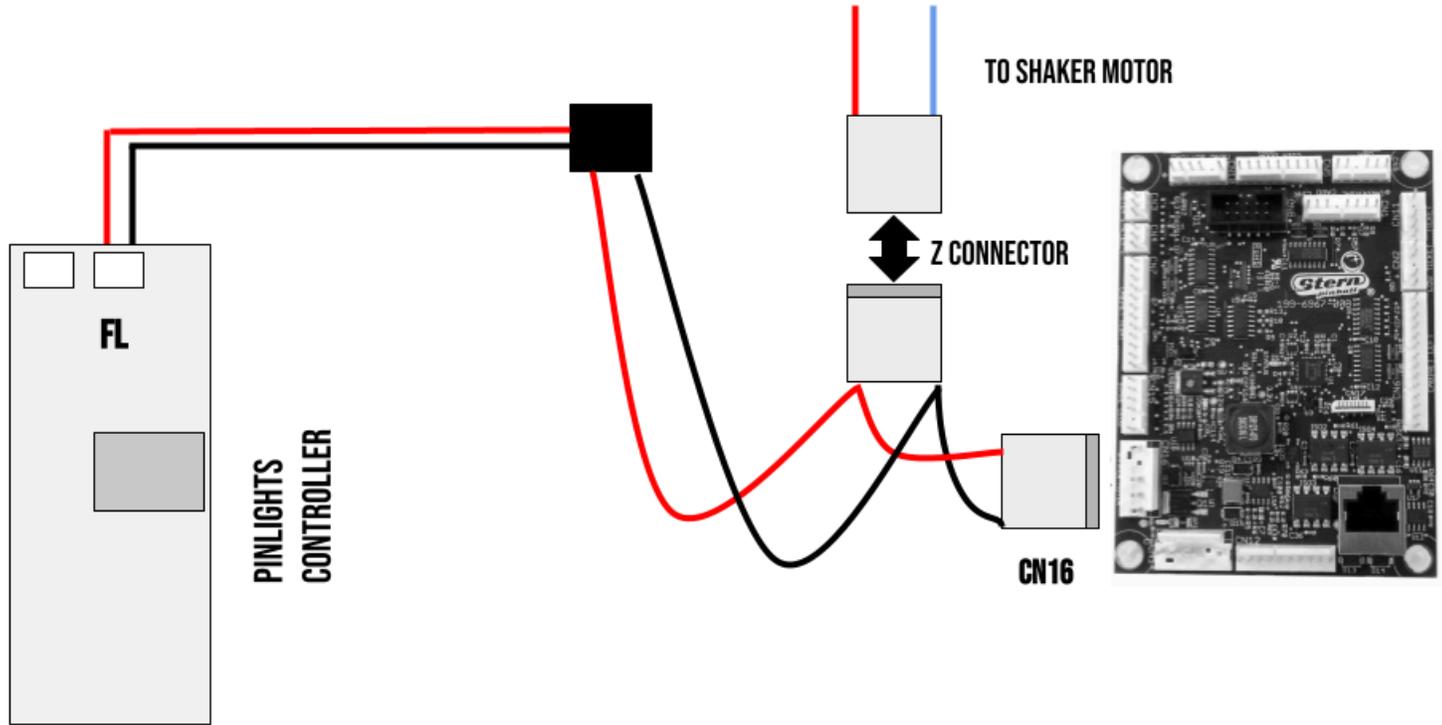
board as necessary.



# PINLIGHTS CLASSIC - MANUAL

## Stern Shaker Connectors

Connect our Stern shaker motor cable to the cabinet node connector located at CN16. (The orientation of the cabinet node may be rotated 90 degrees counterclockwise from the picture below).



## CAUTION

Check your connections at the cabinet node board when using the Stern shaker motor interface cable. The connector (usually with a capacitor on it) at CN1 (gray/black cables) should remain untouched. You are only connecting our interface cable to CN16, which is where your shaker motor is connected. Failure to adhere to this rule may result in damage to your node boards. If ever in doubt, please contact [support@pinlights.net](mailto:support@pinlights.net) and we'll help you right out!

## Installing Pinlights with Magnet Strips

Each set of Pinlights include magnet strips both on the light bars as well as a secondary strip on both sides for mounting to the cabinet. If you purchased your Pinlights with the low profile mounting brackets for the cabinet, skip to the next section.

### Surface Prep

Surface preparation is important for adhesion of the magnetic strips to the cabinet. Use the included alcohol wipes to wipe down both the left and right sides of the cabinet (an area of about 1" below the glass channel should more than suffice.)

### Installing the Wire Clips

The wire clips are an important part of keeping your installation tidy as well as keeping regular playfield motions from exerting force on the Pinlights wire harness. Wipe down the left and right rear sides of the playfield backboard so that you can attach the wire clips and ensure they have good adhesion.

### Mounting the Light Bars

The light bars have polarized magnetic strips on them. Reversing the polarity will cause the magnets to misalign, so it is important to keep them matched. The easiest way to install the light bars is to keep the magnet attached to the light bar. Attach the light bars just beneath the glass channel. Placing your thumbs slightly within the glass channel will help you make sure that your light bars won't obstruct the travel of the glass. Press down firmly to adhere the light bar to the cabinet. Repeat for the other side.

# PINLIGHTS CLASSIC - MANUAL



After the magnet strips are adhered to the cabinet for the first time, it is a good idea to unmount the light bars and firmly press the magnetic strip onto the cabinet to ensure a good bond.

## Installing Pinlights with Low Profile Magnet Mounts

Pinlights offers a Low Profile Magnet Mounting kit for purchase alongside any other Pinlights lighting kit purchase. Simply put, these are small steel right angle brackets (powder coated black) that slide in between your game's glass channel and the wood on both sides of the cabinet. These allow you to secure your Pinlights to the game without damaging your cabinet side walls or art blades. Since they're made from 26 gauge steel, they're also thin enough to raise the playfield (albeit carefully).

### Surface Prep

Each set of mounting brackets includes an optional strip of 3M double sided tape on the inside of the bracket. If you intend to use this to secure the bracket to the side wall of the cabinet, be sure to clean the top edge of the cabinet just below the glass channel off with the included alcohol wipes.

Remove the outer protective film layer from each bracket.

### Installing the Brackets

The brackets **MUST** be installed between the glass channel and the wood. The metal will never touch your playfield glass. Inserting the mounting bracket into the glass channel will result in you breaking the glass.

If you intend to use the included 3M backing tape to adhere the bracket to the side cabinet wall (or your art blades), now is the time to remove the paper lining.

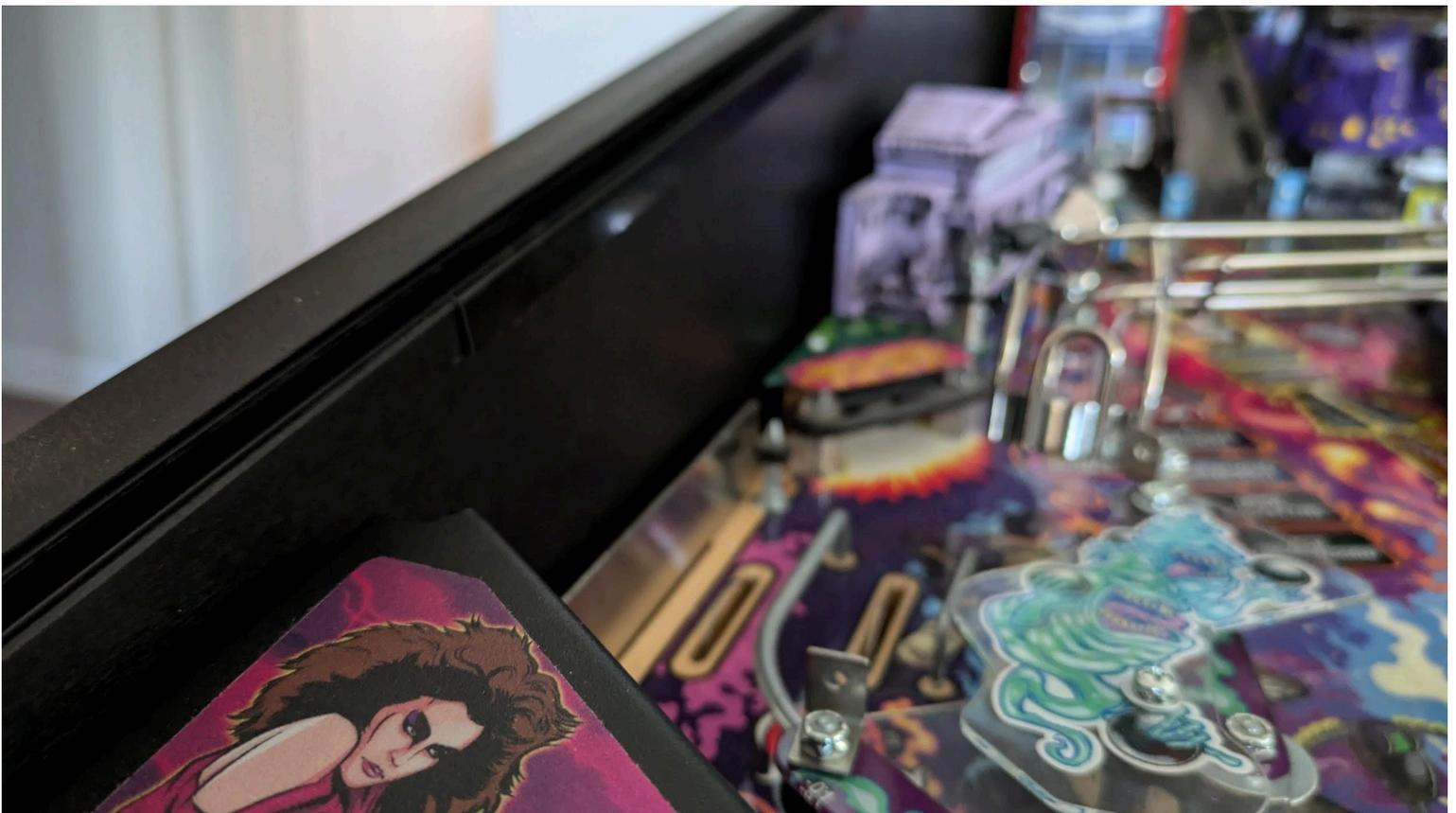
Depending on the age and use of the game, you may require a small screwdriver or putty knife to raise the glass channel just enough to get the bracket underneath.

See images below for a sample installation.

Please note that we always ship magnetic cabinet side wall adhesive strips with your order, even if you order the low profile mounting brackets. If using the brackets, you can peel away the second magnetic adhesive strip from the back of each light bar and store it away. It will not be used.

# PINLIGHTS CLASSIC - MANUAL

**CAUTION:** Exercise caution when lifting the playfield when using the low profile mounting brackets to prevent snags.



## Installing the Wire Clips

The wire clips are an important part of keeping your installation tidy as well as keeping regular playfield motions from exerting force on the Pinlights wire harness. Wipe down the left and right rear sides of the playfield backboard so that you can attach the wire clips and ensure they have good adhesion.

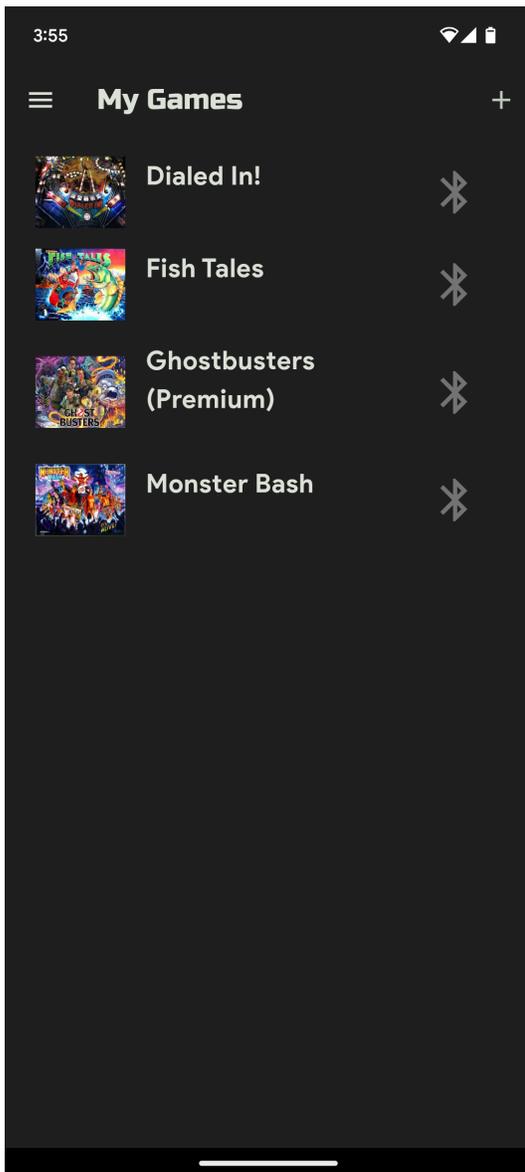
## Mounting the Light Bars

Simply attach the light bar to the metal mounting bracket using the exposed magnetic strip on the back of the light bar. The light bars have a dedicated LEFT and RIGHT side, and the black light bar connector cables should be facing the rear of the game at both sides.

## App Functions

The Pinlights mobile app comes with a bunch of functionality built in. Here we'll break down the screens one by one.

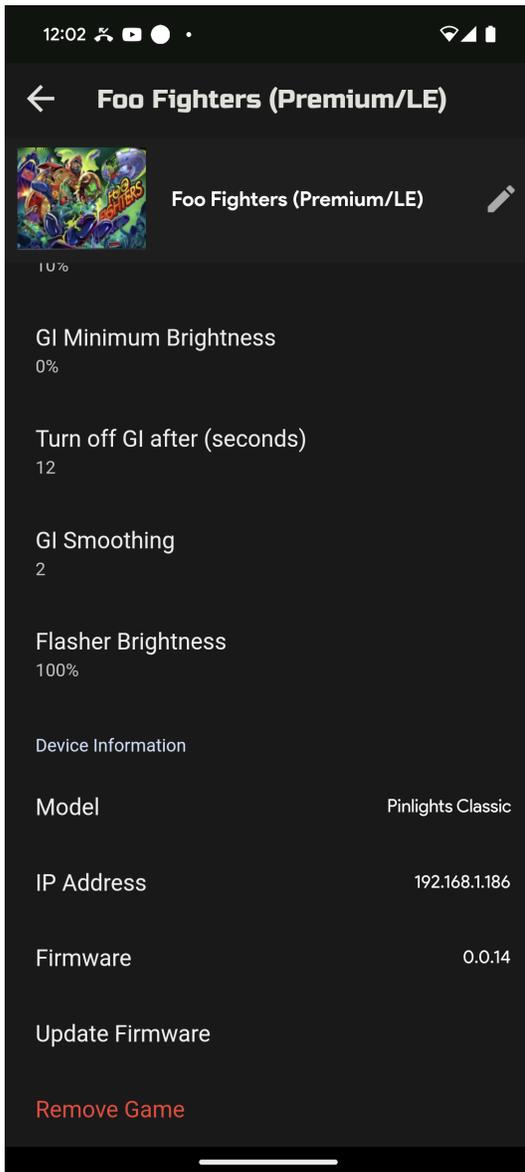
### Game List



The game list screen is the first screen the app opens to. This lists any known games, their device types (Pinlights Classic) and their current power status. **To refresh the status of your games, simply pull down and release on this screen.**

The power icons next to each game allow you toggle the power to the Pinlights. This feature is unavailable when in Bluetooth mode. To adjust power in Bluetooth mode, tap the game and toggle the power from the game settings screen.

## Game Settings



The game settings screen is visible after tapping on a game in your collection on the home screen. When navigating to this screen, the app will attempt to connect to the device either via WiFi or Bluetooth. If a connection cannot be made with the device, many of the options on this screen are hidden.

A summary of each configuration option is below:

- **Power** - Toggles the power state of the Pinlights
- **Duck GI During Flashers** - When the flasher (FL) input activates, disable the GI when firing the flasher, and turn it back on afterward. Use this feature for more dramatic flasher effects.
- **Tournament Mode** - This option disables flasher and GI dimming. This is useful if you want a more uninterrupted playing experience. If you find your lights staying on all the time, make sure this option is OFF.
- **Require GI to be off for flashers to turn on** - ... yeah
- **GI Cool White Mix** - The intensity of the cool white light rail
- **GI Warm White Mix** - The intensity of the warm white light rail
- **GI Flasher Mix** - Allows you to mix in low levels of the purple UV flasher into general game illumination. Helps on playfields with blue tint. (Maxes out at 30%)
- **GI Minimum Brightness** - Forces the Pinlights to a minimum brightness when the GI deactivates in your game. This is useful on games where the GI strobes off and on a lot.
- **Turn off GI after (seconds)** - This is used when tournament mode or a minimum brightness is engaged. This prevents your lights from being left on forever. (Convenient when using minimum brightness/tournament mode features in games where the Pinlights are powered by an "always-on" service port)

- **GI Smoothing** - The intensity of the GI smoothing algorithm. On older games, the GI was operated via AC, not DC. As such setting this value HIGHER on those older games will eliminate visible GI ripple caused by fluctuations on the AC line. Set this value LOWER for newer games whose GI is DC controlled (Stern, Spooky, JJP).
- **Flasher Brightness** - The intensity of the flasher LEDs when pulsed.

## Troubleshooting

### **I can't find the Pinlights controller when trying to add the game in the mobile app**

There is a chance that the Pinlights controller is having an issue connecting to your WiFi. If you suspect that you entered the password incorrectly, or you've never been able to add the controller to your app, hold down the NUKE button on the controller for 10 seconds and add the game again.

### **My Pinlights app isn't showing any options for adjustment when I click my game**

This can happen when the app loses connectivity with the Pinlights controller board. You can give it a slight kick by pulling down on your main game list to refresh inside the app. This will force the app to re-detect and re-connect to any Pinlights devices that are online.

### **My Pinlights device says "Other" for the model and all of the adjustments appear to be missing**

Chances are that the Pinlights app detected another type of smart bulb on your network. Simply remove the game and re-add the device. Make sure you're selecting the device with the name "Pinlights Classic". If you're unable to find your device, hold the "NUKE" button on the control board down for 10 seconds and repeat the process.

### **My unit doesn't power on, or the power seems flaky**

If your control board isn't powering on (the 3 power LEDs in the center don't light up), check the connectivity at the power adapter. The barrel connector should be pushed into the controller board all the way, and the AC power cord on the end of the power brick should be pushed all the way in. Double check these connections as many times they can look solid, but actually not be.

### **My Pinlights stay on after the game powers off**

This is often just a misconfiguration. If you're using the "Minimum GI Brightness" or "Tournament Mode" setting on your game, you need to also set the "GI Off After (seconds)" setting. This means that your lights will only stay on for a limited amount of time after the game powers off.

# PINLIGHTS CLASSIC - MANUAL

## **Testflight is prompting me for a redemption code when trying to install the iOS app**

This is a small bug in the testflight app. Close out of testflight completely and re-scan the Pinlights QR code, or visit [this link](#). You should be able to scroll down on the Testflight screen and hit “Start Testing” to get into the Pinlights app.

## **Where do I install/connect my Pinlights GI or Flasher cables for game X?**

We cannot maintain a list of ALL games and connection points at this point in time. We are constantly discussing connection points with customers, but for absolute certainty, consult your game’s manual for areas where you can connect the flasher and GI sensing cables.

In general, we’ll accept any signal voltage up to 48V. For Stern Spike games, we recommend our 5 pin shaker connector interface for the flasher, and find a round bayonet socket with 2 lugs for the GI. For games with RGB GI (or tiny PCB based GIs), consider connecting your GI to the coin door bulbs using 2 of the 4 included wire taps.

For WPC games, any flasher socket and GI bayonet (round) socket will do.

**CAUTION: Make sure you don’t short the cables together if using alligator clips. For a more secure connection, consider soldering the wires directly to the lugs.**

# PINLIGHTS CLASSIC - MANUAL

## LED Controller Blink Codes

The Pinlights Controller has an integrated LED to give visual feedback on the state of the system. The table below shows the various LED codes (measured by number of consecutive blinks) and what they mean:

1 blink	The controller is scanning for available WiFi networks nearby. This happens each time the controller boots.
2 blinks	The controller is broadcasting a Bluetooth signal.
3 blinks	The controller is trying to connect to a WiFi network.
4 blinks	The controller is connected to WiFi and functioning normally.

## Contact Information

For questions or comments, email us at [support@pinlights.net](mailto:support@pinlights.net)

Or visit us at <https://pinlights.net>