

Bally - 1992
Creature From The Black Lagoon (CFTBL)

Creature “Tail Light Mod”

The Creature “Tail Light Mod” is a mod that is designed in Australia by a CFTBL owner for all the other CFTBL owners around the world that love their game and want to capture that classic 50’s / 60’s feeling of classic car rear tail light while still functional - synced with 2 playfield features - “Parking Ok” & “Move Your Car”. This mod is also a relative simple one to fit, looks cool and suits the era perfectly.



Thank you for your support and we hope you will enjoy this mod for many years to come.

Proudly Designed by



Fitting and Assembly Manual

Parts

Since this is a Do It Yourself type of mod due to the options and some being expensive this is guide to purchase the parts and build yourself. You will need the following parts from various places:

1. Shapeways

- 1 x Bumper (in plastic or metal)
- 1 x Lens
- 1 x Body Panel in the colour of your choice

<https://www.shapeways.com/search?q=swinkscftbl&sort=newest>



- * Costs roughly from \$32.50 to \$169.50 USD for all three parts depending on low end or high end bumper selection.
- * Note 1: Swinks is investigating chroming the 3D printed plastic ones to get that cool look for a much reduced price.
- * Note 2: I did open the Stainless Steel option for those that wanted a metal option. It does have print lines but with 15minutes on the linisher and file you can transfer it to grained SS.
- * Picture 1: is Shapeways preview image in which mine was not as good as this.
- * Picture 2 : is after some linishing and in the tumbler for 12 hours.



2. Electronics Store (Jaycar in Australia)

- 1 x 1.2m of small gauge twin core wire suitable for powering a small led
- 1 x red 5mm led
- 1 x white 5mm led
- 1 x resistor
- 1 x resistor
- 15 centimetres of heat tubing - 2.5 mm
- 15 centimetres of heat tubing - 5 mm

* Costs roughly \$7.50 AUD total

3. Pinball Parts Provider (Pinball Life for example)

- 2 x Twist In Wedge Base Socket

<http://www.pinballlife.com/index.php?p=product&id=283>

* Costs roughly \$0.70 USD total.

4. Hardware

- 1 x 4mm Stainless Steel button head socket head screw
- 1 x 2.5mm metric allen key.
- 1 x 4 x 0.7mm tap

Note: An alternative for the Hardware is use what you have available to suit the hole which 3.5mm which needs to be threaded. See assembly notes on another way to thread.

* Costs roughly \$0.80 AUD for items 1 & 2.

Alternatively you can contact Swinks for the led wiring, pinball twist components and hardware parts and we can supply as a complete kit with most of the wiring completed (except the soldering of wire to the led socket twist inserts as they can only be done after the wire is feed through a tight spot behind the targets on the left hand side - supply but not fasten). We can supply a kit (**Items 2 & 3**) with just the electrical & pinball wedge base socket components for \$35 AUD or including the screw and allen key (**Items 2, 3 & 4**) for \$37.00 AUD (not including the 4mm tap as would have to order in but would cost approximately \$7-8, which we can get it for you if you want as an extra on top of the prices listed above). Note: prices do not include post - would charge at cost only - estimate between \$5-10 AUD to Europe / USA.

Below are the leds that we selected and they worked well, though you will need a resistor inline to reduce the power from 6.3vdc supply from insert lighting to suit the selected leds.

3MM LEDs												
Optical and Electronic Characteristics												
Size (mm)	Viewing Angle (Degrees)	Colour	Lens	Wavelength, Chromatic (nm), Co-ordinates	IF Typical (mA)	VF Typical (V)	IV Typical (mcd)	IF Max (mA)	Max Continuous Preferred Value Series Resistor (ohms) for			
									5VDC	9VDC	12VDC	Cat.
3	45	Red	Diffused	650	15	2.3	40	15	180	470	680	ZD-0100
3	15	Red	Waterclear	660	20	1.8	1500	30	160	360	510	ZD-0102
3	20	Red	Waterclear	625	20	2.0	2100	50	150	360	510	ZD-0104
3	15	Red	Waterclear	625	20	2.1	7000	30	150	360	510	ZD-0106
3	45	Orange	Diffused	625	20	1.9	35	30	160	360	510	ZD-0119
3	50	Yellow	Diffused	585	20	2.1	10	20	150	360	510	ZD-0110
3	20	Yellow	Waterclear	588	20	2.0	3000	50	150	360	510	ZD-0112
3	15	Yellow	Waterclear	588	20	2.2	6500	50	150	360	510	ZD-0114
3	50	Green	Diffused	573	20	2.3	40	20	130	330	470	ZD-0120
3	20	Green	Waterclear	568	20	2.1	500	30	150	360	510	ZD-0122
3	20	Green	Waterclear	520	20	3.2	6000	20	91	300	470	ZD-0124
3	15	Aqua	Waterclear	505	20	3.5	4000	30	75	270	430	ZD-0126
3	15	Blue	Waterclear	465	20	3.3	1500	20	82	300	430	ZD-0130
3	15	Blue	Waterclear	470	20	3.2	3700	30	91	300	430	ZD-0132
3	15	White	Waterclear	0.31/0.32	20	3.2	1000	20	91	300	430	ZD-0140
3	20	White	Waterclear	0.31/0.32	20	3.2	5000	30	91	300	430	ZD-0142

5MM LEDs												
Size (mm)	Viewing Angle (Degrees)	Colour	Lens	Wavelength, Chromatic (nm), Co-ordinates	IF Typical (mA)	VF Typical (V)	IV Typical (mcd)	IF Max (mA)	Max Continuous Preferred Value Series Resistor (ohms) for			
									5VDC	9VDC	12VDC	Cat.
5	50	Red	Diffused	700	20	2.3	8	30	130	330	470	ZD-0150
5	15	Red	Waterclear	660	20	1.7	500	30	160	360	510	ZD-0152
5	15	Red	Waterclear	625	20	2.0	4000	50	150	360	510	ZD-0154
5	15	Red	Waterclear	625	20	2.1	10000	50	150	360	510	ZD-0156
5	15	Red	Waterclear	624*	30	2.1	23500	30	100	240	330	ZD-0293
5	8	Red	Waterclear	616	50	2.1	35000	50	62	150	200	ZD-1790
5	40	Orange	Diffused	635	20	2.0	10	30	150	360	510	ZD-0169
5	50	Yellow	Diffused	585	20	2.1	8	30	150	360	510	ZD-0160
5	15	Yellow	Waterclear	590	20	2.2	2500	20	150	360	510	ZD-0162
5	15	Yellow	Waterclear	588	20	2.0	5200	50	150	360	510	ZD-0164
5	15	Yellow	Waterclear	588	20	2.3	10500	50	130	330	470	ZD-0166
5	15	Yellow	Waterclear	591*	30	2.1	23500	30	100	230	330	ZD-0295
5	50	Green	Diffused	570	20	2.3	10	30	130	330	470	ZD-0170
5	30	Green	Waterclear	525	20	3.5	7500	30	75	270	430	ZD-0172
5	15	Green	Waterclear	515	20	3.5	8500	30	75	270	430	ZD-0174
5	20	Green	Waterclear	525	20	3.2	12000	20	91	300	430	ZD-0176
5	15	Green	Waterclear	527*	30	3.2	64600	30	62	200	300	ZD-0292
5	15	Aqua	Waterclear	505	20	3.5	8500	30	75	270	430	ZD-0178
5	40	Blue	Diffused	470	20	3.3	350	30	82	300	430	ZD-0185
5	15	Blue	Waterclear	468	20	3.2	2500	30	91	300	430	ZD-0180
5	15	Blue	Waterclear	470	20	3.2	4850	30	91	300	430	ZD-0182
5	15	Blue	Waterclear	470*	30	3.2	23500	30	62	200	300	ZD-0291
5	30	White	Waterclear	0.31/0.31	20	3.2	4000	30	91	300	430	ZD-0190
5	20	White	Waterclear	0.31/0.32	20	3.2	10000	30	91	300	430	ZD-0192
5	15	White	Waterclear	0.31/0.32	20	3.3	20000	30	82	300	430	ZD-0195
5	15	White	Waterclear	0.29/0.29*	30	3.2	45000	30	62	200	300	ZD-0290
5	30	UV	Waterclear	405	20	3.3	60	20	91	300	430	ZD-0260

In addition the resistors required for each led to adjust to the 6.3vdc supply are as follows. Obviously your local electronics shop may vary in leds as well as then the correct corresponding resistor but at least you can use this as a guide to take to them to ask for help if required.

Red led ZD-0152 (1.7 v) requires a 220R resistor
 White led ZD-0190 (3.2 v) requires a 150R resistor

Pre-assembly:

Since this mod is a DIY type mod there is no pre-assembly unless you got the wiring kit from Swinks as stated on the previous page. Either way please read all of the manual and assume you have to do everything from scratch and become familiar with the various steps and if you do not understand anything please contact us and we will do my best to help you.

Step 1 - Prepping Your Shapeways Parts

- The Body could do with a clear coat to shine it up but not required - as the one in the photo on the front page is a raw printed part.
- Depending on the colour of the body it may need a undercoat to the inside (light or dark) to stop a possible light bleed through but this can be brushed in.
- The lens does not require any work so it is ready for parts to be fitted..
- The bumper will need the rear hole tapped to either 4mm or to an imperial size close though may need the hole prepped for the correct size. See the image of the hole in question. If you are tapping a metal component, take it easy & slow and lubricate the tap with a little bit of oil or bees wax so to avoid breaking the tap or stripping the hole.
- If the bumper is metal it does not have to be treated as ready to go in but do check that the lens fits as you may need to do a little bit of minor filing to gain a nice fit, but if the bumper is plastic either paint a colour or go to you local hobby shop and see what options there are to give it a chrome look if that is what you are after. Though achieving this look will be a challenge as nothing beats the real thing of chromed / plated metal. The mod on the front page is pure silver and looks very cool, but not cheap. As stated before we are investigating getting some white 3d printed parts plastic chromed to see if this is a viable option for people to purchase directly off me and if so will make complete kits available from Swinks.

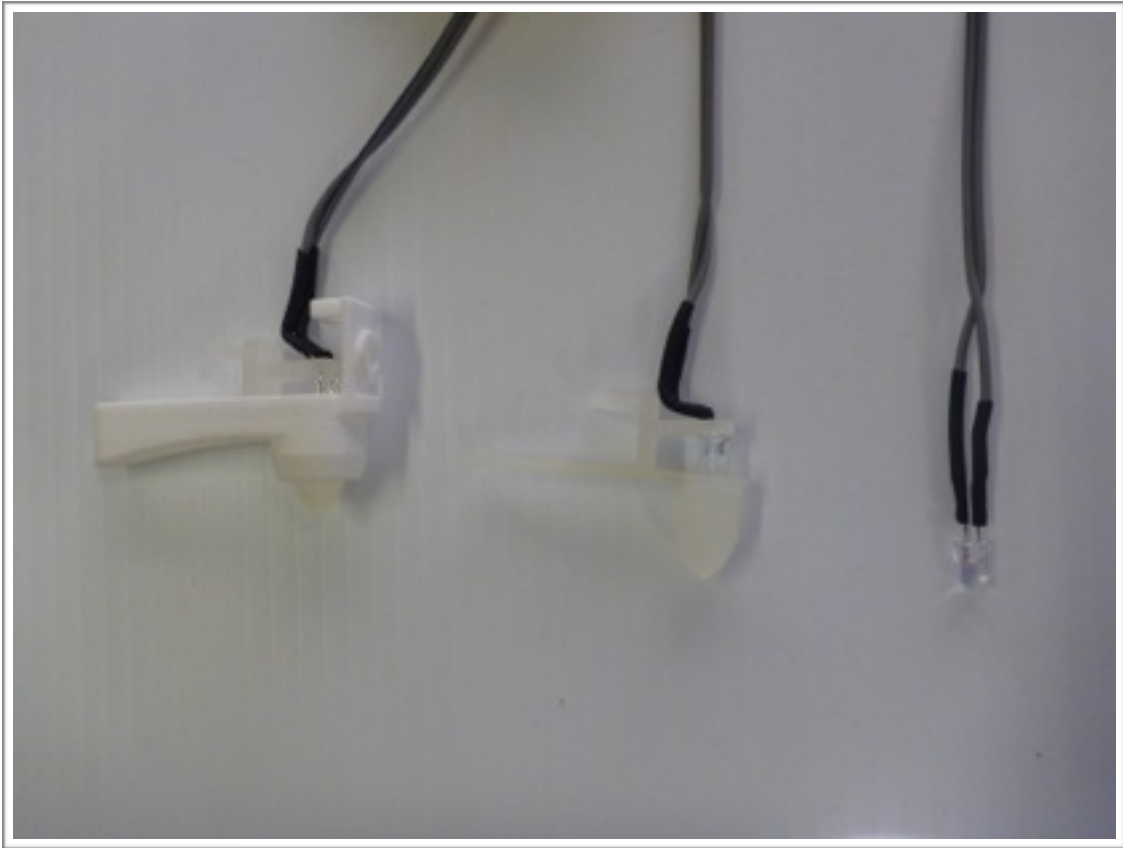


Step 2 - Making the Lighting / Wiring Harness

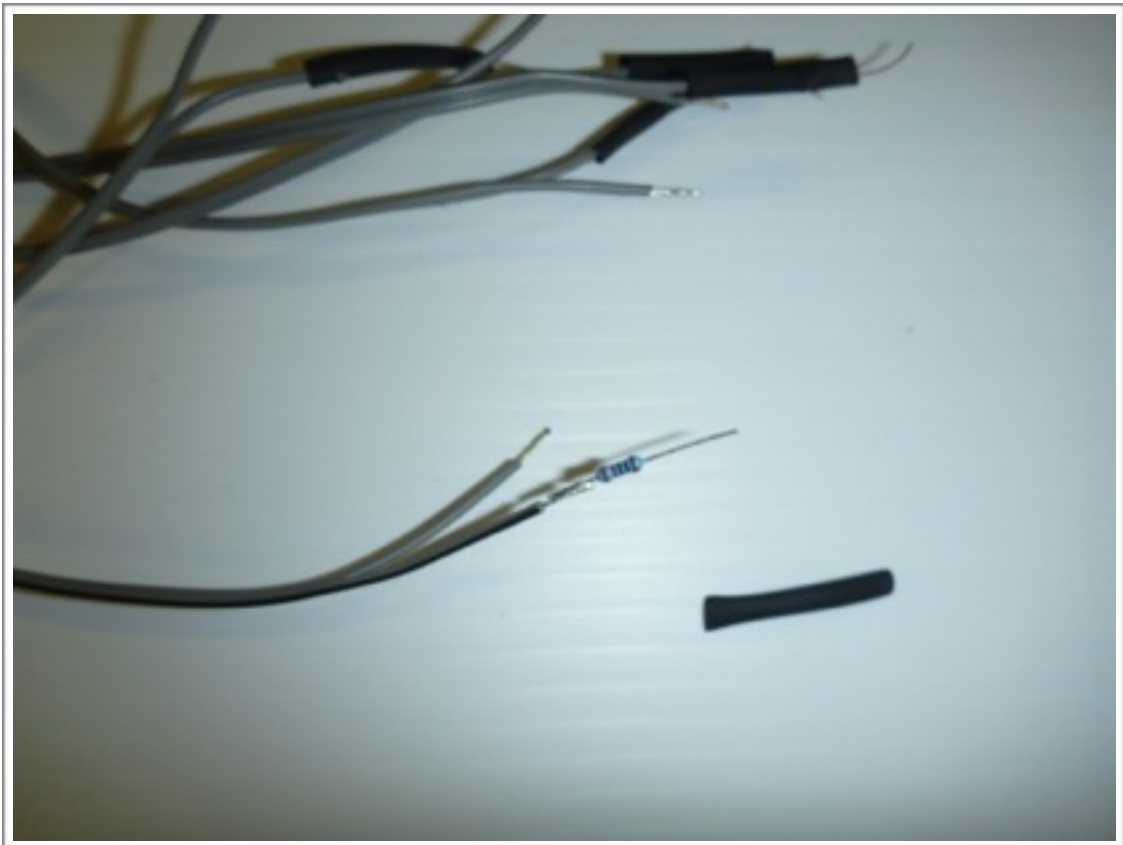
- Cut the twin core cable into 2 lengths of 600mm
- Split each end of the twin core of now both cables back 40-50mm (no more)
- Strip each wire back approximately 6mm / 1/4" and tin with solder to both wires at both ends of the 2 cables.



- Cut 6 pieces of 20mm long 2.5mm heat shrink and slide over just one end of the cable over the tinned wire (only after it has cool down) as far back as possible.
- Get a white led and you will notice one leg is longer than the other - this is for the positive feed to be connected to.
- Trim the positive leg of the led back so it is approximately 10mm long and now select the end of your cable (piece with a black / coloured strip preferably) and solder the end to the led leg.
- Now repeat the process with the other remaining wire to the remaining leg of the led. This wire won't have a stripe on it so will be the negative power feed.
- Slide the heat shrink over the resistor until it is roughly 4mm away from the led for both wires and shrink down over the joint.

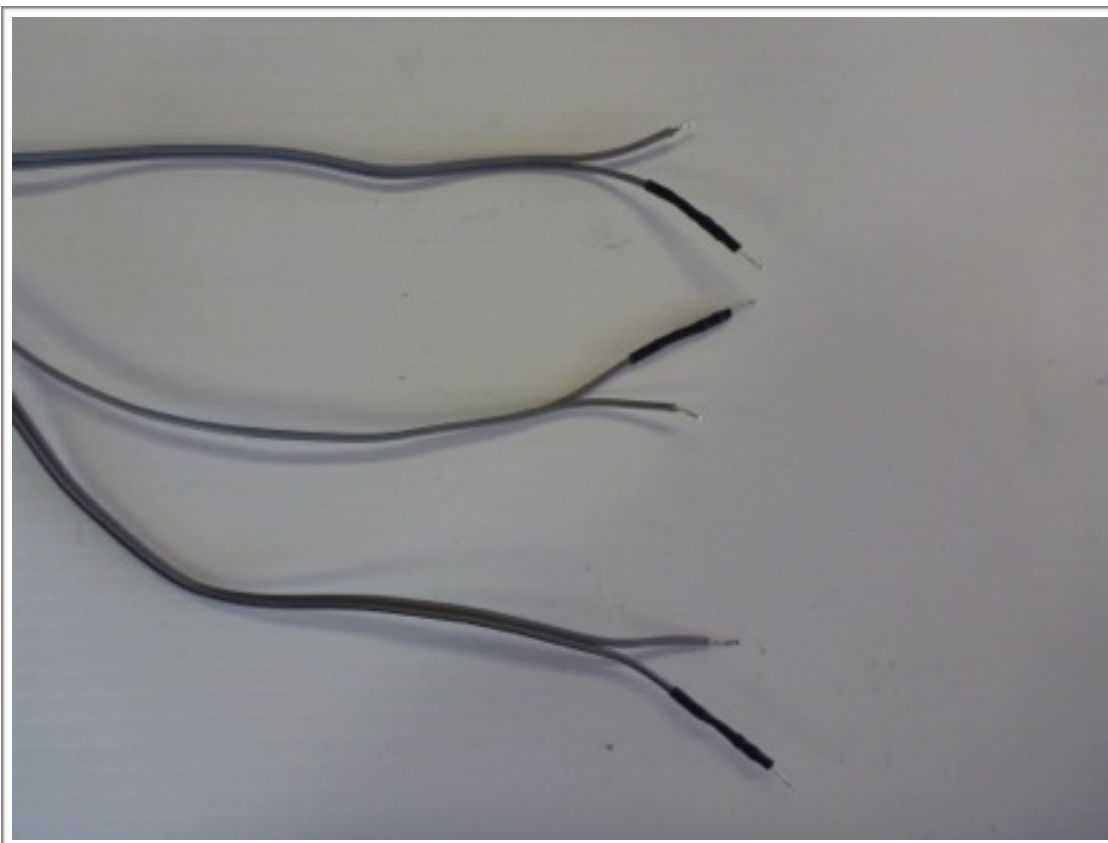


- Repeat the process for the red led.



- Now we need to attach the correct resistor to the correct led to the positive wire only on both cables. Before doing so trim both legs on the resistor back to 10mm long from the resistor body.

- Once the resistors are soldered slide the remaining heat shrink over the solder joint and over the resistor with about 6mm of the resistor leg exposed.



SAFETY NOTE: Before you begin with fitting parts to the game, make sure that your machine is powered off and the cord running from your machine to the wall outlet has been disconnected.

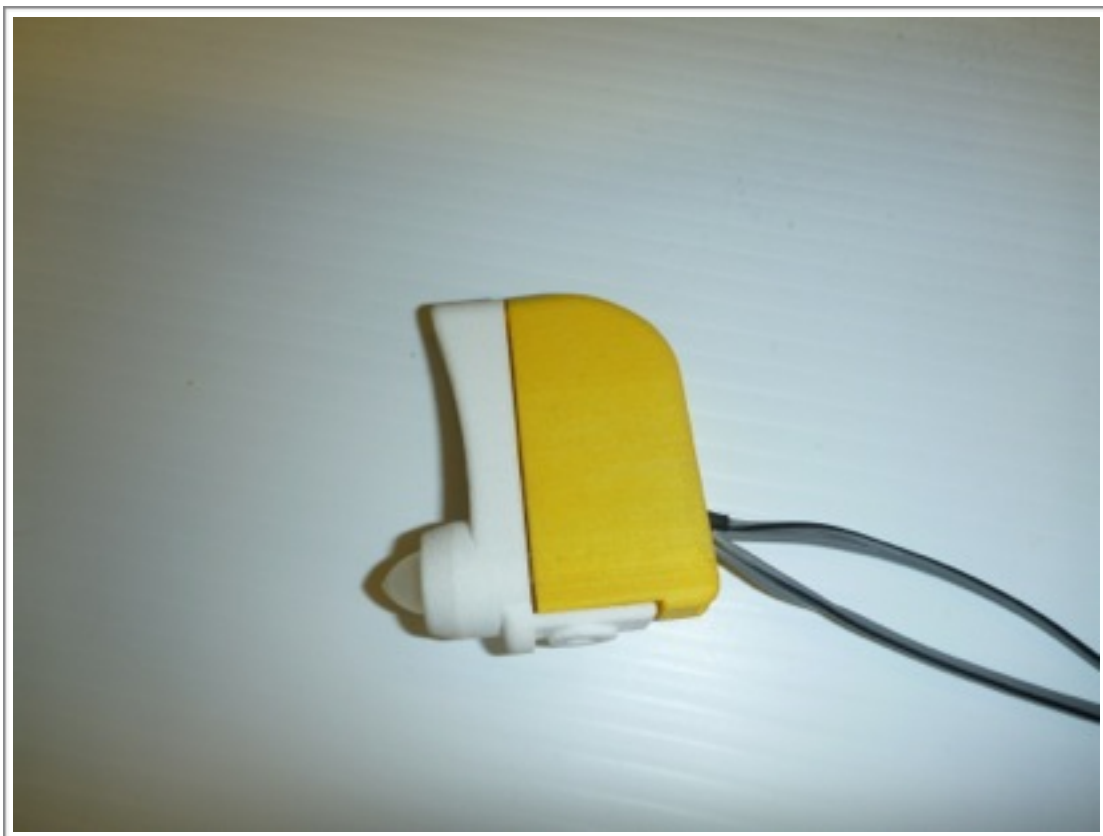
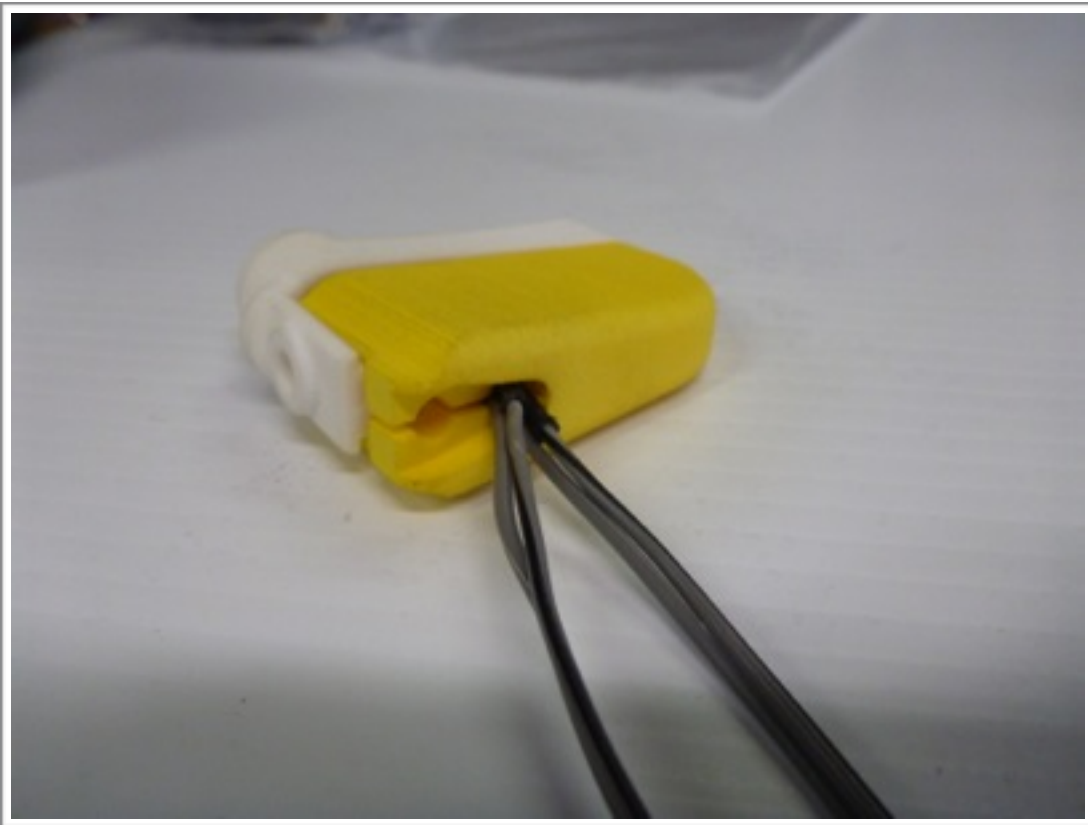
Read through these instructions completely before attempting the installation of this enhancement. Although you may know your machine inside and out, there are a few things to consider before proceeding.

Step 3 - Assembling the Mod to the Game

- This is designed for in front of the targets on the LHS of the game as there is a post already there which has a threaded hole in the top. But you may choose to use a different location so you the following process as a guide.
- Simply locate the bumper over the post and screw down with a pinball imperial screw regular used in games that suits the existing post. see picture below.



- Next install the leds into the lens - we went with white to the bullet shaped lens and red for the tall vertical flat lens. Before installing please note that the leds I selected are very directional which is perfect for the bullet shaped lends but not the flat vertical lens - some people grind a flat on the end of the led to help displace the light instead of having the spotlight look. The best way to install these is one at a time slide the led into the slot and carefully rotate 90 degrees to lock into place - hence the importance of a 3-4mm gap between the led base and the heat shrink. Once both leds are installed slide the lens carefully into the post fastened bumper housing.
- Now take the body panel and slide the wires through the top hole of the body panel as the bottom hole is for the screw to pass through to close body to the bumper housing. There is a slot in the body panel to allow an optional worst case body panel swap out to another colour without un-soldering parts under the playfield.



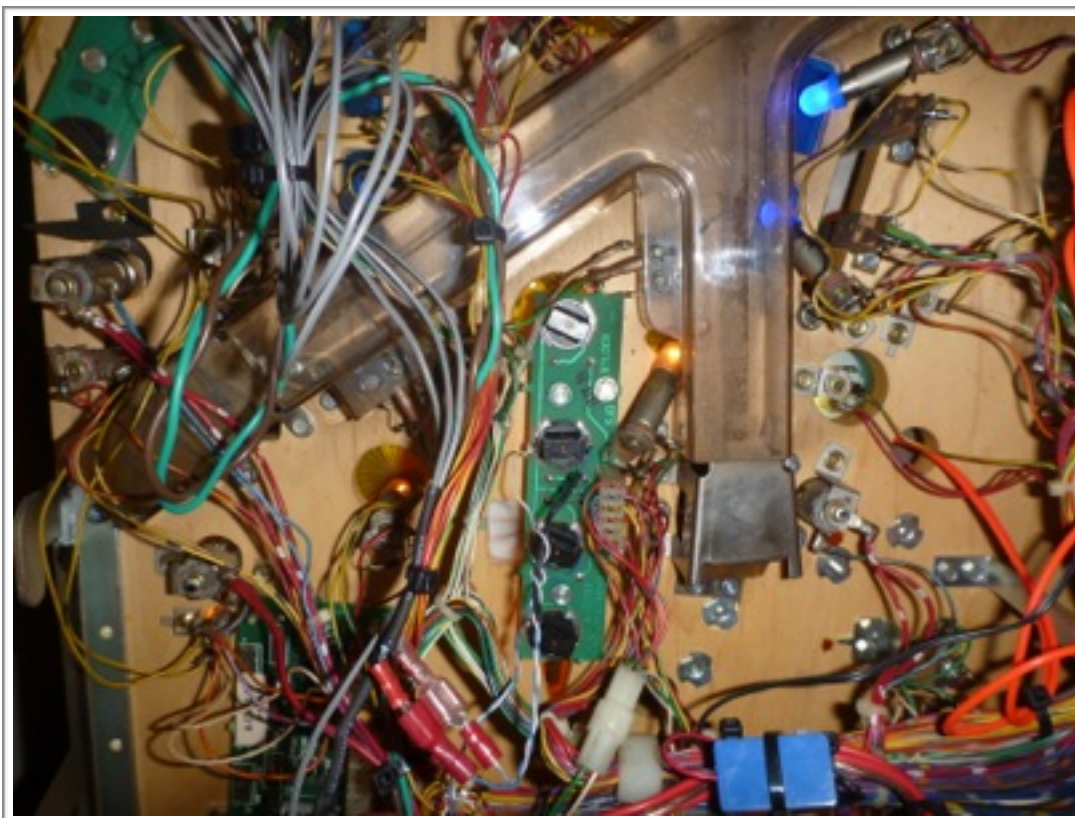
- You may need to bend the wires a little to allow a smooth pass through to the exit point of the body panel - a little fiddly but once done you don't need to do it again. Slide the body panel up and locate into the bumper housing for a nice neat fit and fasten with the M4 x 10mm button screw or equivalent.

- Adjust the angle of the mod to your liking.
- Now take the 15cm 5mm heat shrink and feed onto the cable and butt it up to the exit point of the body and shrink in place - ensure wires are nicely kept together so it will be neat & compact once shrunk in place.
- Now feed the wires through the bottom of the target slot under the plastic just behind the post that the mod hooks into.
- Now lift the playfield (remove the balls of course before lifting) and locate the light board under the "Parking Ok" and the "Move your Car" insert and this is the final place to connect to.
- I chose to get new - Twist In Wedge Base Socket in which I had to remove a little bit of the plastic to expose the brass tabs. I then soldered a end of the resistor to one brass tab and a wire to the other brass tab - but ensure just to the back side only not letting solder drip to the other side which makes contact to the light board.



- Install a led and plug the red wire into the "Parking Ok" and the white led into the "Move Your Car."

Note: even though we wired the wire with the strip to the positive leg and the resistor to the positive striped wire the testing phase comes down to a little bit of luck but at least the led in the mod is protected with a resistor to the positive leg. A led will only work one way when plugged into the board so is a 50/50 chance that it may work first go, and may need to be rotated 180 degrees to get working. The led in the mod is the same so you may need to rotate the twist edge base socket 180 degrees to get the mod led working - don't panic just trial and error.



- Now tidy up and remove any slack in the cabling under the playfield.
- Lastly I had to use a small cable tie under the mod to keep the wire close to the post to avoid hang ups with the target. Place this cable tie as high as possible to the underside of the mod and with the bulky head of the cable tie hidden under the plastic. I did notice that once this head



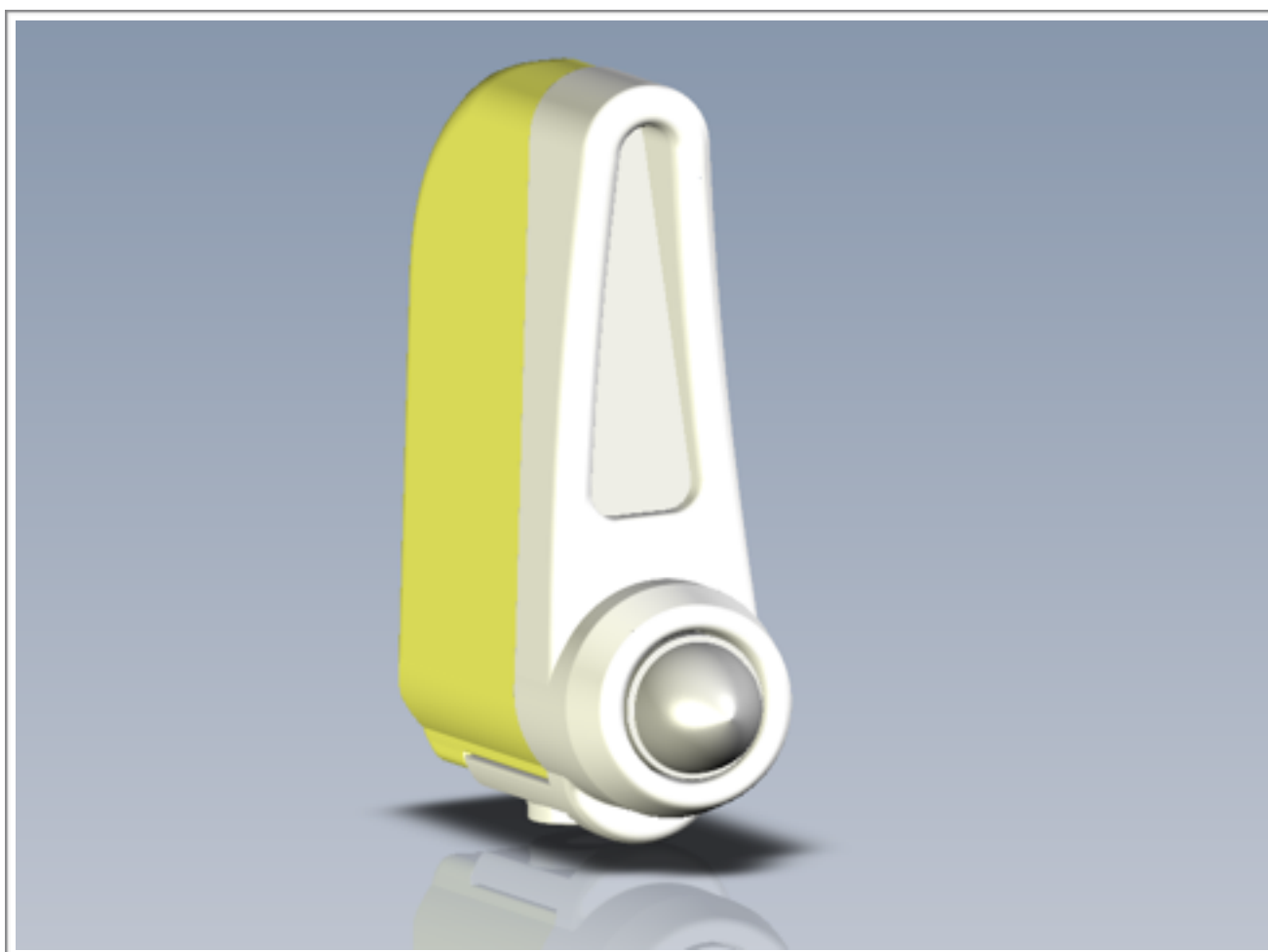
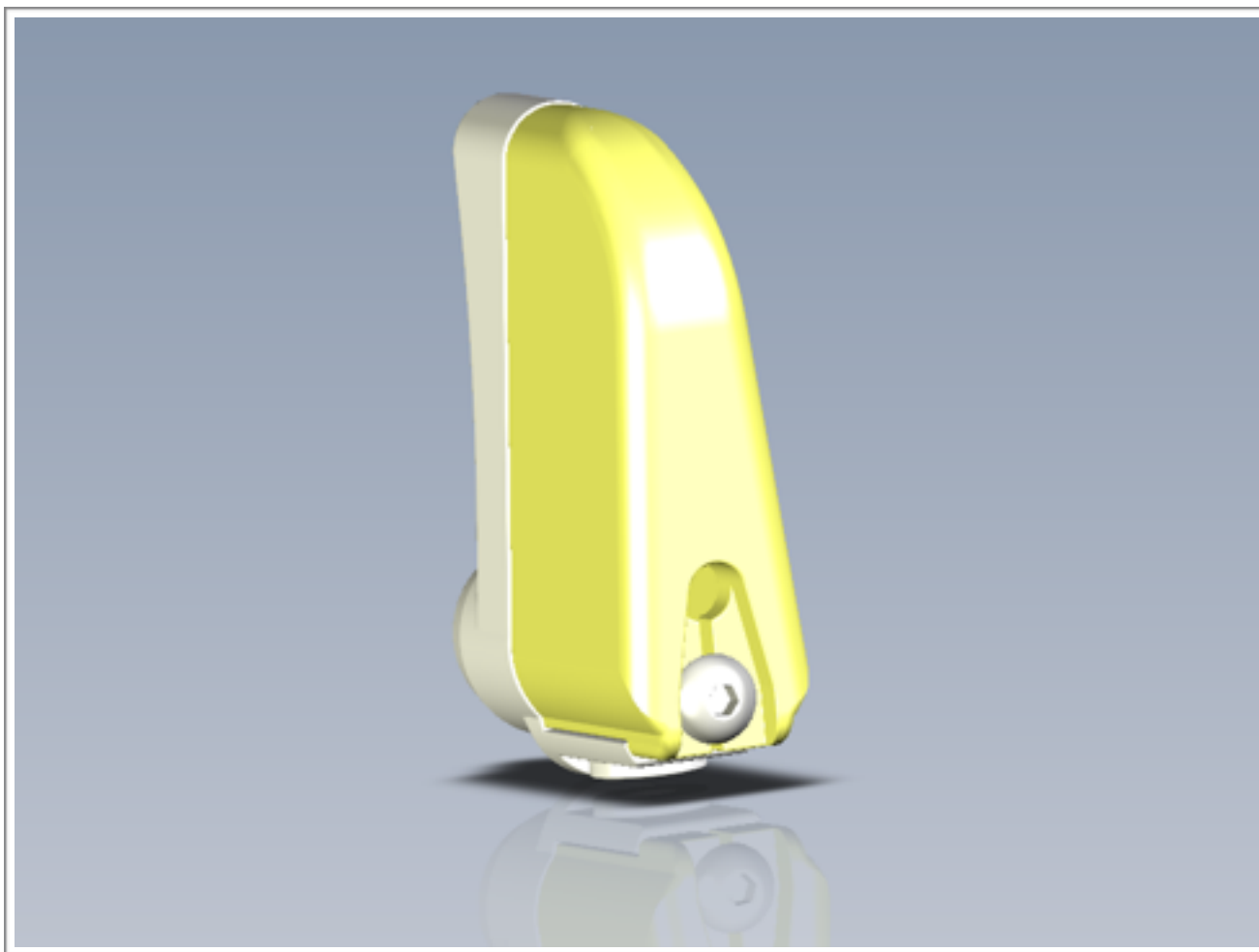
of the cable tie moved a little and when the target was hit next to the mod it got stuck in as got caught up with the target. You will see the target get caught and held back and your game will get a error dot with the error on the cola target.

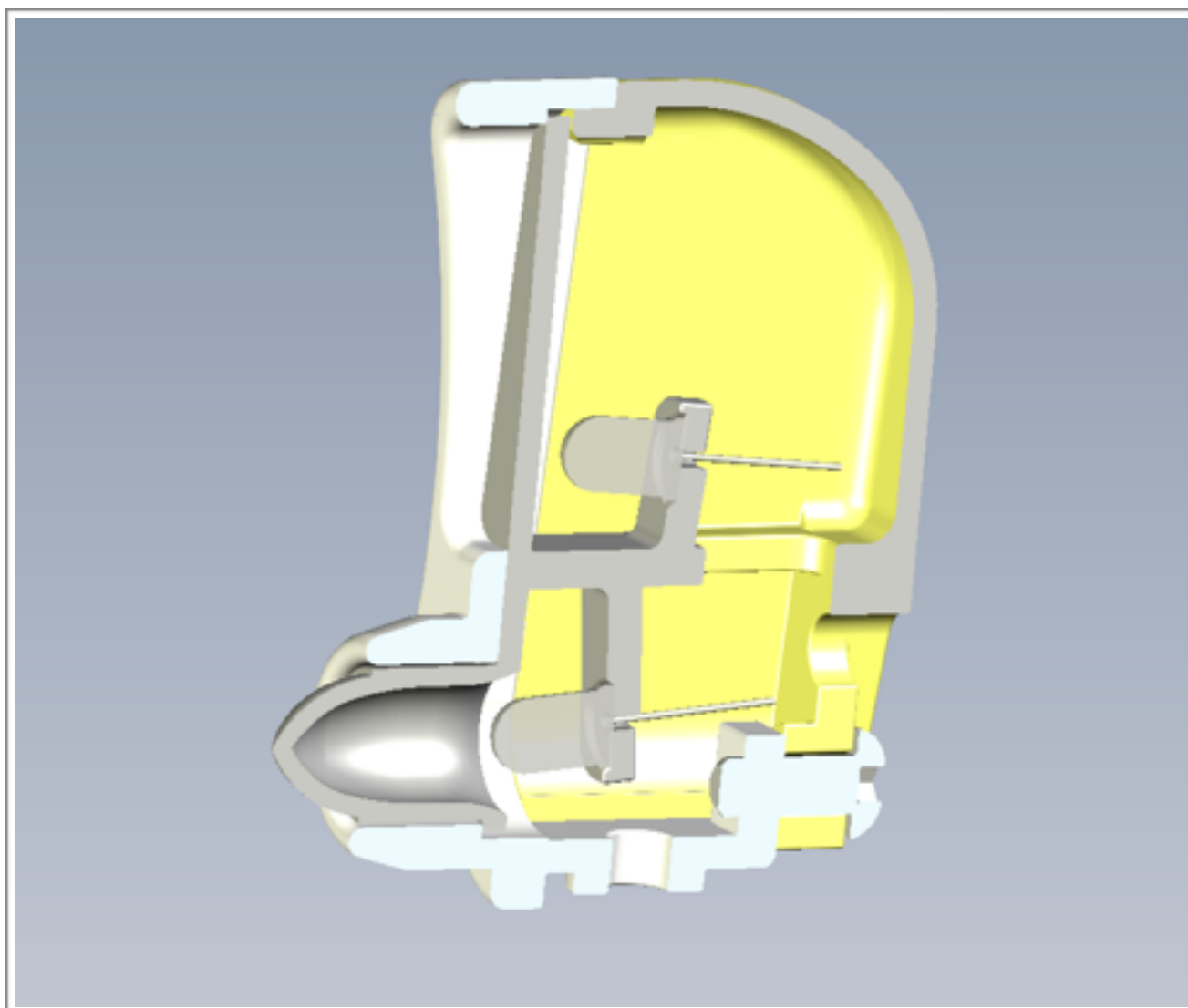
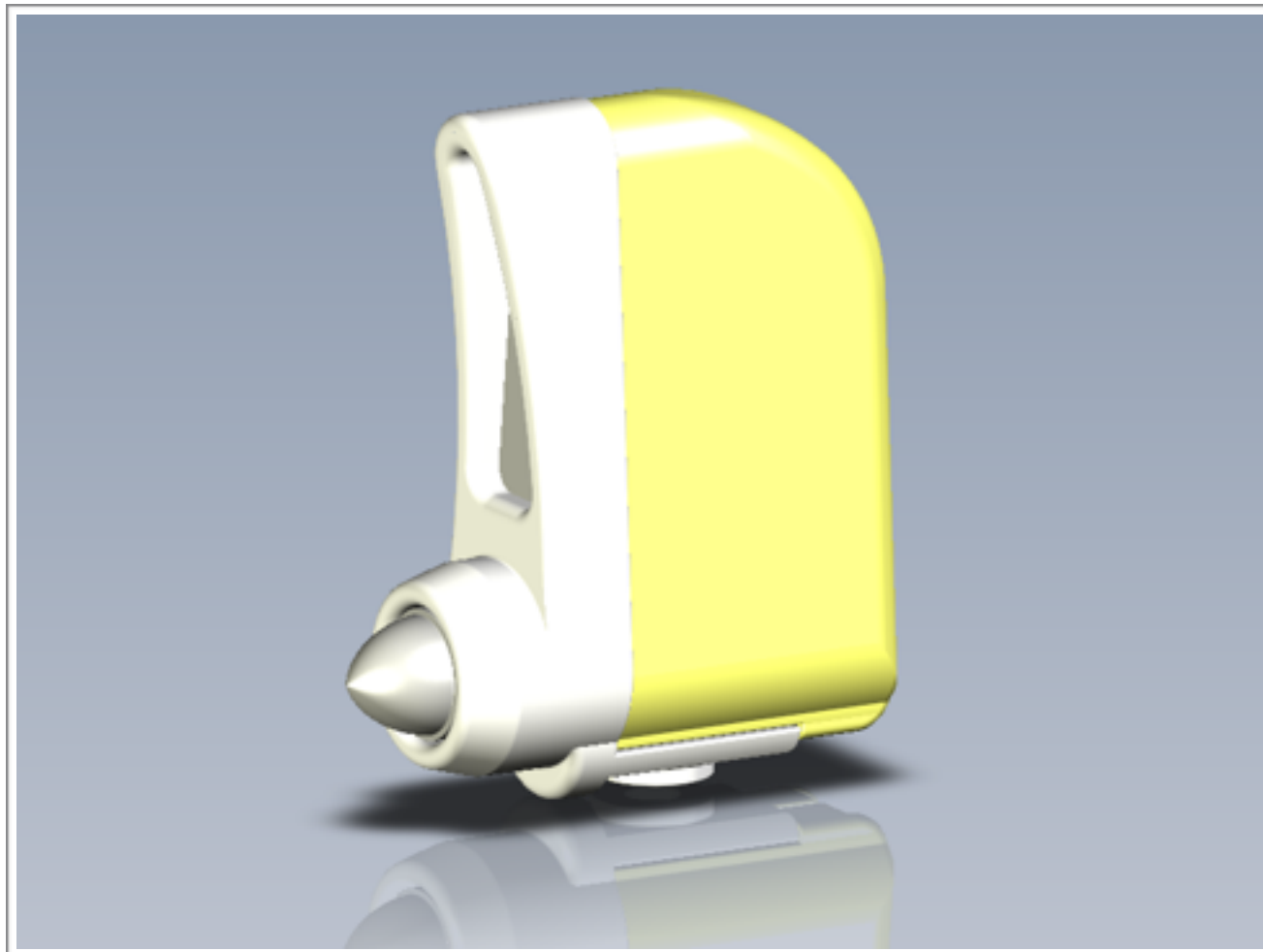
- You are now good to go and enjoy your mod.

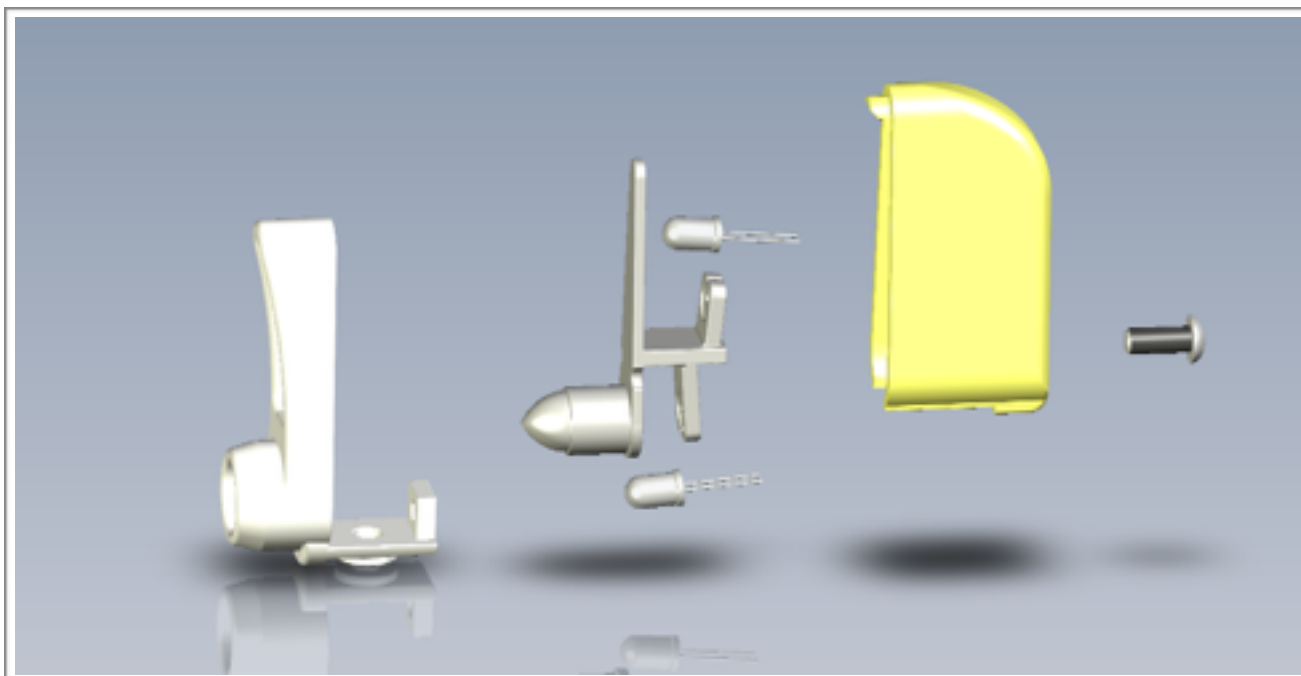
Personally I love this mod as it syncs now with 2 features on the playfield which for us these inserts are hard to see as they are blocked visually by the curly ramp.

Enjoy and please send me your feedback.

Below are some render images to help with the assembly.







RETURN POLICY:

There is no return policy as this mod is a “do it yourself” mod from Shapeways. Refunds are not given as Shapeways is a separate entity to Swinks.

PRODUCT DISCLAIMER:

Please remember that this is a “MOD.” We took great effort in designing and testing our system in order to produce a high quality product, but it is not a factory original or an approved part for your pinball machine. There is the risk of unwanted side effects with any modification to a factory game and there are many factors that can cause undesirable side effects after installation of such a modification. As such, we cannot assume responsibility for game malfunction, damage to the game or surroundings, unwanted electrical emissions, personal injury, or other adverse effects caused by the installation of our MOD.

PRODUCT QUALITY DISCLAIMER:

All parts are made to the highest quality possible. The 3 main components are 3D printed and some sections may have some visible print lines. You may notice these print lines when handling but once the mod is painted and installed they will not be clearly visible from the players perspective. In downloading this manual and purchasing the mod you are accepting the finish quality of this relatively affordable unique mod.

Buyers Feedback

I am known as Swinks on Pinball Forums like Aussie Pinball as well as Pinside and have a large range of products. I am a Mechanical Engineer by trade so I focus on making a quality well engineering design / product.

Much of my designs are readily available at Shapeways for many different pinballs as well as other items.

<https://www.shapeways.com/search?q=swinks&sort=newest>

Here is some of the feedback from various people who purchased different products from me:

Snackbar

- "Well I received my snack bar mod today and was impressed before I'd even assembled it the aqua moulding and decals look like a factory add on Jady had already won me on this mod just from that"
- "It looks absolutely shit hot, well made and very professional - cannot wait to get it in the machine!!"
- "it looks brilliant mate! Can't fault you or your product: very professional on all levels"
- "You certainly see the quality and engineering that went in to this."
- "the quality and the engineering are top rate, very professional. Love the redesign above the scoop too where the original plastic used to bend up (and usually break). A lot of thought, time and effort have obviously gone into this mod to make it look like it should of been there from day one - worth EVERY cent. Every CFTBL should have this mod."
- "This mod is built like a brick sh%t house! Unbelievable! If you were thinking of getting this.....GET IT! Perfect communication, perfect shipping, and a perfect mod! Easy install and this bad boy is built to last!"
- "Looks great, very nice work on your part man..."
- "remembered as one of the classic mods in the hobby"
- "wow I was impressed with how well its made"
- "Great work very well made!!!"
- "Really nice work and I appreciate your attention to detail, both functionally and aesthetically! Super nice quality."
- "You are my god"

Plunger Knobs

- "ALL I CAN SAY IS KICK ASS! I MAKE ALOT OF THESE FOR MY MACHINES , HE DID GREAT !"