

Technical support - User

Alice's Adventures in Wonderland

Manual





Where applicable: based on software release 1.05

Date released 23rd April 2026

Caution:

If you are not comfortable working on pinball hardware and/or high voltage electronics, please get professional support for this. In general: use your common sense. Don't experiment. Don't be a nihilist. Only skilled and trained people are allowed to open this system. The manufacturer accepts no responsibility for injuries caused by unauthorized operation. Keep long hair, fingers, jewelry, etc. away from turning parts of the system.

Disclaimer

- Dutch Pinball B.V. is not liable for damages resulting from non-compliance with the instructions in this manual, or from modifying the machine.
- When setting up the pinball machine, the backbox must be secured with the backbox latch and the two provided wing screws.
- Repairs, maintenance, and electrical connections must only be carried out by a qualified technician.
- Never remove warning or information stickers from the machine.
- Never use the machine during a thunderstorm. In that case, immediately disconnect the plug from the power supply.
- Do not leave pieces of the packaging lying about (plastic bags, carton, etc.), keep this out of reach of children as it poses a danger to them.
- Do not insert objects into the air vents.
- Do not expose the machine to shocks and vibrations. Do not use excessive force when installing or operating the machine.
- Do not turn the machine on and off in rapid succession, this can shorten the longevity of the machine.
- Only use the machine indoors and prevent contact with water or other fluids.
- Only use the machine if you are familiar with its functions.
- Prevent exposure to fire and do not place the machine near inflammable fluids or gasses.
- The housing must remain closed during usage.
- If the machine is not in use or when it must be cleaned, you must disconnect the plug from the power supply. Always use the plug to disconnect the power cord from the power supply. Never remove the plug from the power supply by pulling the power cord.
- Make sure the machine is not exposed to extreme heat, moist or dust.
- Make sure the power cord does not get entangled and do not use the cord if it is damaged.
- Do not immediately turn on the machine after it has been exposed to large temperature fluctuations (such as after transport). Condensation can damage the device. Let the machine gradually reach room temperature before turning it on.
- For adult use only. Children can only use the machine under supervision of an adult. Never leave the working machine unsupervised.
- When replacing the fuses, only use fuses of the same type and class.
- The user is responsible for correct installation and use of the machine. Dutch Pinball B.V. is not liable for damages resulting from misuse or an incorrect installation of the machine.
- If this machine is used in a manner not described in this manual, the product can be damaged, and the warranty will be voided.
- Any other use can lead to hazards such as short circuit, burns, electrical shocks, constriction, jamming, etc.
- Do not place objects, food, or beverages on the pinball machine.
- Do not kick, push, or hit the pinball machine. Playing pinball is a lot of fun but can be frustrating and trying too..
- The pinball machine must never be tilted. There is risk of crushing and even death!
- The pinball machine can only be connected to a grounded power supply. Any other use can lead to hazards such as short circuit, burns and electrical shocks.

Safety Warning

- In general: use your common sense. Do not experiment.
- The maintenance of this machine or the replacement of parts can only be carried out by a qualified technician.
- Always use utmost care when maintaining the machine and always consult the manual for replacing or maintaining parts. The manufacturer accepts no responsibility for injuries caused by unauthorized operation.
- Use only original spare parts. Modifications may only be carried out with prior written permission of Dutch Pinball B.V. The use of unauthorized parts voids the warranty.
- Never tilt the machine! There is risk of crushing and death!
- This product is protected by copyright. Do not copy Alice, be original!
- Keep long hair, fingers, jewelry, etc. away from turning parts of the system.
- The power supply shall be installed near the equipment and shall be easily accessible. The main plug shall be connected only to a power supply provided with a protective earth contact.
- Do not allow liquid to get into the machine.
- Always unplug the machine before you open the playfield because of the high voltage and/or damage that you can cause to the system.
- Do not install or store in rooms subject to extremes of temperature and/ or humidity. The system should always be transported with the backbox DOWN.
- A small percentage of the population can be prone to seizures when exposed to certain images, such as flashing lights or patterns. Also, persons without any medical history of epilepsy can have an underlying condition which can cause an epileptic seizure when exposed to flashing lights.
- Also, people with epilepsy and/or balance disorders should stay away from this game.
- Do not play this game too long. It might cause pain in your arms, hands, fingers but also in your legs. In fact, in your whole body including your eyes and other senses. Also, people with heart or brain problems should not play this game. Dutch Pinball will and cannot be held liable for any harm or damage. Play or look at this game at your own risk.
- For adult use only. Children can only use the machine under supervision of an adult.
- People under 21 years old are not allowed to play this system without explicit permission and guidance of one of their parents.
- The manufacturer accepts no responsibility for any harm done to children, adults and/or seniors nor to any pets or objects in the house or from outer space.
- Also, take good notice of the section Important Notice for technicians when working on Alice page 18.

Warranty and Return policy

Warranty terms

- The electronic system, the mechanical parts, and the software of this Dutch Pinball B.V. pinball machine are designed to work with original accessories and machines of Dutch Pinball B.V. Any alteration, reparation or modification with parts not produced by Dutch Pinball, the warranty will be voided. Also, any alteration, reparation or modification by a non-authorized person will void the warranty.
- A warranty period of 1 calendar month applies to most parts, unless specified otherwise in the description.
- The warranty does not apply to wearing parts, such as rubbers, silicone rings, stickers, and the glass plate. The sole liability of Dutch Pinball B.V. concerns the replacement or repair of parts which have been returned during the applicable warranty period.
- Open the packaging and inspect the pinball machine immediately upon receipt. If the packaging shows obvious signs of transport damage, do not accept the package, or only under strict reservation.
- When returning the pinball machine, use the original packaging. The shipping costs are at the expense of the buyer.
- Unless specifically agreed otherwise, no other warranties, either explicit or assumed, apply to the pinball machine.
- The maintenance of the pinball machine or the replacement of parts can only be carried out by a qualified technician.
- This document and the information contained therein may not be reproduced or used, partially or in its entirety, without express written permission of Dutch Pinball B.V. The products in this manual, the company name and the designs are protected by design registrations, trademarks, and copyright. In case of infringement or imitation, legal action will be taken. Dutch Pinball maintains the right to change specifications without prior notice.
- Damage to the sculpts not reported immediately upon receipt of the game is not under warranty.

Return policy

- Only new, unused, and unmodified parts and accessories can be returned or exchanged. The parts or accessories must have been purchased with Dutch Pinball B.V. or one of its authorized distributors. Parts or accessories which have been used or show wear and tear will not be accepted.
- All return requests must be submitted within 30 days after purchase. This can be done by sending an email to support@dutchpinball.com. You will then receive instructions for further processing.
- All shipping and additional costs are at the expense of the buyer.
- If the complete machine must be returned, use the original packaging. Parts must be properly packed. Dutch Pinball B.V. is not liable for any transport damage or loss of shipments during transport.
- A purchase receipt must be submitted.
- If it is determined that restitution will take place, it will be done with the same payment method as the original payment.
- Exchange options depend on availability.
- Dutch Pinball B.V. reserves the right to reject the request to restitution or exchange.
- Dutch Pinball B.V. reserves the right to change the provisions of this policy at any moment.

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This manual is to help you to maintain your AAIW to the best way possible and make sure you enjoy it to the full of the intentions of the builders. They have taken pride and joy in building the AAIW for you and hope it will give you joy for many years.

If you have questions or issues which are not solved in this document, please contact Dutch Pinball support at support@dutchpinball.com

Clearly mention in the subject header the serialnumber of your AAIW and a short description of your issue. In the email itself include as many info as you have, to be able to help you the fastest and best way possible. Pictures and-or video can add a lot.

Also, we would like to refer for more info to the AAIW section of the Dutch Pinball website, https://www.dutchpinball.com/alices_adventures_in_wonderland . Available here is for instance the latest release firmware and you can register your game. Also an Operational manual and Rules manual can be downloaded here.

Disclaimer: this manual has been made with great care and attention, but errors can and will always happen. Take care when maintaining your ALICE and always double-check what is written. DP cannot be held liable for any errors when using this manual.

When working with the sculpted plastics, be extra careful and don't overtighten the screws! Damage to the sculpts not reported immediately upon receipt of the game is not under warranty.

Also, take good notice of the section Important Notice for technicians when working on Alice page 18.

Changelog compared to previous release:

- Release 0.50: first release 9th April 2025
- Release 0.51: update USB update FAQ, updated PROC reseal faq, added several faq
- Release 0.52: update New SSD faq, added several faq, added Dimensions
- Release 0.53: updated Playfield vertical FAQ, flash new image FAQ, updated switch test
- Release 0.54: added Stumblor faq, diverter faq, ramp entrance adjustment, updated USB image flash procedure, added watch shot faq, corrected several typo's
- Release 0.55: added Removal Scoop faq, Stumblor board connections, Safe motors service bulletin, droptarget adjustment, updated Fuses, added Checking Opto, added used rubbers
- Release 0.56: updated Software history, write image from USB faq, operate Alice from Keyboard, updated fuses faq
- Release 0.57: updated write image from USB faq,
- Release 0.58: added ball stuck in CAT scoop faq, added adjust Orbit shot, added remove watch display faq
- Release 0.59: added flashers backplate service bulletin, changed USB update, update flipperissues, added flash topper software on PC, update trough faq, updated PDLED/PROC faq
- Release 0.60: updated right to left orbit shot, droptarget assy faq, added apron led switch faq, updated USB update
- Release 0.61: update topper faq, updated image faq, added Fuse F2 blowing, added bottom flippers stop working faq
- Release 0.62: updated coinop faq, added used leds and fets, updated USB update faq
- Release 0.63: updated topper faq, updated Stumblor board connection faq, updated PDLED-PROC faq, updated full image install faq

Frequently asked questions

Below questions DP gets more often with a reference to the pages where a possible solution for the issue is described:

- Disconnected Translite and don't know where to reconnect it: page 79
- Leds act weird-funny? Reseat the PROC board and if that doesn't help also the PDLED boards, for how-to see page 95
- Cabinet speaker stops mid-game or want to adjust Bass level? See page 88

Common parts and Tools required

Tools

When working on your Alice the following 'special' tools (compared to a Stern/BW pinball for instance) are likely needed:

- Metric nutdrivers and-or wrenches size 5 ; 5,5 ; 7 ; 8 ; 10 mm
- Torx drivers size TX6 ; TX8 ; TX10 ; TX15 ; TX20 ; TX30

Of course, this is besides the usual tools like screwdrivers, pliers, etc.

This list is subject to change.

Parts

Most parts directly related to pinball are common available parts used also with many BW pinballs and can be bought for instance with Pinball Life.

Examples:

- Flippercoils FL-11630: https://www.pinballlife.com/williamsbally-fl-11630-flipper-coil.html?Category_Code=
- Coilstops are standard BW WPC type A-12390, [Pinball Life: Williams/Bally Flipper Coil Stop A-12390](#)
- Plungers are standard BW WPC type. Left flipper [Pinball Life: Williams/Bally Left Flipper Plunger and Crank Assembly](#) , right flipper [Pinball Life: Williams/Bally Right Flipper Plunger and Crank Assembly](#)
- Flipper coil sleeve is type 03-7066-5, https://www.pinballlife.com/2-316-coil-sleeve.html?srsId=AfmBOorlxdvlek-o9aZ74dHXmnhftTbZy_2Xw3_qswCLRT8EvGYtb0i
- Complete flipper assy. No EOS needed. Coilstop type A-12390, Coil type FL-11630
<https://www.pinballlife.com/dutch-pinball-full-flipper-assembly-left.html>
<https://www.pinballlife.com/dutch-pinball-full-flipper-assembly-right.html>
- Complete flipper rebuilt kit, <https://www.pinballlife.com/dutch-pinball-flipper-rebuild-kit.html>
- Fuses are 5x20 mm Slow Blow fuses: <https://www.pinballlife.com/20mm-slow-blow-fuses.html>
Values used are 1A, 1.6A, 3.15A, 8A, all slow blow
- Micro Switches DB5 : <https://www.pinballlife.com/williamsbally-sub-microswitch-5647-12693.html>
- Roll-over Switches: <https://www.pinballlife.com/rollover-switch-with-mounting-bracket.html>
- Etc.

This is just a short list to give you an idea what you may need for your Alice. List is also subject to changes throughout the build which were unknown at the moment of releasing this manual.

Dimensions AAIW



Alice has same dimensions

Height Topper is approx. 21 centimeter.

This makes it a total height of approx. $200+21=221$ cm (= approx. 87 inches). This includes some safety margin as the height of a setup Alice **without** topper is approx. 194 centimeter.

Boxed up on a pallet dimensions are approx. 80x80x155 cm, weight approx 150 kg. HS code 9504908000.



Meaning wire colors

On the main playfield you will notice that wires have different colors. The ‘meaning’ of these colors is:

- Black = Ground
- Red = +5 VDC
- Yellow = +12 VDC
- White on Coil = 48 VDC
- Orange on Coil = switched to Ground when coil is active
- White on FlipperCoil = 48 VDC
- Orange on FlipperCoil = switched to Ground when Holdcoil is active
- Purple on FlipperCoil = switched to Ground when Powercoil is active
- Blue on switch = Ground (minus)
- Purple on switch = PROC input (plus)

How to set leg levelers

We recommend screwing the levelers of front legs totally in and back legs totally out. This should get you a tilt of 6.5 – 7.0 degrees



Used Silicone rubbers

Used are transparent/clear silicone rubbers in AAIW, commonly available in many webshops.

DP Articlano	Description	Qty
DP-00-100180	Shooter tip 3/8 silicone CLEAR	1
DP-00-100147	Silicone ring 2" CLEAR	3
DP-00-100149	Silicone Post Sleeve 1-1/16" CLEAR	14
DP-00-100165	Silicone ring 2-1/2" CLEAR	4
DP-00-100148	Silicone ring 1" CLEAR	1
DP-00-100184	Silicone Post TAPERED Sleeve 1-1/16" CLEAR	1
DP-00-100178	Silicone ring 5/16" ID CLEAR	10
DP-00-100150	Purple Silicone Flipper Rubber	2
DP-00-100158	Silicone ring 3/16" ID CLEAR	6
DP-00-100177	Silicone ring 3/4" CLEAR	4
DP-00-100164	Silicone ring 3/8" OD CLEAR	2

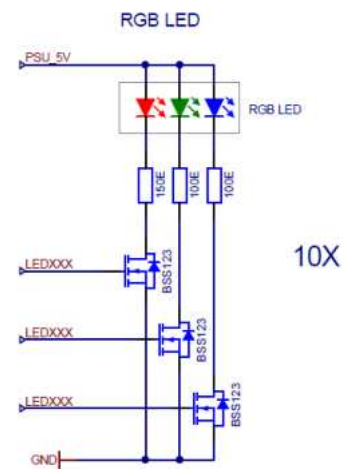
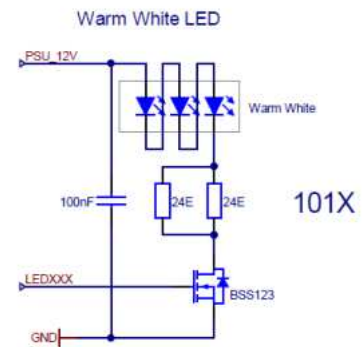
Coilnumbers in Alice

DR62	FMB	right_sling
DR61	FMB	left_sling
DR35	Driver	saucer
DR59	FMB	left_flipper
DR56	FMB	auto_launcher
DR57	FMB	right_flipper
DR60	FMB	left_flipper_hold
DR58	FMB	right_flipper_hold
DR63	FMB	through
DR45	Driver	loop_magnet
DR44	Driver	lock_release
DR43	Driver	vuk
DR38	Driver	right_jet
DR55	FMB	magnet_newton
DR34	Driver	ramp_up_down
DR33	Driver	diverter
DR41	Driver	top_jet
DR37	Driver	drop_target
DR36	Driver	scoop
DR39	Driver	magnet_left
DR42	Driver	magnet_right
DR40	Driver	left_jet
DR00	MMB	left_motor
DR02	MMB	right_motor
-	-	high_power_low
-	-	high_power_high
J14	MMB	shaker
DR32	Driver	knocker

Used Leds & Mosfets

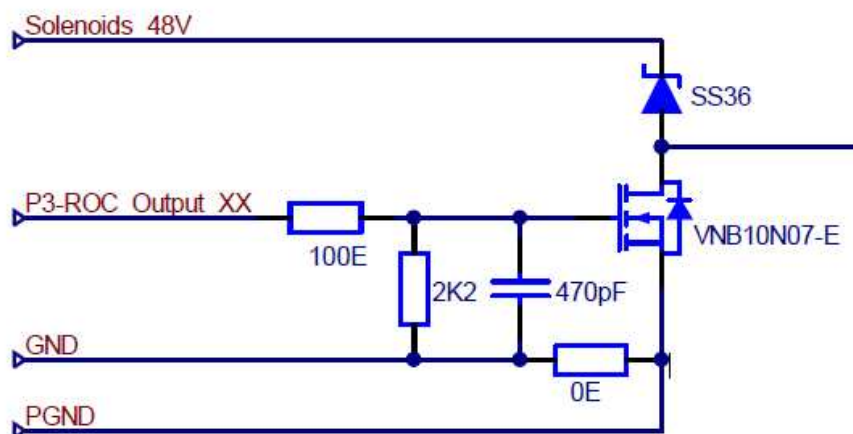
- Driver mosfet led: BSS123LT1G
- Warm white led: HL-AF-5060H343W-3-S1-THL-HR3(2800-3100K)
- RGB led: HL-AF-5060H271BU46FU79GC-S1-THL or as alternative HL-AF-5060H248BS36FU76GC-S1-TLD-B1

Playfield LEDs



These LED schematics are the same for ALL Warm White and RGB LEDs.

- Coil driver mosfet: VNB20N07 or VBN10N07 depending on strength coil
- Schottky diode present driver Mosfet circuit: SS36



This schematic is for ALL playfield solenoid drivers.



Important Notice for technicians when working on Alice

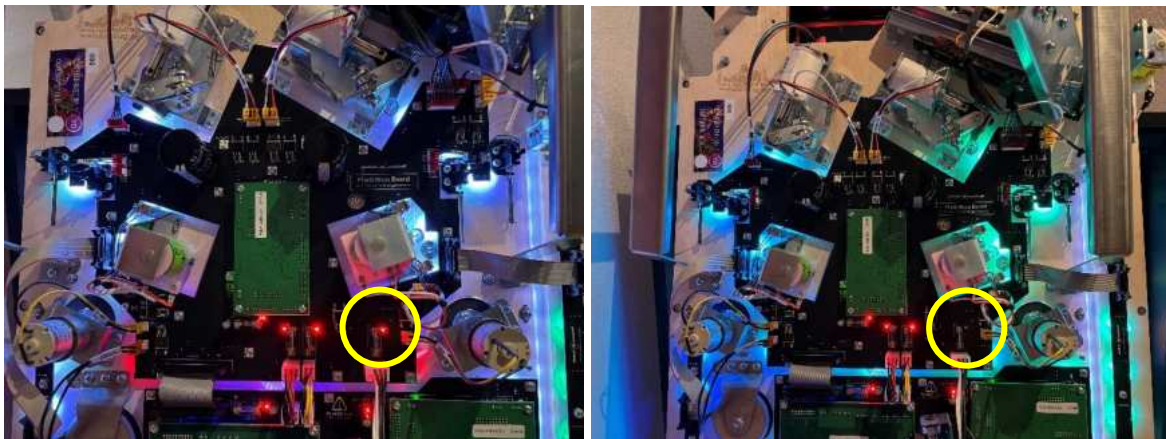
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To get the best pinball experience Alice is equipped with 4 Elco's of each 10.000 uF making it a total of 40.000 uF. This makes sure the flippers, magnets and all other coils have the 'snappy' feeling we all like.

This large capacity however also means that even after opening the coindoor, which disables the 48VDC circuit for safety reasons, the 48VDC would remain present for quite some time if no other precautions were taken. What happens now is that when the coindoor is opened a magnet is automatically activated to drain these 4 Elco's asap. This should now only take a few seconds maximum.

We recommend however to check this process prior to working on Alice. Check is easy, just see if the red led next to a 48VDC fuse is lit Yes/No. If yes, 48VDC is still present, please wait a few extra seconds. These fuses can be found on several spots in Alice, most easy one to spot is on the Front Main Board (FMB) as shown in the Yellow circle in below picture.



Also, because of the high capacity be extra careful when you are working with a live 48VDC circuit. **Do NOT short it to ground (direct or indirect via a coil) as the massive spike from the 4 charged Elco's could cause damage to electronic components!!**



Removing Foam after unpacking

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When Alice is unpacked you will see foam and bubble plastic on several places at the playfield. They were installed for protection during shipment. They have to be removed prior to gameplay, take extra care when removing the bubble plastic around Jabberwock.





Setting playfield vertical

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Setting the playfield vertical and securing it, is slightly different with Alice. There are some extra steps to be taken if you keep the topper installed. This as the playfield can touch (and damage) otherwise your topper.

- Carefully remove the lockdown bar and playfield glass.
- Balls can remain in the Ball Trough as there is a mechanism in place preventing balls dropping out the trough
- To avoid damage to the inner art-blades we recommend you place the protectors delivered with your Alice on both sides to give maximum protection



- Lift the playfield a bit and pull the playfield a bit towards you as soon as the playfield support brackets are high enough to do so and rest the playfield onto the front of the cabinet on the playfield support brackets:



- Now we need to raise the playfield to vertical position. Lift it up at the servicebars, pull it towards you till you hear two clicks (this means the locking mechanism is in place and the playfield can't drop in the cabinet). Now set it carefully vertical. **Prior to doing so we recommend you put the foam in which the topper was transported on the front of the topper.** This to avoid damage to it.



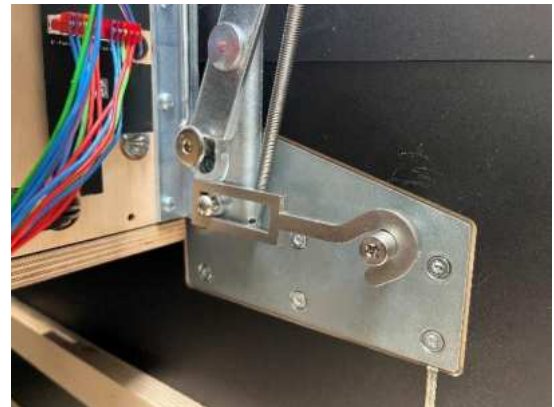
Foam protecting the topper Playfield is locked

Let it carefully touch the top part of the backbox-topper, this to avoid damage.

- Now, with Alice there came one or 2 metal 'hooks'. Carefully place them in one of the positions as shown in below pictures. If you have 2 hooks you can choose to do both sides.

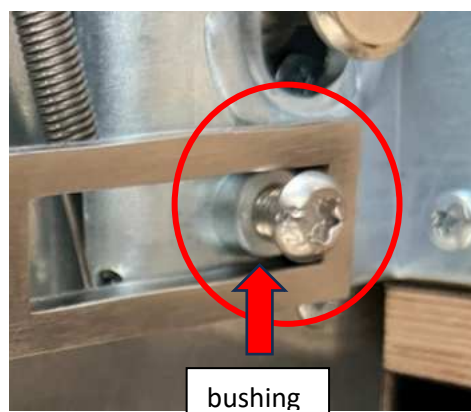


Left side

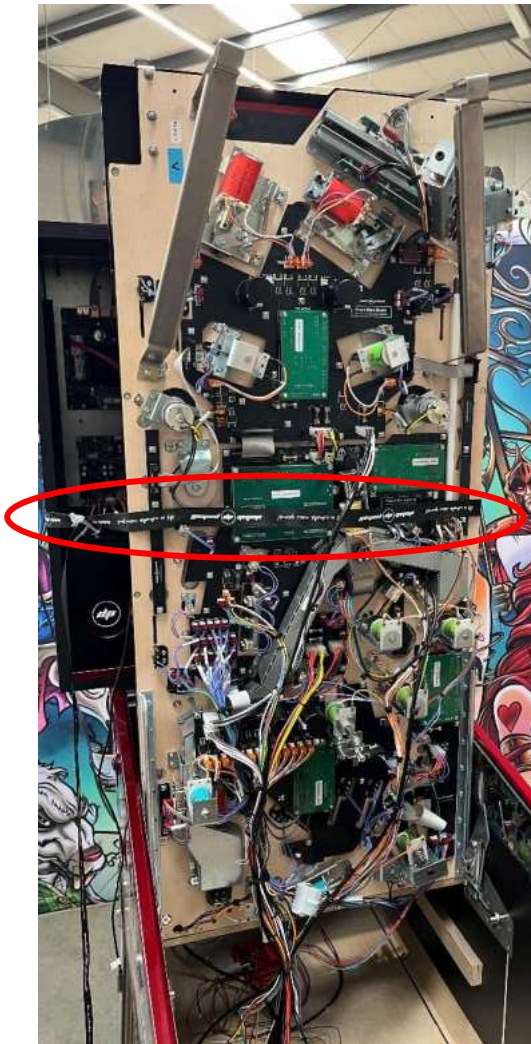


Right side

Make sure the square part of the hook is set around the bushing as per below picture



- When done properly the playfield should be stable enough to work upon. **However, to make sure it doesn't drop on your head while working on it, it is recommended to secure it with a strap as shown below.**



Playfield is secured with a strap

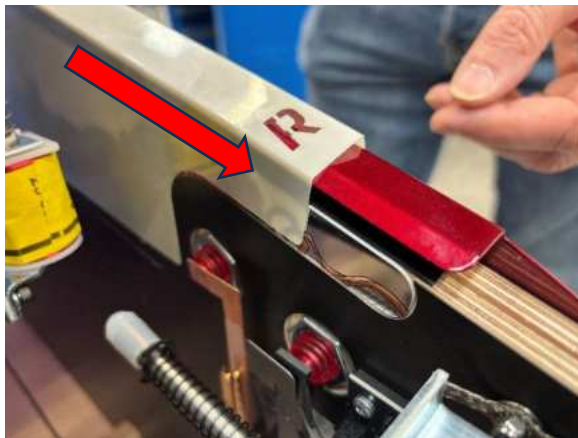


Foam protects the topper

- When returning playfield to horizontal position make sure the autosooter assembly doesn't touch the right save flipper assembly while going down. Best method is to move the playfield as much as possible to the left prior to sliding it horizontal. Once fully horizontal again there should be enough space.



Also, another practice to avoid this damage is to pull the right-side protector a little forwards till it covers the right save flipper assembly and then lower the playfield..



Remove any built-up electrical charge in your body

- If you are doing any kind of electrical work on Alice we recommend to remove any built-up electrical charge in your body. For this, touch a grounded metal parts like a siderail
- Note: we assume your Alice is still connected to a grounded wall-socket! If not, touch another spot which you know is grounded
- **Also, see the remark with working with a life 48VDC circuit on page 18**





Install the Topper

Caution:

If you are not comfortable working on pinball hardware and/or high voltage electronics, please get professional support for this. In general: use your common sense. Don't experiment. Don't be a nihilist. Only skilled and trained people are allowed to open this system. The manufacturer accepts no responsibility for injuries caused by unauthorized operation. Keep long hair, fingers, jewelry, etc. away from turning parts of the system.

If you got topper direct with Alice (so, not in a standalone box) please proceed direct to next page as the metal frame described below is already in place

- Open carton box and check content



You will see the cheshire topper itself, two paws, a plastic zipbag containing the required screws and the metal frame which has to be installed top of backbox.

- Take out the metal frame and put it topside backbox. Four screws are needed now to secure it to topside backbox. A Trox30 screwdriver is needed for this

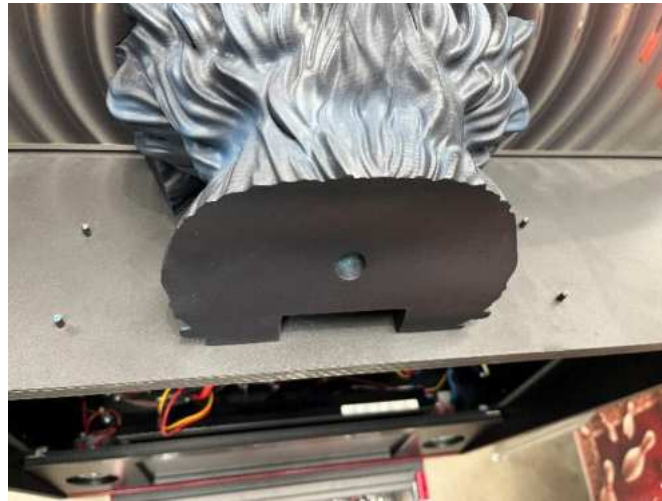


- Take the topper from the foam packaging. This is only the Head, main body is already installed on Alice. The 2 needed screws are found in the small white carton box or in the plastic zipbag if you got the topper standalone delivered..



Save the foam as it can be useful later on when setting the playfield in vertical position.

- Inspect topside backbox. You see left and right of the body two pins, these will secure the claws. On the body you see a small hole in the middle (this will be used to guide the USB-cable) and at the bottom a square hole which will position the head.



- Advised is to install first the head as the screws which secure the head are then easier to install but, it can be done both ways. Guide the USB-cable through the hole in the middle and place the head in position.



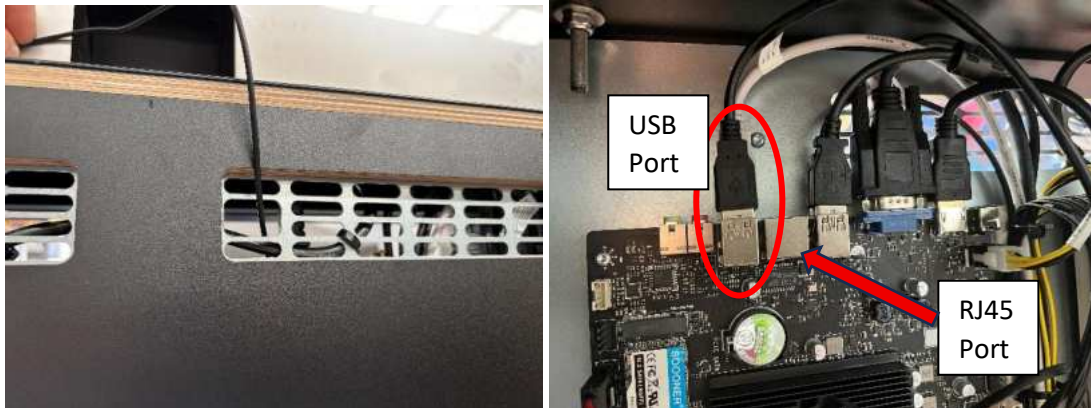
- Slide the head on the topper while feeding the USB-cable through the body and then secure it with the 2 screws, 1 on each side. Size is TX20 and each screw has a washer. Do this left and right side. **Use only mild force, do NOT overtighten the screws !!** Also, best to insert the screw prior to setting the head on the body. This as can be a little fiddling to get the screw to the 'other side'.



- Position now the claw against the two pins sticking out of topside backbox and slide claw over it. Secure the claws with the two screws size TX7 with washer. Do this for left and right side. **Use only mild force, do NOT overtighten the screws!!**



- Now guide the USB cable through the bigger ventilation hole and install the USB-plug on one of the free USB-slots topside PC. Typically, this is the most left one. **Don't put it in the RJ45 port which is right next to it!** It does fit but not only it doesn't work but can also have strange side-effects like not booting of PC. The surplus of cable you can tug away inside or outside of the backbox.



- Turn ON your Alice and enjoy!





Installing Shooter

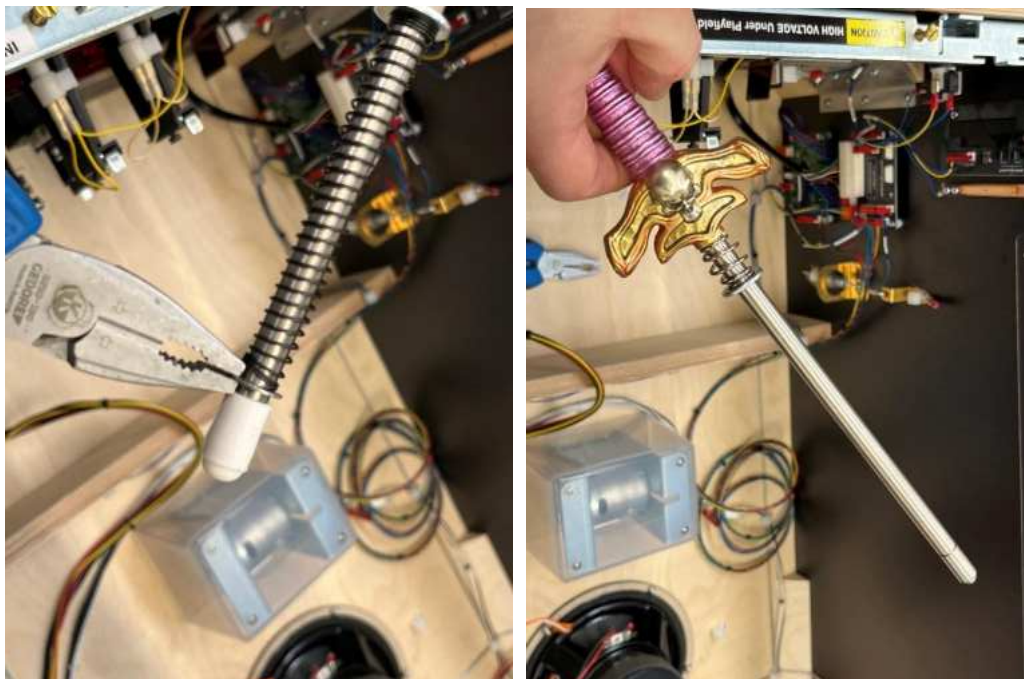
Caution:

If you are not comfortable working on pinball hardware and/or high voltage electronics, please get professional support for this. In general: use your common sense. Don't experiment. Don't be a nihilist. Only skilled and trained people are allowed to open this system. The manufacturer accepts no responsibility for injuries caused by unauthorized operation. Keep long hair, fingers, jewelry, etc. away from turning parts of the system.

- Unpack the shooter



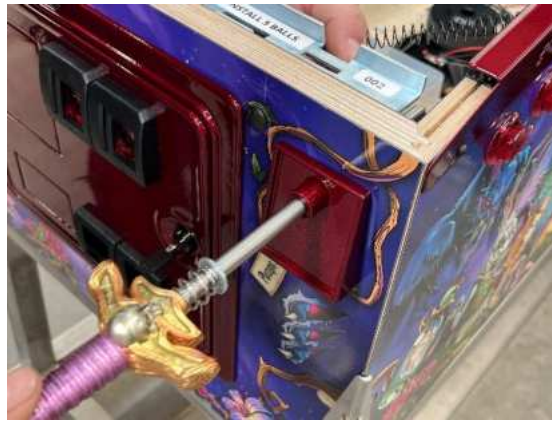
- Remove the rubber tip
 - Remove the E-Clip.
- Now you can remove the spring and sleeve. You leave the short spring on the metal rod.



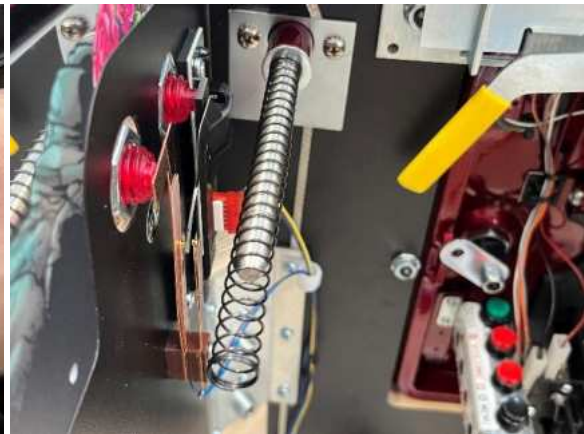
- Slide the sleeve from the back in the Shooter housing. The flange should be positioned at the back.



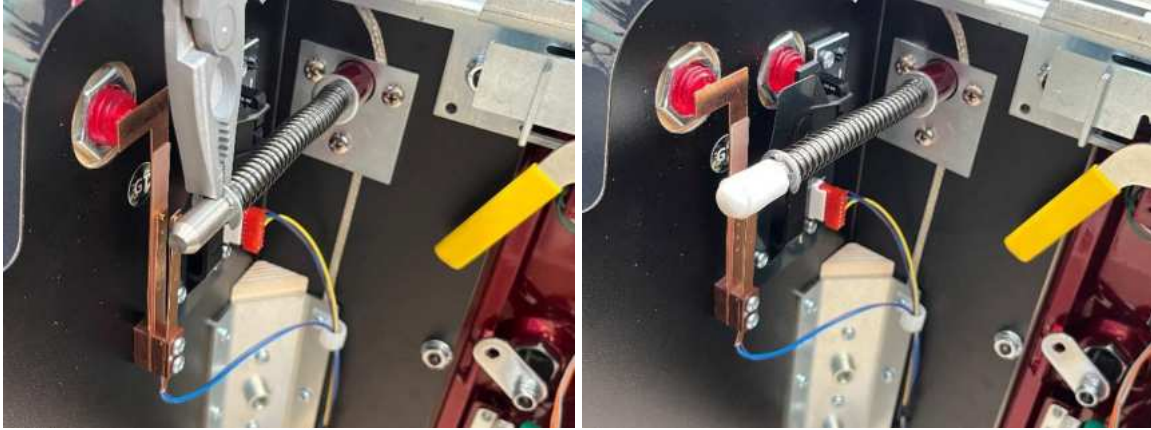
- Slide the shooter rod from the front in the Housing



- Slide first the washer and then the spring over the rod



- Push the spring inwards and install the E-clip back again. When that is done put on the rubber tip



- Done



Installing Jabberwock tail

Caution:

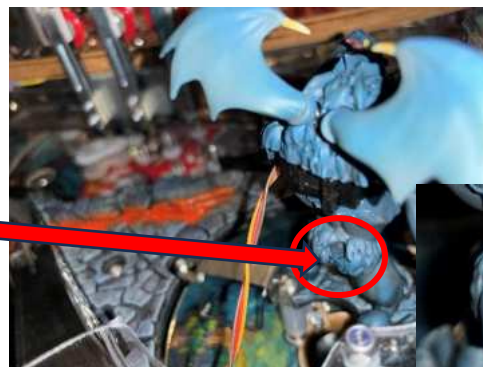
If you are not comfortable working on pinball hardware and/or high voltage electronics, please get professional support for this. In general: use your common sense. Don't experiment. Don't be a nihilist. Only skilled and trained people are allowed to open this system. The manufacturer accepts no responsibility for injuries caused by unauthorized operation. Keep long hair, fingers, jewelry, etc. away from turning parts of the system.

In the white accessories carton box, you will find the tail of the Jabberwock. This is magnetically attached to the Jabberwock and installation is an easy straight-forward procedure.

- Locate the tail in the white carton box



- Remove the playfield glass and have the playfield rest on the service rails for easier access.
- Place the tail in the hole backside Jabberwock



- Put playfield horizontal again and place playfield glass back again
- Done



Adjusting exit Right Orbit

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If you have problems with the exit of the right orbit, for instance too many SDTM to your liking, be aware that this exit has an adjustment possibility. You will need some Torx drivers and a 7mm nutdriver.

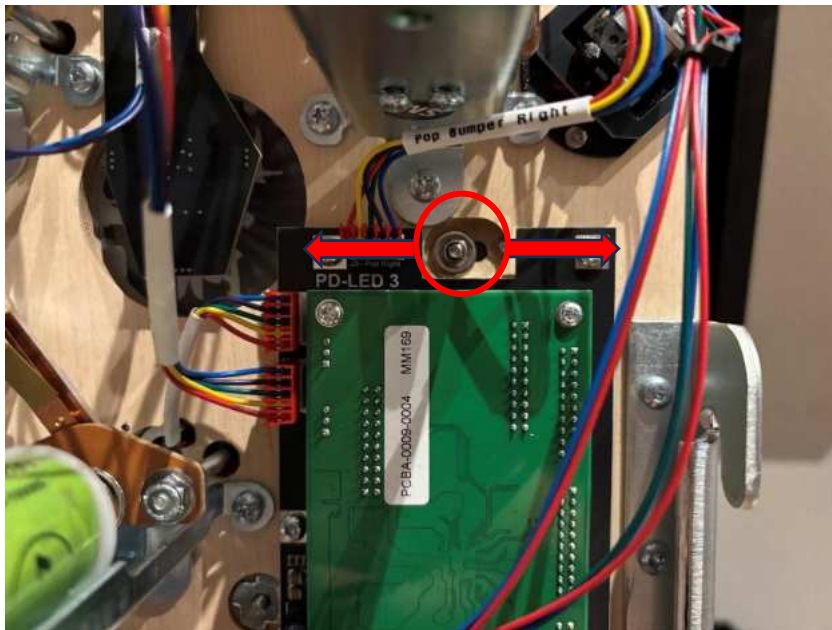
- Remove the glass and locate the starpost which can be repositioned.



- Remove the 2 screws off the popbumpercap so that the popbumpercap comes loose. Leave it as is. Remove carefully the sculpted plastic. The starpost you see, when loosened, can move to left and right.



- Is also held with a nut from bottom-side. Likely you will need to hold this nut when loosening or fastening the starpost.



- Put sculpted plastic back again. **Don't overtighten the screws!**
- Place popbumpcap back in position and fasten the screws again.
- Put playfield horizontal again and place playfield glass back again
- Done



How to set you Wonder Number on Alice

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Each Alice has an unique number assigned to it. This is visible for instance on the apron cards which came with your Alice and is also the serialnumber of your Alice.

Its however also possible to have this number shown on the Watch display. This number is usually already set in the factory, but you can also do it yourself. As follows:

- Open coindoor and push Menu button
- Select Adjustment menu
- Go down untill second page is shown. At the very bottom you will see now Wonder number
- Here you can set your number. If you select 0 there will be no number shown in attract mode.





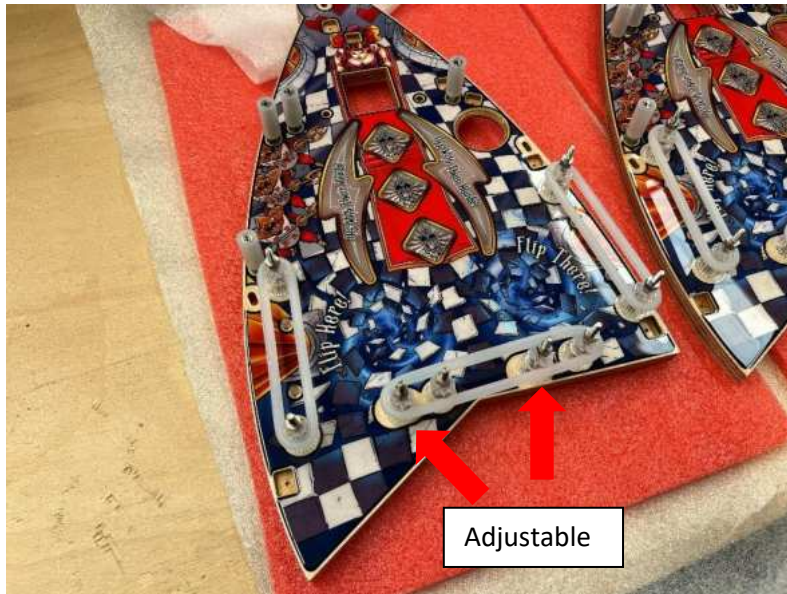
Adjust Difficulty MPF

Caution:

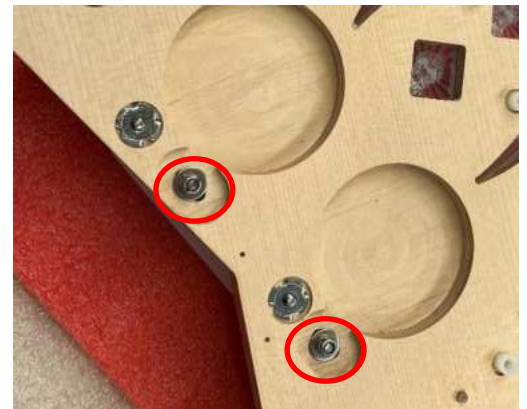
If you are not comfortable working on pinball hardware and/or high voltage electronics, please get professional support for this. In general: use your common sense. Don't experiment. Don't be a nihilist. Only skilled and trained people are allowed to open this system. The manufacturer accepts no responsibility for injuries caused by unauthorized operation. Keep long hair, fingers, jewelry, etc. away from turning parts of the system.

With Alice you can adjust the possibilities for the ball to leave the playfield, eg make it easier or more difficult to play.

At the bottom of the Mini PlayField (MPF) you will see four starposts bottom center. From the factory they have one silicone rubber around all four starposts.



Top view



Bottom view

Following possibilities:

1. Leave as is from the factory
2. You can move the left starpost to make the gap bigger, or smaller, to make it the ball easier, or more difficult to leave the MPF.
3. You replace the big rubber with two smaller rubbers you will find in the white accessories box which will create an extra way for the ball to leave the MPF
4. You can move the third left starpost to make the gap bigger, or smaller, to make it the ball easier, or more difficult to leave the MPF.

Fuses ALICE

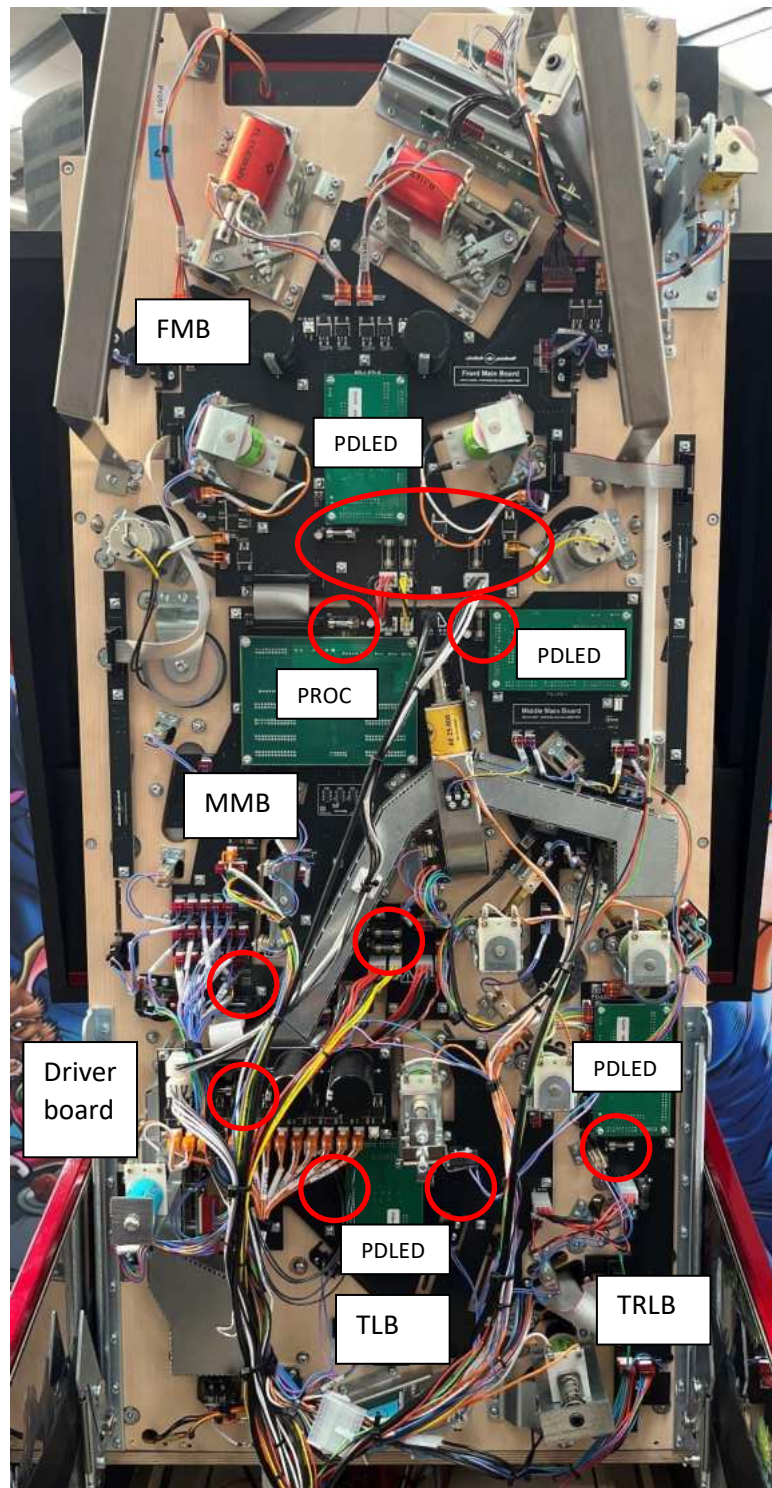


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The fuses in Alice are all located below the playfield on several PCB's. In the backbox there are fuses located on the power distribution board.

Fuses below playfield are to be found in the red circles in below picture.



Next to the fuse you will notice a red led. If it is lit in bright red the fuse should be OK. If it isn't lit or only very faint lit very likely the fuse is not OK (or no voltage present due to another cause). **If you**

have the coindoor open no 48VDC is present so the leds next to the fuses protecting these circuits will not be lit!! Also, if PC is not booted the 48VDC fuses will not be lit as well.

The switch responsible for this protection can be found on a bracket at the left side of the coin door. If you want to disable this protection during testing, you have to pull the pin on this switch till you feel it click. The protection circuit is now disabled! It is important be aware of this when you touch parts at the bottom of the playfield. If you close the coin door, the protection is re-instated for the next time.



All fuses are slo-blow, 5x20 mm. They can be purchased at many places as they are quite common but you can check also out : <https://www.pinballlife.com/20mm-slow-blow-fuses.html>

Values used are 1A, 1.6A, 3.15A, 8A, again, all slow blow

Fuses under playfield:

DPX-01-320001 - AAIW Middle Main Board (MMB):

F1 – 8A Slow (12V Optos, to Cabinet, to FMB)

F2 – 8A Slow (5V)

F3 – 1A Slow (5V P³-ROC)

F4 – 1A Slow (5V PD-LED)

F5 – 8A Slow (12V Shaker)

DPX-01-320003 - AAIW Front Main Board (FMB)

F1 - 8A Slow (12V Servos, Ball Trough Optos)

F2 - 8A Slow (5V)

F3 – 1A Slow (5V PD-LED)

F4 – 8A Slow (48V)

DPX-01-320002 - AAIW 48V Driver Board

F1 – 8A Slow (48V Coils)

F2 – 8A Slow (48V Magnet Coils)

DPX-01-320006 - AAIW Top Right LED Board (TRLB)

F1 - 8A Slow (5V)

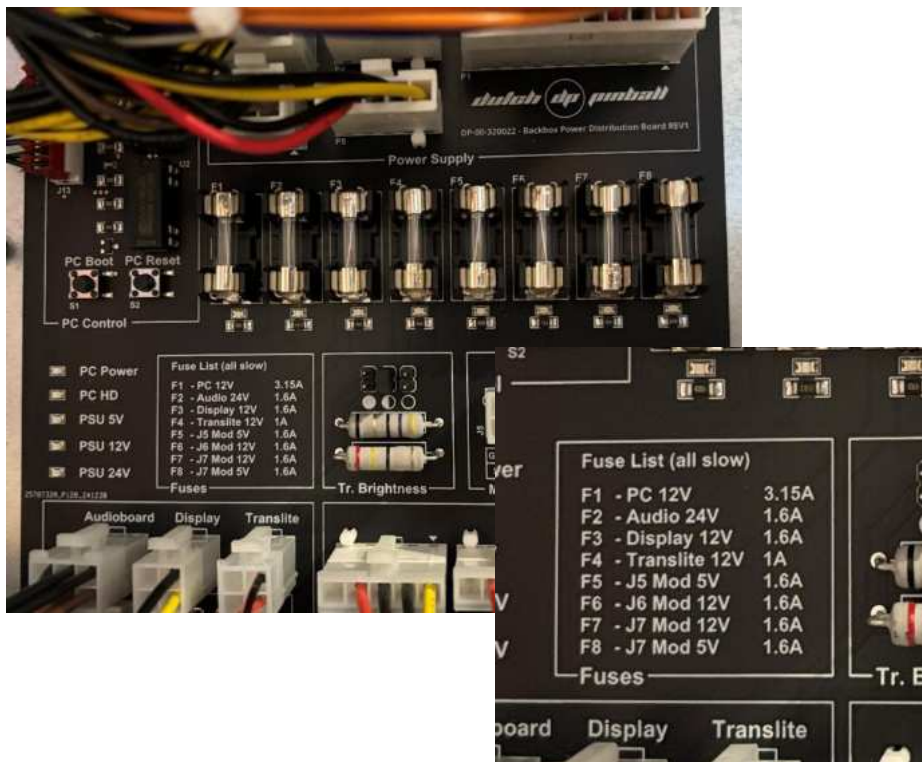
F2 – 1A Slow (5V PD-LED)

DPX-01-320009 - AAIW Top LED Board (TLB)

F1 - 8A Slow (5V)

F2 – 1A Slow (5V PD-LED)

Fuses in backbox



Mains fuse

The entrance for the mains powercord also has a fuseholder



Used here are 2 pcs 3.15AT (slow) fuses for 230VAC countries and 6.3AT (slow) for 115VAC countries.

USB how-to update



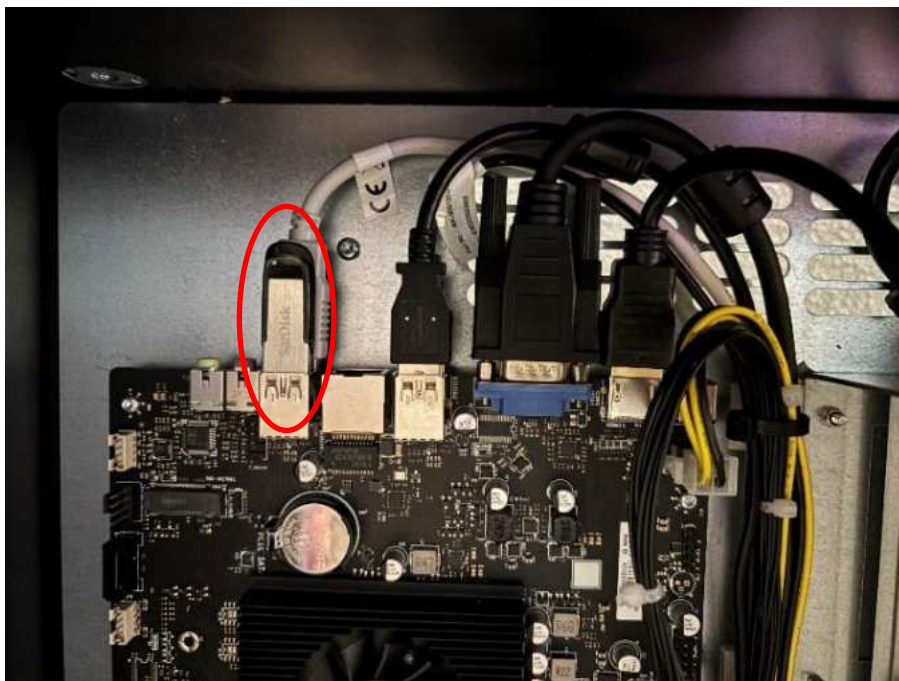
https://www.dutchpinball.com/alices_adventures_in_wonderland_software

Delta update instructions:

- The here described method is only applicable for so-called Delta updates (which are Zip-files). If you download an image (IMG-file) it is a full image install. For detailed instruction how-to please see the "[Technical Support AAIW FAQ Manual](#)", section: Restore SSD using USB image auto installer
- Download the .zip file of update X.XX (without renaming the file and without extracting the zip - **some browsers (like Safari) have a setting to do this automatically, so disable that if needed**). When using a MAC using Chrome is recommended.

*We have also noted that when an older USB2.0 stick is used, the update is **much faster** when USB stick is **exFAT** formatted (and not the usual FAT)*

- Copy the .zip file to the root of a USB stick (meaning **not** in a subfolder).
- Insert the USB stick in a free USB-port. If none available, remove topper USB cable



Method 1 (most easy one)

- With USB stick inserted in the PC, switch Alice ON. Update will be automatically detected and performed. After update is done Alice will Start. In menu you can check version number.

Method 2

- Enter the Service Menu and go down to "Software".
- Now you should see update X.XX listed.
- Push the Start button and update will start
- The game will restart using version X.XX.

DO NOT FORGET! Last step is to write possible new firmware to the PCB used in the CAT Topper. For this the USB cable from the topper needs to be connected to the PC of course.

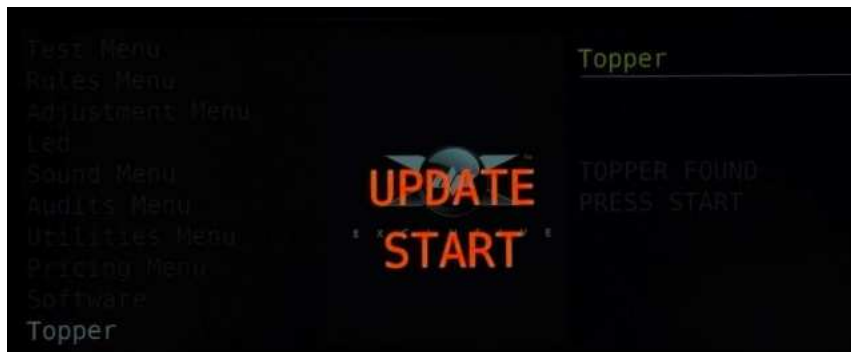
Open the Testmenu



Select Topper



Press Start. Following screen will appear.



Wait (should take less than a minute) till below screen appears which tells you Update has been done successful.



DONE

Software version history

Starting from release 093 dated April 2025. For complete list check out DP website at

https://www.dutchpinball.com/alices_adventures_in_wonderland_software

May 2025 rel 098

New image 098 was released which required a total rewrite of the SSD. This solved several bugs, added music and call-outs and also activated the Topper. Procedure described page 69.

August 2025 rel 099-3

New image 099-3 was released which requires a total rewrite of the SSD. Future updates are expected to be Delta updates possible via a more simple USB-update. Procedure described page 69.

Update Highlights:

- **Accessibility Mode:** A new one-handed play mode is now available! Choose between left-side or right-side flipper buttons in the menu for a more accessible experience. This feature makes *Alice* more accessible for people with limited use of one arm.
- **New Attract Callout:** A knocker-based attract mode callout has been added. This feature can be toggled ON/OFF (default: ON).
- **Status Suits Display:** Suit collection progress, including countdown, is now shown on the mini screen for better player feedback.
- **Super Skillshot Guide:** A helpful on-screen guide now appears when entering the mini playfield to assist with the Super Skillshot.
- **Wonders Letter Award:** Collecting all suits now awards a "Wonders" letter, complete with new callouts.
- **New In-Game Callouts:** Four additional callouts have been added for enhanced immersion.
- **Ramp Combo Reward:** Shooting the ramp 15 consecutive times now awards a Wonders letter **and** grants a **2x playfield multiplier** when a mode is started, lasting for the full mode duration.
- **Bonus Countdown Update:** The end-of-ball bonus countdown now features a brand-new animation.
- **Eat Me Target Enhancements:** New target animations added for "Eat Me" hits.
- **Croquet Multiball Animation:** A fresh start animation and callout have been added to Croquet Multiball.
- **Score Balancing:** Various tweaks have been made to balance scoring across features. Further enhancements to scoring balance are planned for upcoming releases.
- **Auto Launch Option:** Auto launch is now selectable in the menu after ball lock. Default is **OFF** (manual plunge).
- **Sneak in:** Advance the wizard mode by knocking down card targets. Each target awards 1 million
- Some bugs inside the Wonderland squashed :-)

September 2025 rel 0.99-5

Version 0.99-5 was released, is a Delta update and thus using the standard update method described page 52. *Note: this version was mislabeled the first few days as 0.99-9-5. This is exactly same version.*

New Features & Adjustments

- **Difficulty Settings – Midnight Madness Clock**
Adjustable difficulty options for more tailored gameplay.

Gameplay & Mode Changes

Knave of Hearts

- Balanced scoring adjustments.
- Added saucer scoring.
- *Extra Ball* now available under the horseshoe captive ball, with callout and display text.

Quick Croquet Multiball

- Added hit status animations for improved player feedback.

Ramp Awards

- Hitting the ramp **15 times within 20 seconds** now awards:
 - A **WONDER** letter.
 - **2x multiplier** for the remainder of the ball.
- New ramp-specific callouts added.

Extra Ball & Shoot Again

- New dedicated callouts for both events.

Mad Hatter Mode (Revised)

- Now begins as a **2-ball multiball**.
- Rolling over the clock:
 - Adds a **3rd ball**.
 - Awards a **WONDER** letter.
 - Increases jackpot value with each collected jackpot.
- New themed callouts added.

Army of Cards

- New progressive scoring: each hit increases value.

Visual & Audio Enhancements

- **Temporary Overlay – Coin Play**
Placeholder overlay added when the game is set to coin play (final design to follow).
- New callouts added for completing **Eat Me** targets.
- Multiplier callouts added.
- **Service Protection**: opening the coin door now instantly drains the 48V line for safer service access.
- **Wonder Count Adjustment**: Wonders number can now be quickly adjusted in attract mode by holding the button for faster scrolling.

December 2025 rel 1.00 Delta install

Release 1.00 is a regular Delta update which can be uploaded through the Testmenu as described in this Manual

Please note: You must have version **0.99-5** or **0.99-9-5** installed before applying this update. If not, the software may crash during gameplay, requiring you to reinstall the 0.99-5 full image and then reapply the 1.00 delta update.

Changelog 1.00 (compared to rel 0.99-(9)-5):

New Features & Adjustments

- **Final Wizard Mode via Test Menu**

The final wizard mode can now be started through the Test Menu:

Rules → Page 3 → Cheat the Queen

This option may only be used **twice per hour** due to the long play duration on the MPF and magnet core heating/cooling cycle.

Using it more than twice per hour will create a log entry on the hard drive. **Any resulting damage to magnets or the playfield due to overheating is at the user's own risk.** This option is just present to give everybody the possibility to experience this mode. In real gameplay it is impossible to play this mode more than twice per hour so possible overheating is no issue.

- **Suits Difficulty Setting**

Suits now have an adjustable difficulty setting to better match player preference.

Default setting: Easy

Gameplay & Mode Changes

Suits

Completing Suits now begins a **Hurry-Up scoring mode**.

Shoot the **right orbit / left ramp return through the pop bumpers** repeatedly to score jackpots.

Final Wizard Mode – “Cheat the Queen”

- After the three standup targets are hit, the Queen can now be defeated in two ways:
 - A:** Shoot the saucer
 - B:** Shoot the captive ball (**awards +25,000,000 points**)

This mode intentionally uses only **3 target hits** to make the “Cheat the Queen” version easier.

The **original wizard mode** still requires **21 card hits** throughout the game by playing modes such as *Paint the Roses*.

Visual & Audio Enhancements

- **Midnight Madness**

- New animations added
 - Updated audio
 - Mode is now fully completed
- Shoot the **main ramp repeatedly** to stack jackpots.

Bugfixes

- It could happen the Watch display didn't show the Suits progress. This is now fixed
- Some annoying bugs in Wonderland have been squashed and eaten :-)

March 2026**Version 1.05 Delta install**

Release 1.05 is a regular Delta update which can be uploaded through the Testmenu as described in the Manual

Please note: You must have version 1.00 installed before applying this update.

If not, the software may crash during gameplay, requiring you to reinstall the 1.00 full image and then reapply the 1.05 delta update.

Changelog 1.05 (compared to rel 1.00):

March 2026 rel 1.05

New Features & Adjustments

- **CoinOp play**
- Shows in upper left corner how many credits are left and indicates Alice is in CoinOp play
- Enhanced setting possibilities for the operator

Bugfixes

- User changed coilpower settings did reset to factory default after Jabberwock Multiball
- Some annoying bugs in Wonderland have been squashed and eaten :-)

Switch test FAQ



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Perhaps the most important test in Alice is the switch test. Especially stuck switches have shown to have unexpected side-effects and need to be dealt with prior to any other actions.

How do you adjust switches?

There is plenty of material on the Internet in how to do this. I have found this one to be quite helpful:

<https://homepinballrepair.com/pinball-switches-fixing-adjusting/>

https://www.flippers.be/basics/101_switch_adjustment.html

How do you do this switch-test?

First you need to open the coindoor and understand the controls you will see fitted in the coindoor

Coin Door buttons

Normal function

With the coin door buttons (located at the inner side of the coin door to the left), you can make all game adjustments you desire as well as carry out tests if needed.

In normal use, the two inner buttons function as volume up (+) or down (-). The most left button functions as Escape and the most right as Enter button.



Menu function

Push the Enter button to open the Main menu. In the Main menu, you have submenus which will lead you to subsections with a variety of possibilities:

- Test menu. You can carry out any test you desire to check if something is working properly.
- Rules menu. You can adjust settings or customize gameplay to your needs.
- Adjustment menu. For general game settings (like how many balls).
- Led menu. Set brightness levels of the leds.
- Sound menu. Set volume of the different categories of sound.
- Audits menu. Here you can for instance see how many games were started, total game time, etc.
- Utilities menu. For Factory reset, audits reset, etc.
- Pricing menu. This is meant for when you put Alice on coin-op play.
- Software menu. Here you can find software related options, such as version check & select, and update.
- Topper menu. Here you can flash the PCB in the topper with latest version firmware

You can use the + - keys to select the item of your choice and when pressing the Enter key, this choice will be activated. The Escape key will return you to your previous choice or close the test menu. For Switch test select Test Menu.



Switch test

If you activate this test, it will display all switches which are active at that moment.

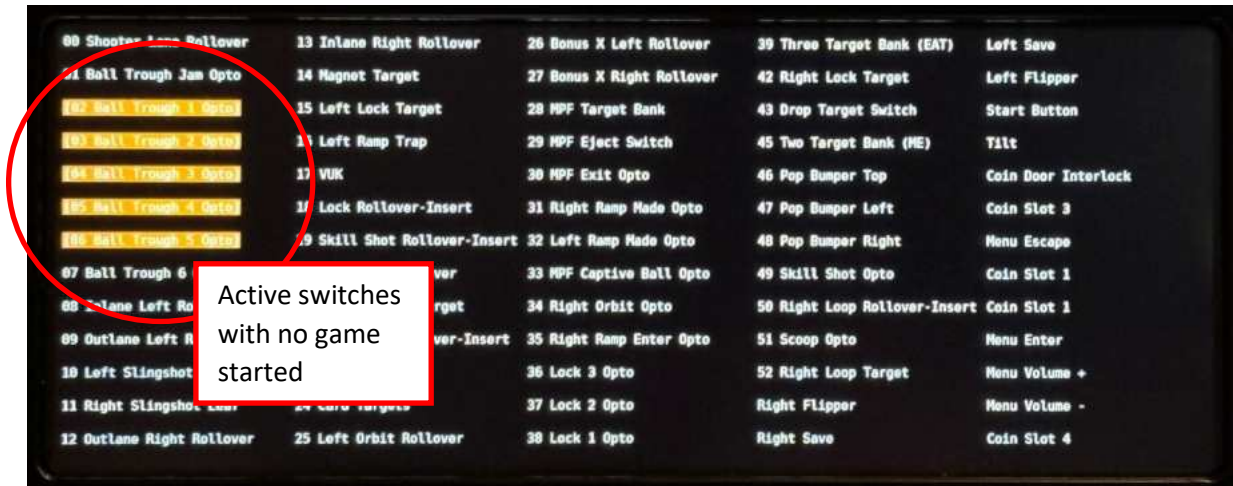


If you have doubts about a certain switch, you can check the correct working here. Push the switch, or even better, roll a ball over it, and see if this switch pops up (gets illuminated) on the display here. Also, a sound can be heard when a switch is activated, and you can also see if there are no switches active when they should not be. When a switch is lit up in Red it means that the switch hasn't been activated in some time and likely needs attention.

The displayed screen is a typical example without a game started. With all balls in the Trough, you will see Trough 1 to 5 illuminated. Shooter lane will only be active when a ball is present in the shooter lane (*which means of course that Trough 5 will not be active anymore).

Which switches are expected to be Active with **NO** game started?

Most likely it is :

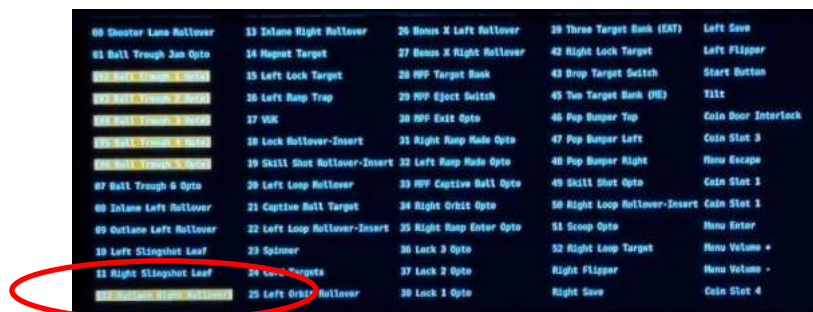


If you see any other switches Active this is most likely a stuck switch and needs to be fixed prior to further diagnosis.

Upon booting the software will check for any unexpected closed/stuck switches. If one is found the following display is shown



Go into switch-test and look for any closed switches which shouldn't be closed compared to the earlier screen.



In this example the Outlane Right Rollover was closed upon booting and needed some attention.

Droptarget functionality

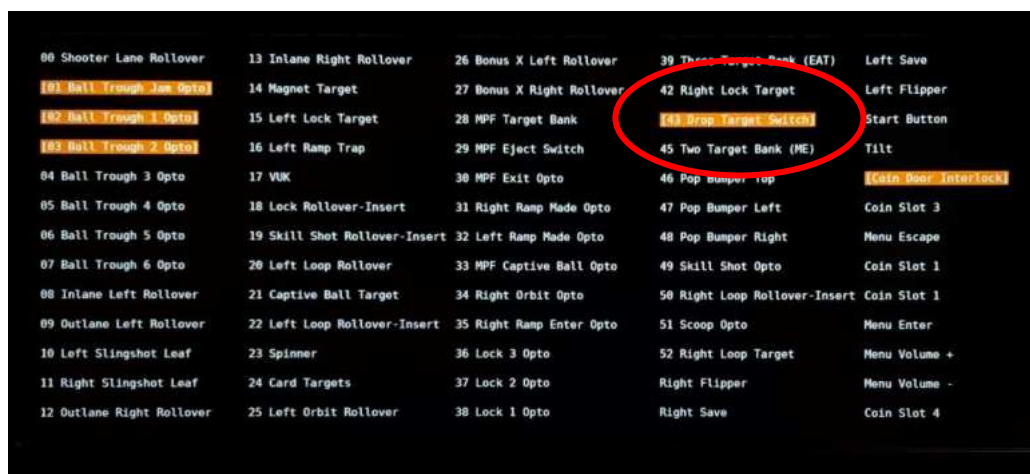
If the Droptarget is not working as designed, eg not coming up while it should be, it likely already thinks it's up. The droptarget has one switch which detects it's in dropped state. If that switch isn't triggered Alice thinks Droptarget is in up position.



Droptarget in UP-position

Droptarget in DOWN-position

If in DOWN-position you will see this in switchtest. If not, bent the wireform on the switch a little so it triggers when in DOWN-position. Try first manually to push the blade down while in Switchtest so we know for sure switch is not broken and just adjustment is needed.



VUK functionality

If the VUK is not working as designed, eg the ball is not appearing on the upper playfield while it does so in ball-search, likely the switch detecting the presence of the ball on the upkicker needs some adjustment.



You can see on the right picture the 2 copper blades of the switch. They should be in contact with each other when a ball rests on them. In switchtest this is seen as follows

00 Shooter Lane Rollover	13 Inlane Right Rollover	26 Bonus X Left Rollover	39 Three Target Bank (EAT)	Left Save
01 Ball Trough Jam Opto	14 Magnet Target	27 Bonus X Right Rollover	42 Right Lock Target	Left Flipper
02 Ball Trough 1 Opto	15 Left Lock Target	28 MPF Target Bank	43 Drop Target Switch	Start Button
03 Ball Trough 2 Opto	16 Left Ramp Trap	29 MPF Eject Switch	45 Two Target Bank (ME)	Tilt
04 Ball Trough 3 Opto	17 VUK	30 MPF Exit Opto	46 Pop Bumper Top	Coin Door Interlock
05 Ball Trough 4 Opto	18 Lock Rollover Insert	31 Right Ramp Made Opto	47 Pop Bumper Left	Coin Slot 3
06 Ball Trough 5 Opto	19 Skill Shot Rollover-Insert	32 Left Ramp Made Opto	48 Pop Bumper Right	Menu Escape
07 Ball Trough 6 Opto	20 Left Loop Rollover	33 MPF Captive Ball Opto	49 Skill Shot Opto	Coin Slot 1
08 Inlane Left Rollover	21 Captive Ball Target	34 Right Orbit Opto	50 Right Loop Rollover-Insert	Coin Slot 1
09 Outlane Left Rollover	22 Left Loop Rollover-Insert	35 Right Ramp Enter Opto	51 Scoop Opto	Menu Enter
10 Left Slingshot Leaf	23 Spinner	36 Lock 3 Opto	52 Right Loop Target	Menu Volume +
11 Right Slingshot Leaf	24 Card Targets	37 Lock 2 Opto	Right Flipper	Menu Volume -
12 Outlane Right Rollover	25 Left Orbit Rollover	38 Lock 1 Opto	Right Save	Coin Slot 4

So, test is easy . Put a ball in the VUK (below the upper playfield at the back, and check in Switchtest if VUK is triggered. If not, bend switchblade till ball is seen.

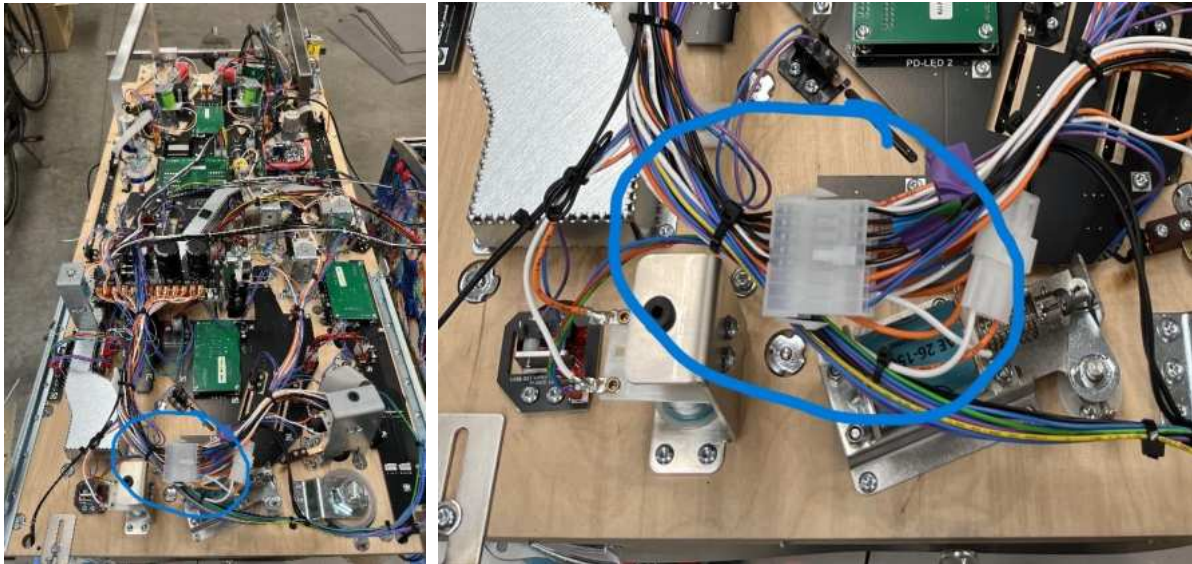
Which switchnumbers on Playfield?

SW00		00 Shooter Lane Rollover
SW01		01 Ball Through Jam Opto
SW02		02 Ball Through 1 Opto
SW03		03 Ball Through 2 Opto
SW04		04 Ball Through 3 Opto
SW05		05 Ball Through 4 Opto
SW06		06 Ball Through 5 Opto
SW07		07 Ball Through 6 Opto
SW08		08 Inlane Left Rollover
SW09		09 Outlane Left Rollover
SW10		10 Left Slingshot Leaf
SW11		11 Right Slingshot Leaf
SW12		12 Outlane Right Rollover
SW13		13 Inlane Right Rollover
SW14		14 Magnet Target
SW15		15 Left Lock Target
SW16		16 Left Ramp trap
SW17		17 VUK
SW18		18 Lock Rollover-Insert
SW19		19 Skill Shot Rollover Insert
SW20		20 Left Loop Rollover
SW21		21 Captive Ball Target
SW22		22 Left Loop Rollover Insert
SW23		23 Spinner
SW24		24 Card Targets
SW25		25 Left Orbit Rollover
SW26		26 Bonus X Left Rollover
SW27		27 Bonus X Right Rollover
SW28		28 MPF Target Bank
SW29		29 MPF Eject Switch
SW30		30 MPF Eject Opto
SW31		31 Right Ramp Made Opto
SW32		32 Left Ramp Made Opto
SW33		33 MPF Captive Ball Opto
SW34		34 Right Orbit Opto
SW35		35 Right Ramp Enter Opto
SW36		36 Lock 3 Opto
SW37		37 Lock 2 Opto

SW38		38 Lock 1 Opto
SW39		39 Three Target Bank (EAT)
SW42		42 Right Lock Target
SW43		43 Drop Target Switch
SW45		45 Two Target Bank (ME)
SW46		46 Pop Bumper Top
SW47		47 Pop Bumper Left
SW48		48 Pop Bumper Right
SW49		49 Skill Shot Opto
SW50		50 Right Loop Rollover-Insert
SW51		51 Scoop Opto
SW52		52 Right Loop Target
		Right Flipper
		Right Save
		Left Save
		Left Flipper
		Start Button
		Tilt
		Coin Door Interlock
		Coin Slot 3
		Menu Escape
		Coin Slot 1
		Coin Slot 1
		Menu Enter
		Menu Volume +
		Menu Volume -
		Coin Slot 4

Not working MPF switches

If this is the case, we have noticed that sometimes the ‘pins’ in the encircled connector below came loose. Just push them back in with a small screwdriver and you should be fine again





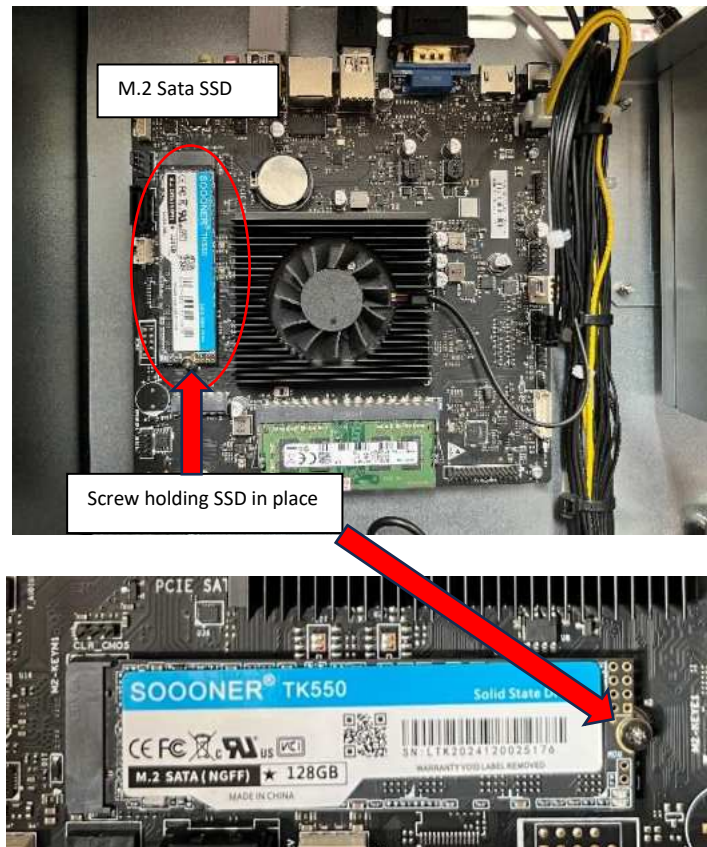
Restore SSD using USB image auto installer

Caution:

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The below mentioned procedure is not complicated but does require some basic computer skills.

Needed is a USB stick with a minimum capacity of 6 Gb. It is highly recommended to use an USB3.0 stick to save (a lot of) time compared to USB2.0. As SSD factory is using a M.2 SATA Drive size 128 GB or bigger. If you want to replace the SSD this is the type needed. Bigger size is of course OK. SSD is easy to remove as it's just held with 1 screw.



M.2 Sata SSD 128 GB

Remarks: If you install a new image to your Alice all the changes to settings you made yourself are undone. Don't forget to make a note of these changes so you can re-install them if desired! Also, your Wonder number must be set again, for how-to see section starting page 43.

Make USB drive

- Download the image (AAIW rel 1.05) from the link <https://we.tl/t-Rd9Cn2osfFXNSZZ2>
It's a download of approx. 6 Gb.
- The image will typically be put in a folder called Download.
- To write the image to a USB stick we use a program called Balena Etcher.
Download this program from <https://etcher.balena.io/#download-etcher>

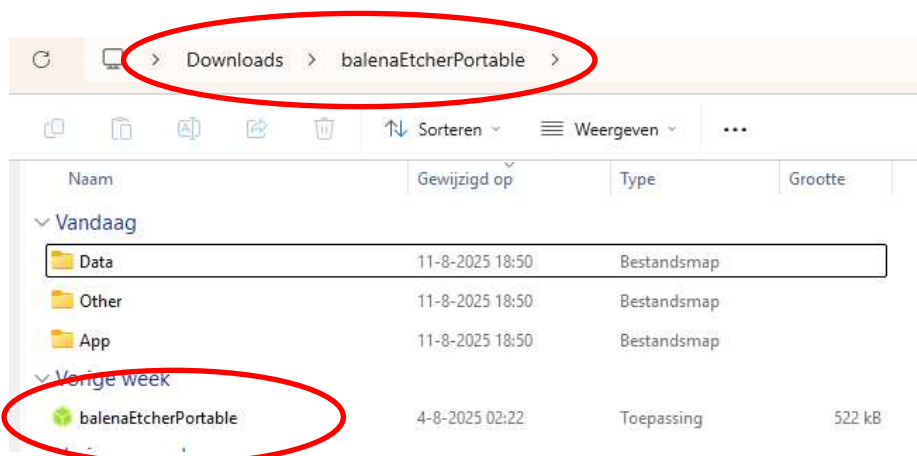
DOWNLOAD

Download Etcher

ASSET	OS	ARCH	
ETCHER FOR WINDOWS (X86 X64) (INSTALLER)	WINDOWS	X86 X64	Download
ETCHER FOR MACOS	MACOS	X64	Download
ETCHER FOR MACOS (ARM64)	MACOS	ARM64	Download
ETCHER FOR LINUX X64 (64-BIT) (ZIP)	LINUX	X64	Download
ETCHER FOR LINUX (LEGACY 32 BIT) (APPIMAGE)	LINUX	X86	Download

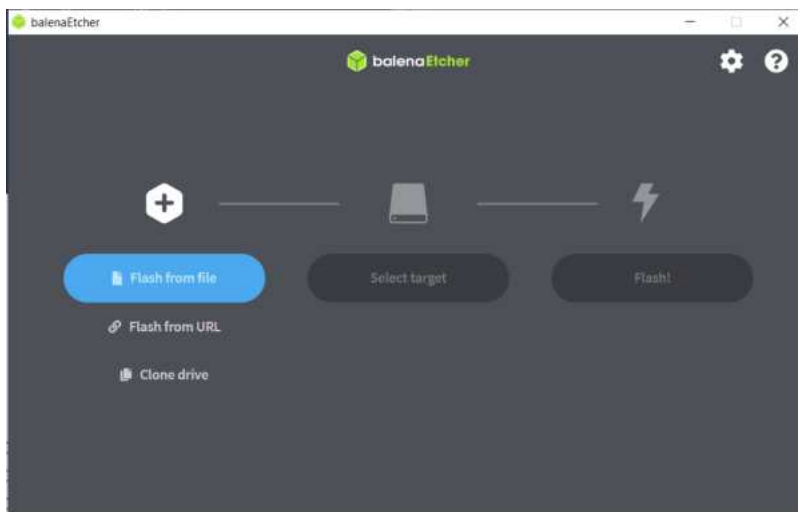
There used to be a portable version available from Balena download. At this moment, Balena has apparently withdrawn this version from their website. I did find however a portable version at

https://portableapps.com/downloading/?a=balenaEtcherPortable&s=s&p=&d=pa&n=balenaEtcher%20Portable&f=balenaEtcherPortable_2.1.4.paf.exe. If you run this it will extract the program in a folder in which you will find the program and no install to your Windows installation should have been done. See below picture.



I recommend, however, that you use the fully installed version as a flash program is always a handy tool to have on your PC and Balena is one of the most popular for this type of work.

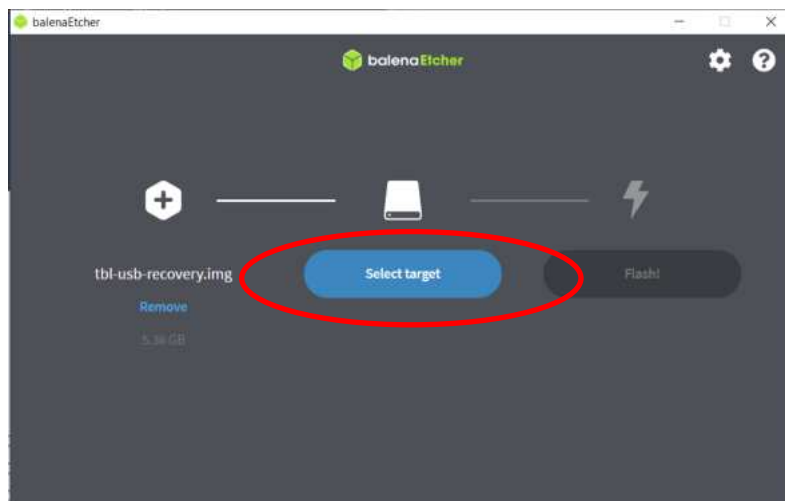
- Start the program (portable or fully installed). This will be now displayed



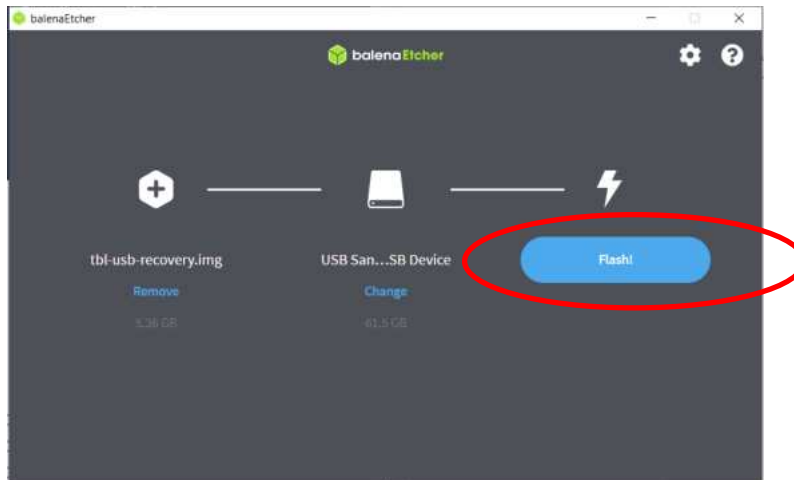
- Click on Flash from File and select the downloaded Image file (usually located in a folder called Download). It's likely called **AAIW_XXX.img**



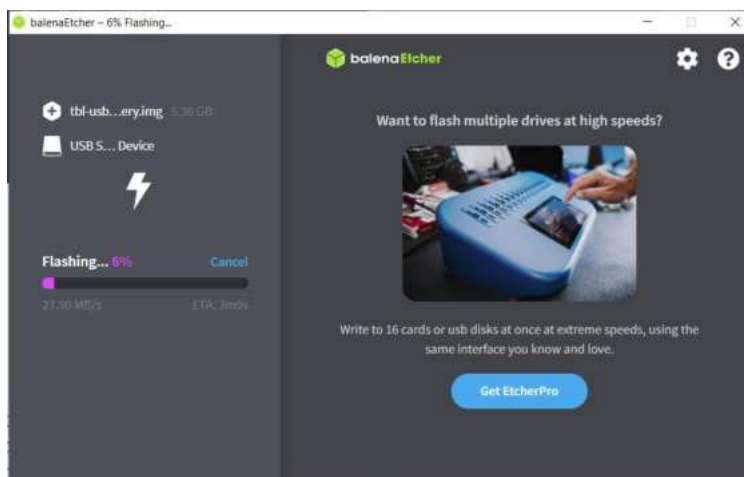
- Click on Select target and select your USB drive



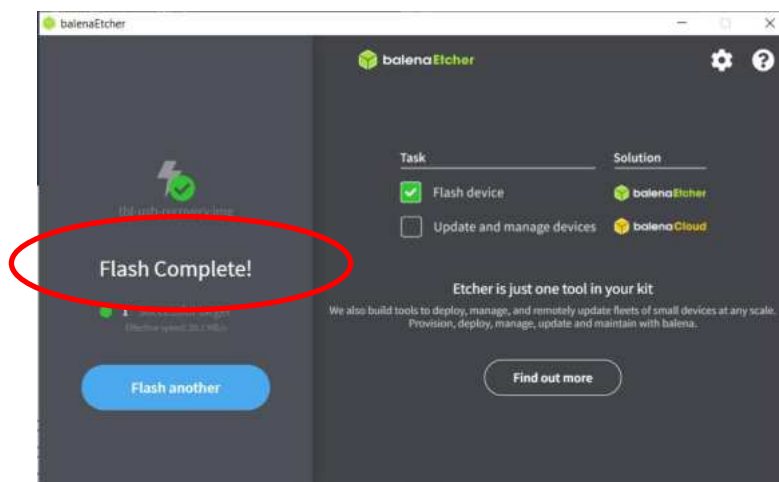
- Click on Flash



- Flash proces has started. How long it takes depends on speed of USB stick and your PC



This should end with a Flash complete message



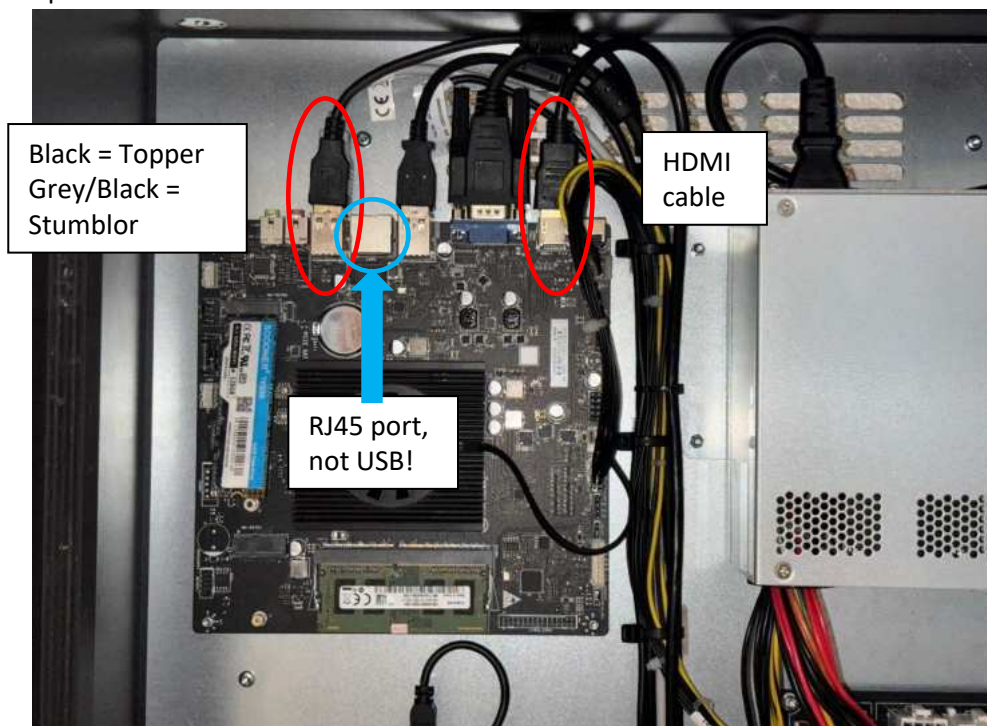
USB drive is now ready

Flashing a new image to the internal SSD

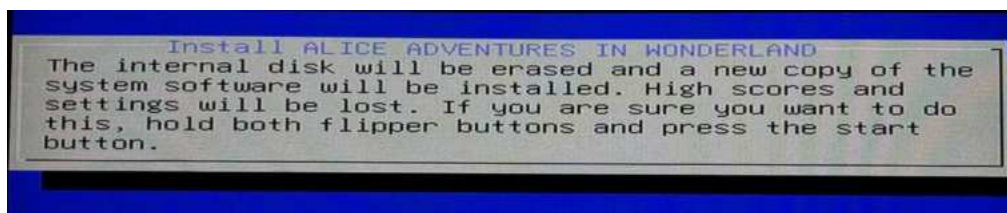
A quick & dirt video on the below can be seen at <https://youtu.be/3KmpYDX7HwE>

Not shown in the video but at the end you also always need to flash the topper!

- Insert your USB drive in a free USB slot of Alice PC. Preferable a most left one as these are typical USB3 ports. If no free USB slot available remove the grey or black cable leading to the Stumblor board in the cabinet or black cable leading to the Topper you see in below picture. So, it are the 2 USB cables totally to the **left** which you can **safely remove** for this purpose. The 2 on the right position are for Audio and PROC. PROC has to be installed to make this update work.



- **Remove the HDMI cable (this leads to the Watch display on the playfield)**
- Turn Alice ON. You will see some text appearing and at the end a warning message that your SSD will be erased. To confirm you really want to do this you will have to **push&hold both flipperbuttons** and then press **START** button.



If you are doing this to override a working image it is likely that USB-drive does not start and Alice wants to boot from the internal SSD again. When this happens, see the section at page 77, further down in this manual to change boot order. When installing a brandnew empty SSD Alice typically starts from the USB-drive regardless of the Bios settings.

You will see a lot of messages scroll over your screen. If you are using an USB3 drive on an USB3 port total process takes less than 10 minutes.



Once finished the software will turn the PC off and the screen turns total black

- Turn OFF Alice via the ON/OFF switch, remove USB drive, put HDMI cable Watch and any USB-cable you had to remove back in place and turn ON again.
- Last step is to write possible new firmware to the PCB used in the CAT Topper. For this the USB cable from the topper needs to be connected to the PC of course.

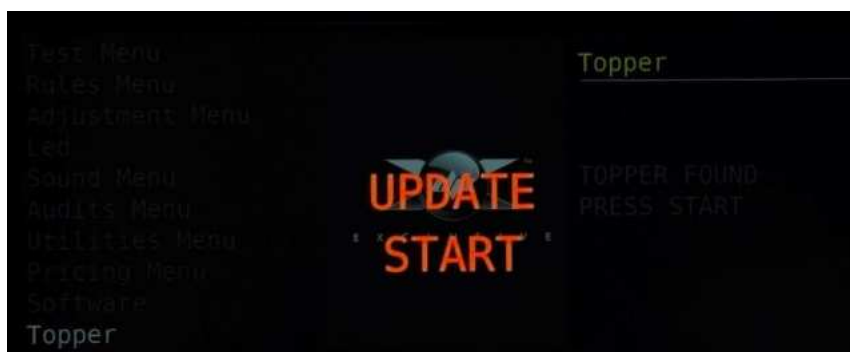
Open the Testmenu



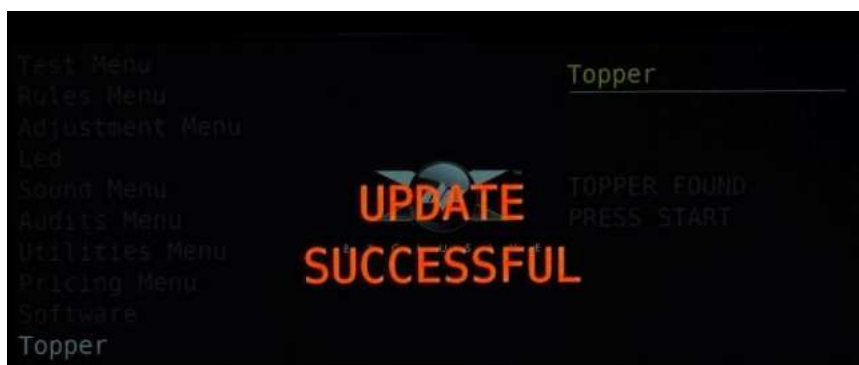
Select Topper



Press Start. Following screen will appear.



Wait (should take less than a minute) till below screen appears which tells you Update has been done successful.



DONE

- Also advised is to do a factory reset after the image is installed. This to make sure all settings are properly initialized.
- Also, your Wonder number must be set again, for how-to see section starting page 43
- Check on DP website if any delta updates are available to a higher version

USB drive does not start

Sometimes the BIOS of the PC has a setting in which it always tries to boot from SSD first. You will then need to change the boot order setting in the PC.

This section explains how to do this.

Follow these steps to change Boot-order setting in the BIOS of the PC:

General steps

- Connect an USB keyboard to Alice. If needed, remove the grey USB cable leading to the Stumblorboard in the cabinet and/or the USB cable leading to the topper to make space.



- **If not already done, remove the HDMI cable (this leads to the Watch display on the playfield). If this is not done the PC will choose the Watch display as standard display and nothing is shown on the big LCD-display.**
- Insert USB drive



- Turn ON Alice and immediately push the F11 button on your keyboard and keep pushing it till you see a small blue screen on your display



- Select with the arrow keys on your keyboard **USB, Partition 1** and push ENTER on keyboard
- Now it will start from USB-drive and you can follow the earlier described method.

Where to hook up my Translite?



Caution:

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Sometimes people disconnect their translite and didn't note where they unplugged it.

On the power distribution board you will find the connector header



The Translite connection you will see in the red encircled area. It's mentioned in silkprint above the connector header.

How to adjust brightness Translite

Also on this PCB you will find a jumper with which you can select the brightness of your translite to your wishes. Default position is to the left which is also the brightest. Want less brightness? Set jumper in middle or right position.



Where to hook up my Mods FAQ



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There are questions on where to take safely power for connecting Mods.

Used in Alice for supplying the 5 and 12 VDC power is, at the moment of writing this application note, a special PSU with dedicated short cabling. It's the silver PSU in the top middle of the backbox. The mod outputs are fused @ 1.6A slow.

The PSU you can see on the right is the 48VDC power supply used to power the coils.

It looks like this:



With Alice one Mod output is already used to power the siderails.

Again, adding mods to your pinball is at your own risk. This document is meant to keep the chance for errors as little as possible and always check the voltages prior to adding mods.

And fuse your Mods properly!

Audio FAQ



Caution:

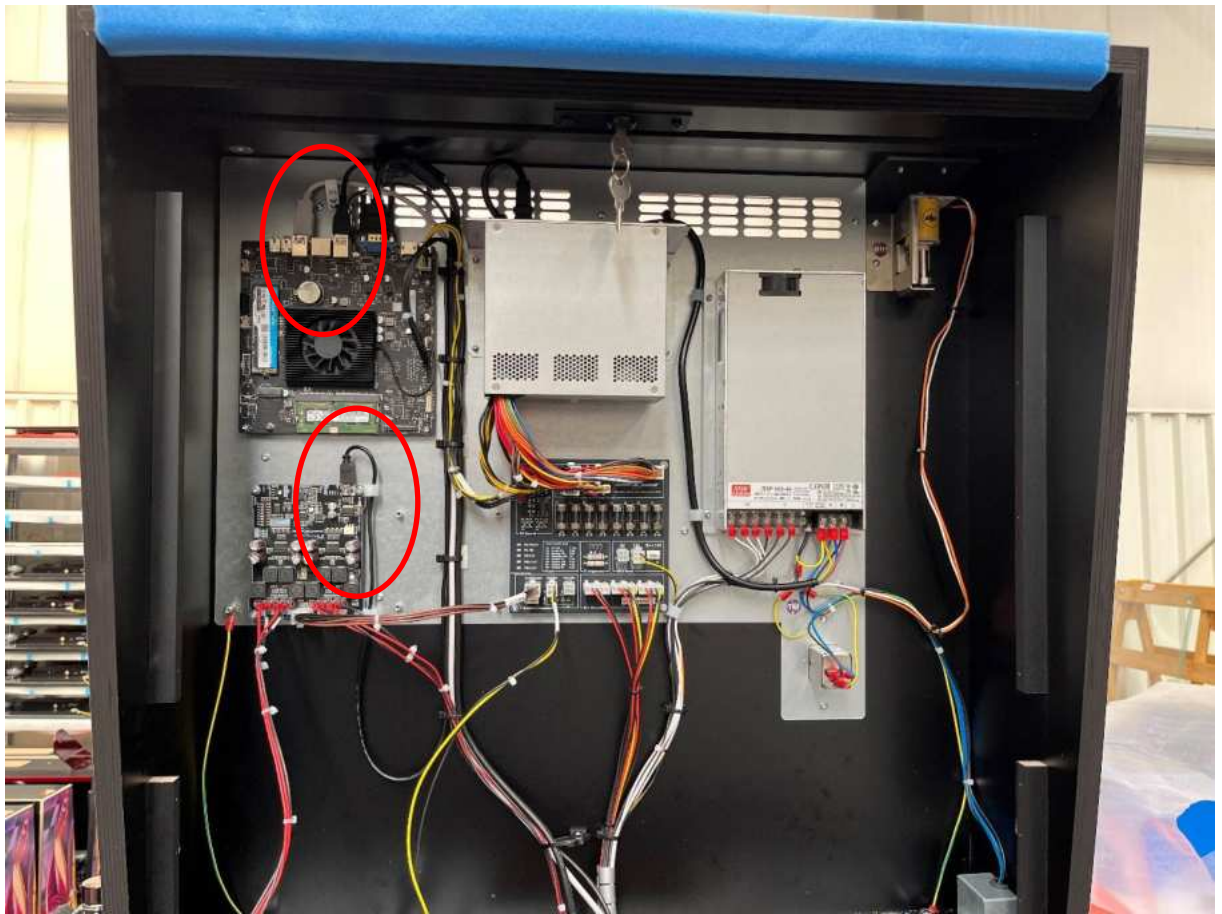
If you are not comfortable working on pinball hardware and/or high voltage electronics, please get professional support for this. In general: use your common sense. Don't experiment. Don't be a nihilist. Only skilled and trained people are allowed to open this system. The manufacturer accepts no responsibility for injuries caused by unauthorized operation. Keep long hair, fingers, jewelry, etc. away from turning parts of the system.

In this FAQ information/questions in regard to Audio are gathered.

I hear a humm/distortion coming from the speaker(s)

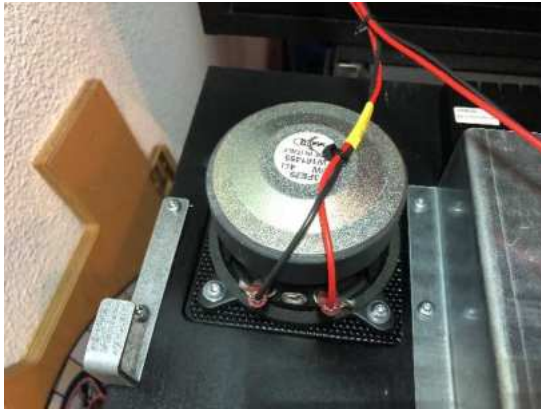
For this we would like you to ask the following:

- Reseat the USB connectors on both sides of the USB cable running from the PC to the audioboard. It is the grey cable in below picture. Preferred position for the P3ROC USB cable and the Audio board cable are the USB2.0 ports on the right row of USB ports.



- Check if the polarity of all the speakers is connected properly

Speaker panel

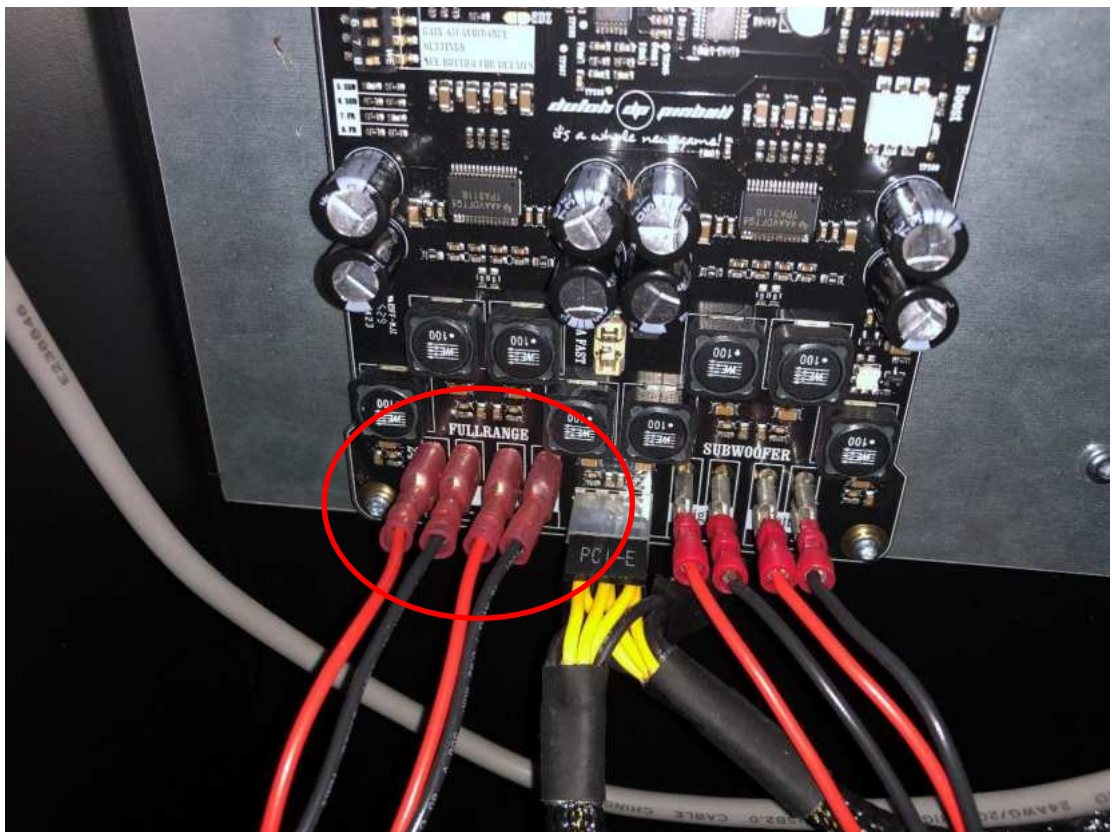


left speaker



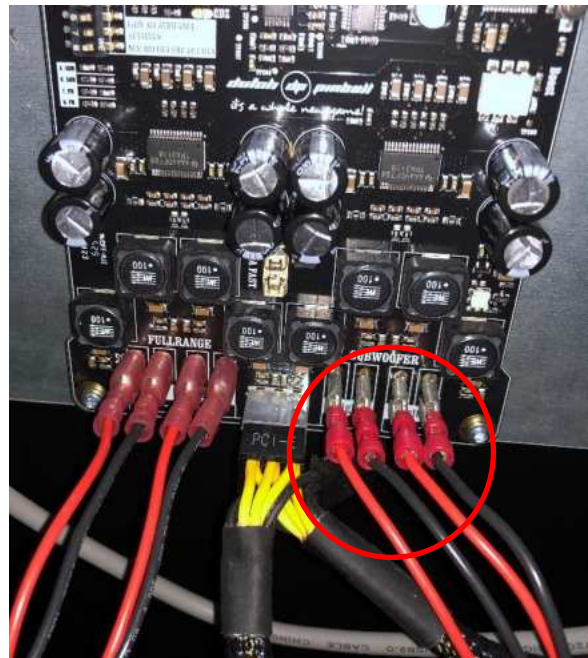
right speaker

The speaker wires run to the audioboard bottom left. Red is + and Black is -. The marking + - is mentioned on the PCB below the connections.



Cabinet speaker

On the cabinet speaker you will see at one of the connections a red dot, this is where the + is and red wire goes. Cabinet speaker is connected via 2 pairs of cables running to the audio board and connected to the right bottom side of the audio board.

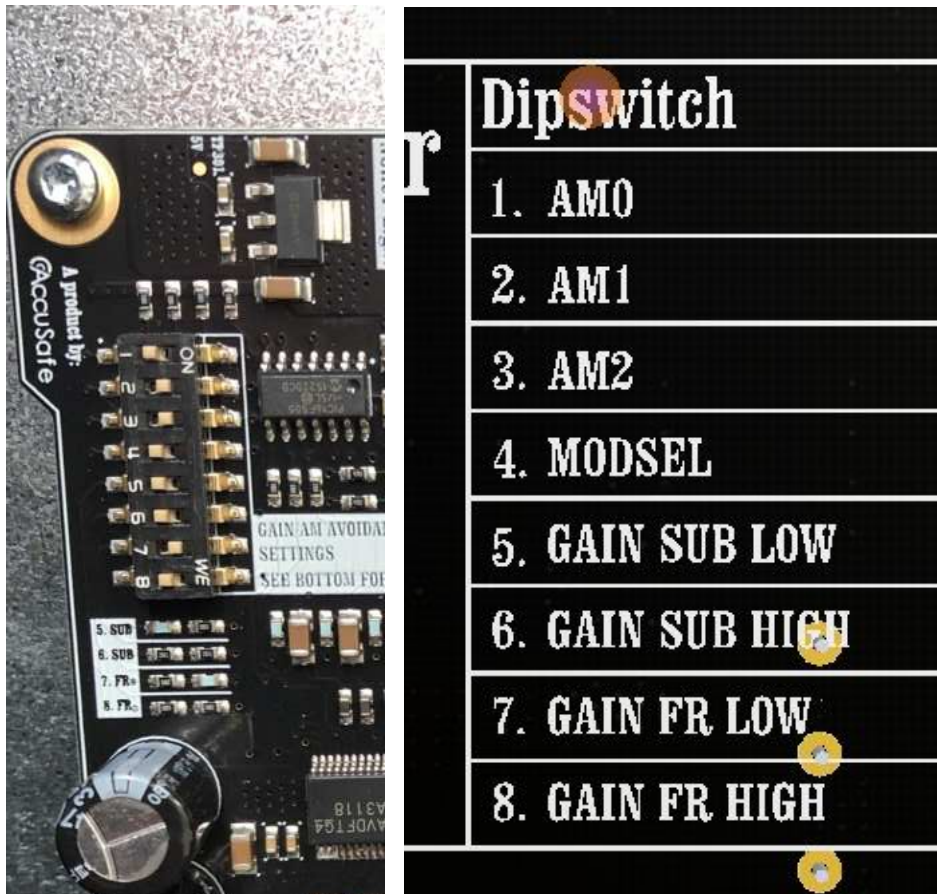


- Replace the audio USB cable. It is a cable from USB-A to USB-mini, length approx. 1 meter (3 feet).



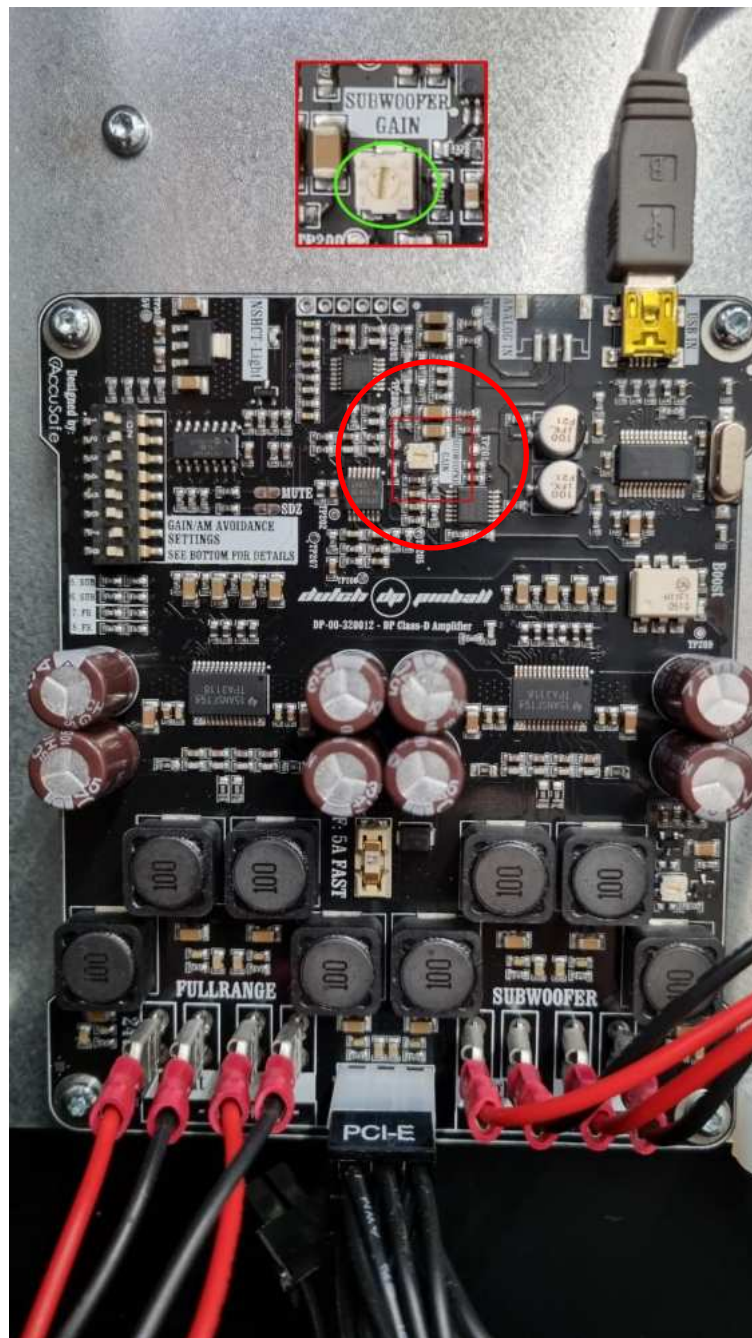
- Check dipswitch settings

The Audio board has a dipswitch. Default settings are shown in below pictures.



Bass speakers stops midgame, how-to adjust Bass volume

The audio board has a small potmeter to do this. If the Bass is set to heavy it overheats the amplifier chip and thermal protection makes it shut down. Turn it down to a lower level. Clockwise decreases bass volume immediate.





P3ROC & PDLED Removal & Installation Guide, fix for led issues

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Before removing P3ROC or PDLED make sure the game is **TURNED OFF!**

The P3ROC is the hart of the system and controls switches and coils. Also, the P3ROC addresses the four PDLED boards which control GI and insert lightning. Each PDLED board takes care of a part of the lightning.

What we see is that, typical after transporting Alice, the PROC and PDLED boards can have a loose contact with the headers on the PCB causing strange behavior with the Leds. Reseating these boards is best but you could try first just loosening (not removing) the screws holding the board, pushing firmly with your hand on top of those boards (especially in the middle) and retighten afterwards the screws to get them properly back into the headers. If that doesn't solve the issue you can always still reseat them. If the Led issues are scattered over the whole playfield likely it's just the PROC needing a reseat.

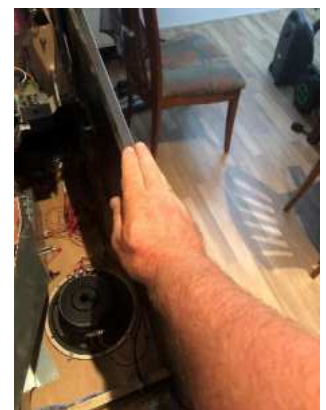
Preparations

Step 1 – Raise the main playfield

- See for this section **Setting playfield vertical, page 22**

Step 2 – Remove any built-up electrical charge in your body

- Touch a siderail
- Note: we assume your Alice is still connected to a grounded wall-socket !
If not, touch another spot which you know is grounded
- **Also, see the remark with working with a life 48VDC circuit on page 18!**



PROC installation - removal

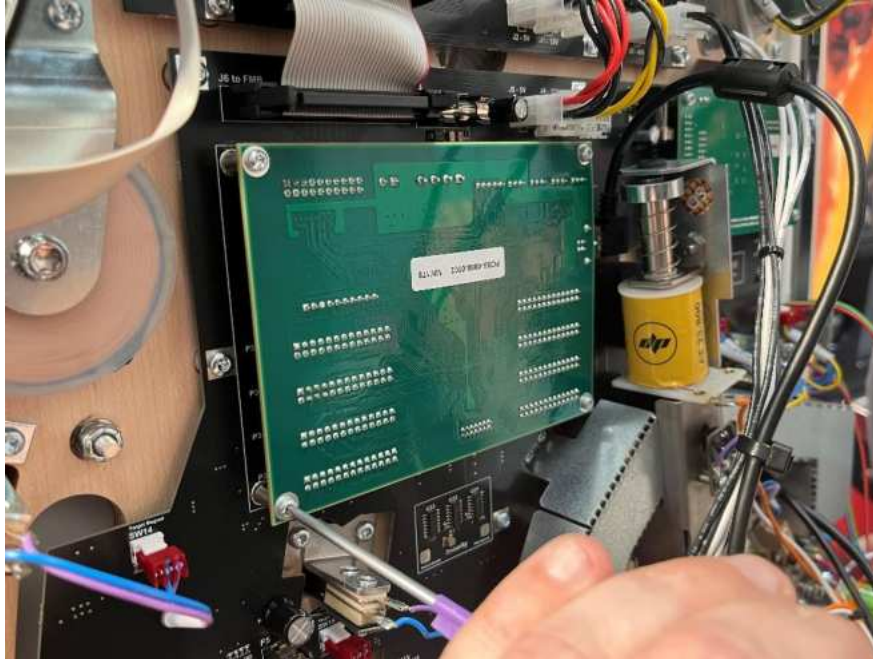
Step 1 – Locate the P3ROC

If you don't want to reseat the PROC you can always try first loosening the 4 screws at the corners, then push on top of PCB, especially in the middle, to force it back into the headers and retighten the 4 screws in order to fix led-issues.

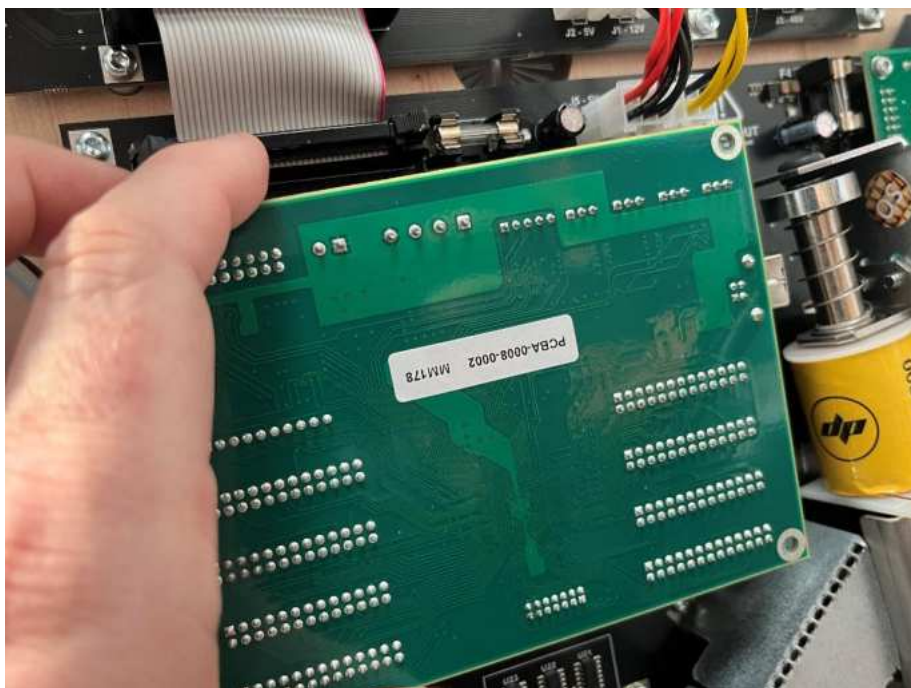


Step 2 – Remove the 4 screws on the corners of the P3ROC and the USB cable

- Disconnect the USB cable
- Remove the 4 screws and put them aside

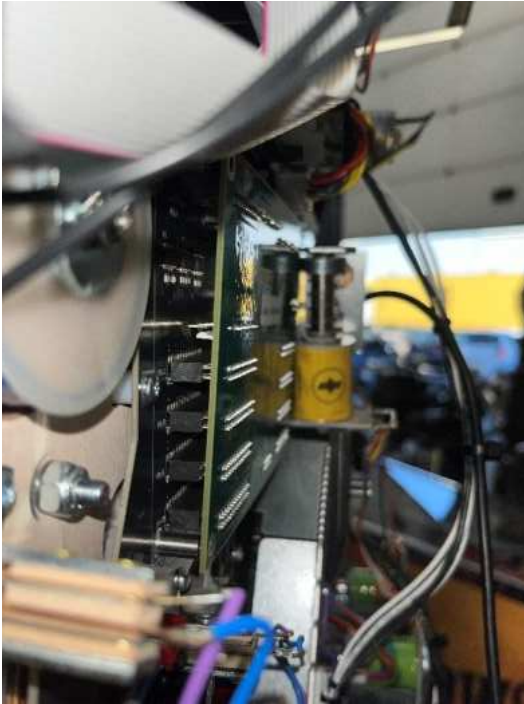
**Step 3 – Remove the P3ROC**

- This does typically require some force.
- Lift the board a little at each corner and wiggle it out of the headers. You will likely need to visit each corner several times.
Just start for instance top-left corner, lift it a little, than go to top right corner, lift it a little, go to bottom tight corner, lift it a little, go to bottom left corner, lift it a little, go back to the first corner, top left, and lift it again a little, etc..
You may need to do several circles. Just take your time and yes, it typically requires some force. So, no worries if this is the case with you, its normal and P3ROC will not break easily.



Step 4 – Install P3ROC

- **If you exchanged the PROC, check dipswitch setting first!! Should be 1100011 (ON-ON-OFF-OFF-OFF-ON-ON)**
- Place it gently on the headers and check proper alignment of the pins against the headers and the screw holes against the posts



- Once check alignment is OK push the P3ROC In its place. This will require some force.
- Push again on several spots on the P3ROC (like the middle) to make sure the pins of the P3ROC are as deep as possible in the headers of the MMB
- Reinstall and tighten the screws
- Reinstall the USB-cable

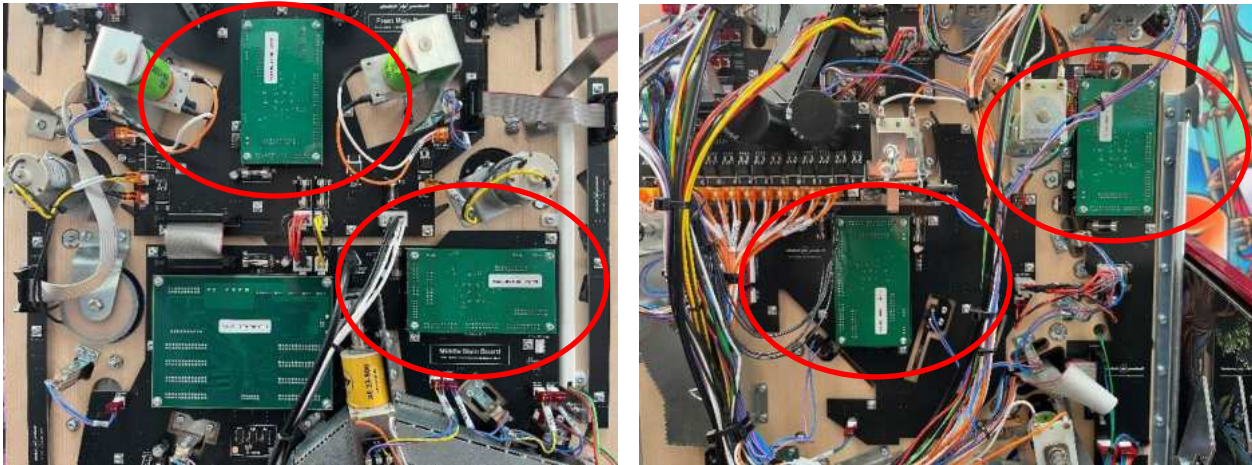
Step 5 – Place playfield horizontal

- Turn on your Alice and test functionality
- If OK insert the playfield glass and enjoy your Alice!

PDLED installation - removal

Step 1 – Locate the PDLED boards, there are 4:

If you don't want to reseat the PDLED you can always try first pushing on top of PCB, like in the middle, to force it back into the headers in order to fix led-issues.



Step 2 – Remove the 4 screws on the corners of the PDLED

- Remove the 4 screws and put them aside

Step 3 – Remove the PDLED

- This does typically require some force.
- Lift the board a little at each corner and wiggle it out of the headers. You will likely need to visit each corner several times.
Just start for instance top-left corner, lift it a little, than go to top right corner, lift it a little, go to bottom right corner, lift it a little, go to bottom left corner, lift it a little, go back to the first corner, top left, and lift it again a little, etc..
You may need to do several circles. Just take your time and yes, it typically requires some force. So, no worries if this is the case with you, its normal and PDLED will not break easily.

Step 4 – Install PDLED

- Place it gently on the headers and check proper alignment of the pins against the headers and the screw holes against the posts. See previous pictures.
- Once check alignment is OK push the PDLED in its place. This will require some force.
- Reinstall the screws
- Push again on several spots on the PDLED (like the middle) to make sure the pins of the PDLED are as deep as possible in the headers of the PCB

Make sure you install the PDLED at the same position as they each have their own unique address. **If you want to swap a PDLED with another PDLED make sure you also swap the Dipswitch settings!**

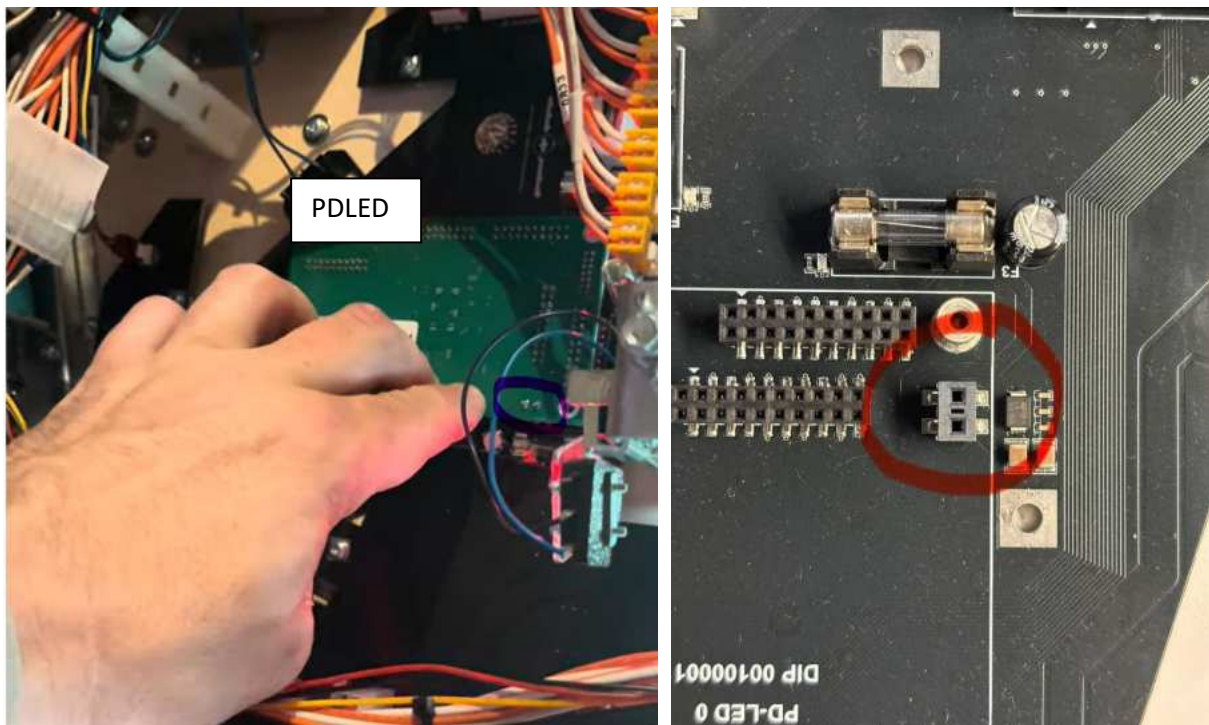
Step 5 – Place playfield horizontal

- Turn on your Alice and test functionality
- If OK insert the playfield glass and enjoy your Alice!

Leds on Main Playfield ain't working

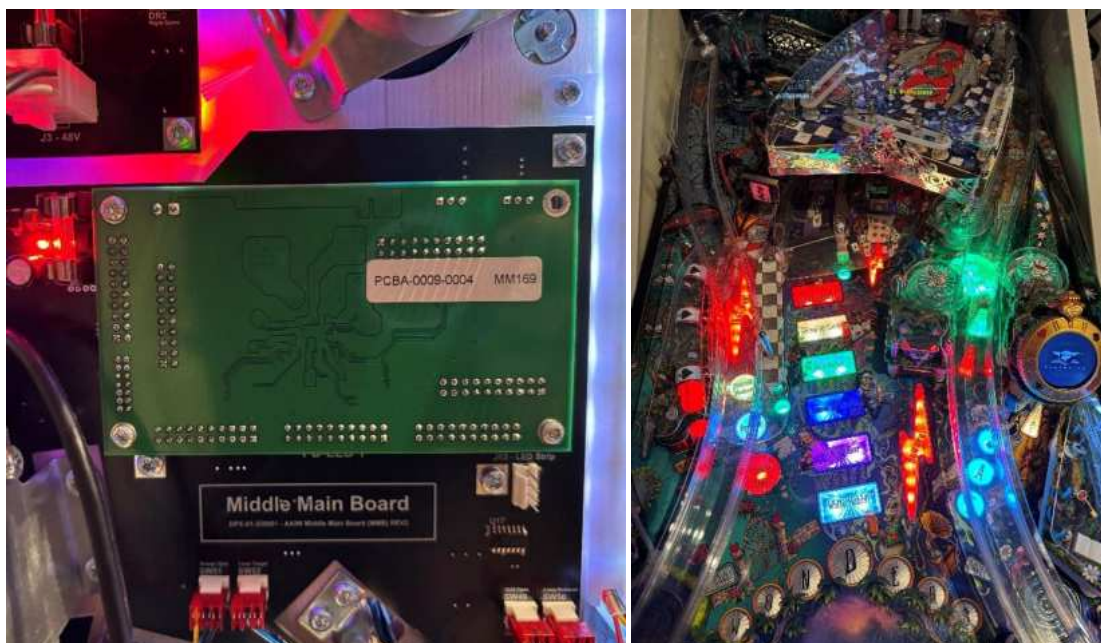
We have seen sometimes a bad solder on the PDLED power Pins to cause a part of the Leds go out. When pushing on top of the PDLED board Leds usually go ON again. Another sign of a bad solderjoint.

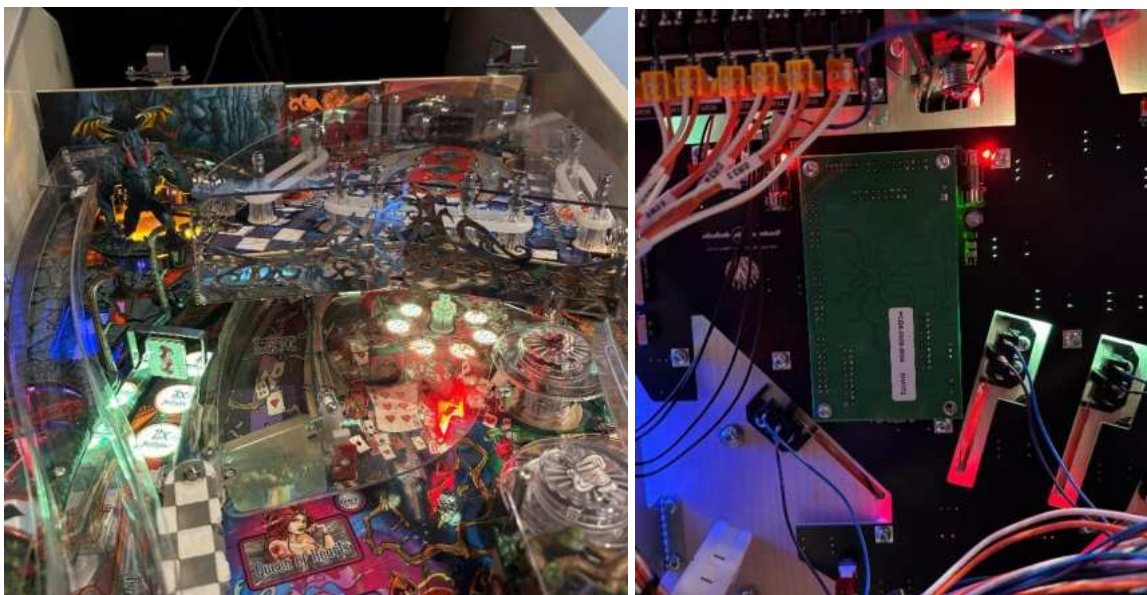
This is a relatively easy fix, remove the PDLED board and reflow the solder of the 2 Powerpins. See below pictures which pins these are.



Which Pdled controls which part of the leds on playfield

As follows:







Trough issues FAQ

Caution:

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Before the following make sure the game is **TURNED OFF!**

In case there is the need to set the playfield vertical or take it out on the brackets for better access of the Ball Trough please follow the below instructions

Preparations

Step 1 – Raise the main playfield

- See for this section Setting playfield vertical, page 22

Step 2 – Remove any built-up electrical charge in your body

- Touch a siderail
- Note: we assume your AAIW is still connected to a grounded wall-socket !
If not, touch another spot which you know is grounded

Check amount of balls

Alice is delivered with 5 balls. If you have only 4 balls in the ball trough most likely one is stuck on the playfield. Check your playfield carefully.



Check switch test

Go into the test menu **WITHOUT** starting a game. This works as follows

Push the Enter button to open the Main menu. In the Main menu, you have submenus which will lead you to subsections with a variety of possibilities:

- Test menu. You can carry out any test you desire to check if something is working properly.
- Rules menu
- Adjustment menu. You can adjust settings or customize gameplay to your needs.
- Led
- Sound
- Audits menu. Here you see what the earnings are, how many times a flipper was activated, etc.
- Utilities
- Pricing
- Software menu. Here you can find software related [options](#), such as version check & select, and update.

You can use the + - keys to select the item of your choice and when pressing the Enter key, this choice will be activated. The Escape key will return you to your previous choice or close the test menu. Go to Test Menu



Select Switch test. If you activate this test, it will display all switches which are active at that moment.



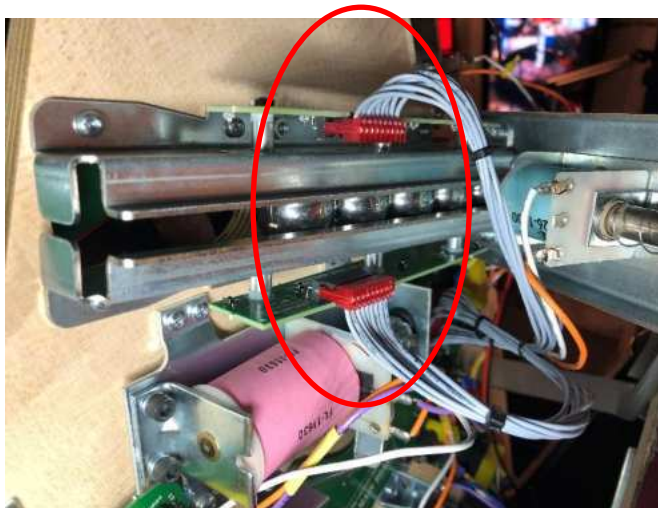


The above picture shows the active switches at this moment. What we are targeting here is if we see switches Trough 1-2-3-4-5 active. This means Alice thinks 5 balls are in the ball trough which is OK.

Now remove all balls manually. You can most easily do this by manually moving the plunger of the coil upwards.

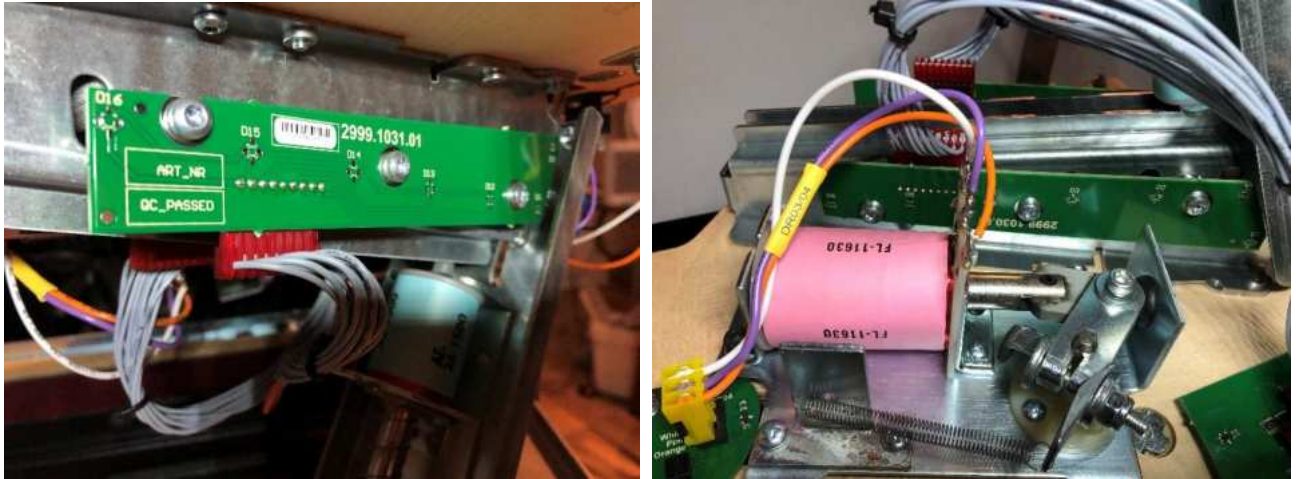
Repeat the switch test. ALL trough switches should now have disappeared.

In case one of the above tests doesn't show the expected outcome remove and reseal the connectors of the two PCB's. Do this with Alice turned OFF!!



In case reseating the connectors doesn't help most likely one of the senders or receivers, which form an opto-pair, isn't working.

Alice has 6 opto-pairs for Trough 1-6 and at the end one extra to detect a ball jam. You can check which one isn't working via blocking the light path with for instance a sheet of paper. Check which one doesn't react and see if for instance it's not just a soldering problem



The above 2 pictures show the two PCB's which form together the detection of the balls in the Trough.

If you think something is faulty in (one off) these two PCB's report it to DP support @ support@dutchpinball.com for a replacement set of PCB's. Include a detailed description of the issue and the serialnumber of your game.

Ball has issues getting in shooterlane

Check Rubber grommet

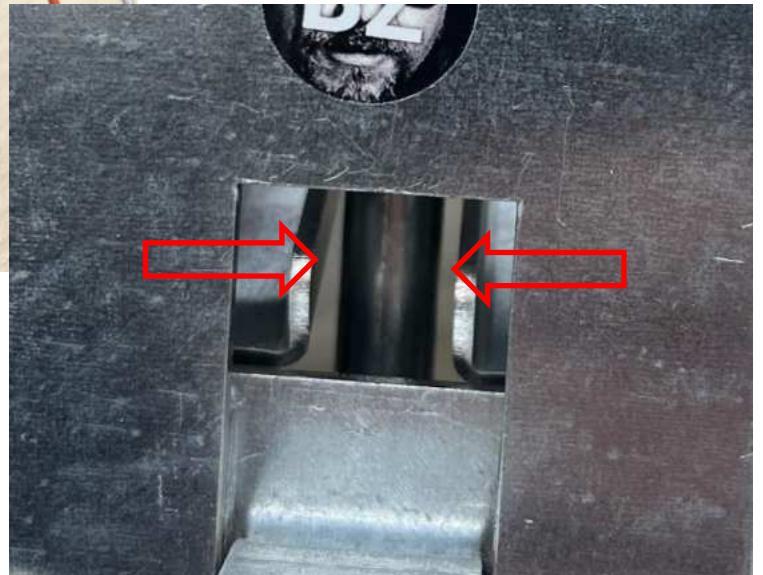
If the ball has issues coming into the shooterlane check the rubber grommet which acts as a kind of coilstop. Have tried as a replacement this one <https://www.pinballlife.com/williamsbally-rubber-bumper-pluggrommet.html> . You might have to play a little with coilstrength but worked fine in my Alice (original grommet is a local sourced product)



Check alignment VUK coil

Check if the plunger is nicely in the middle of the laneguides

There are 2 versions, shown below is latest version. If you loosen the 4 blue encircled screws a little you can juggle the plunger via moving the coil a little left-right (red encircled), make sure its centered between the 2 laneguides on left and right side so it hits the ball properly. The other version the 4 screws are slotted and have more space to move



Remove rubber top of trough

When all others fail, I have had reports that removing the rubber which is on top of the trough present solved all issues. See picture which one I mean.



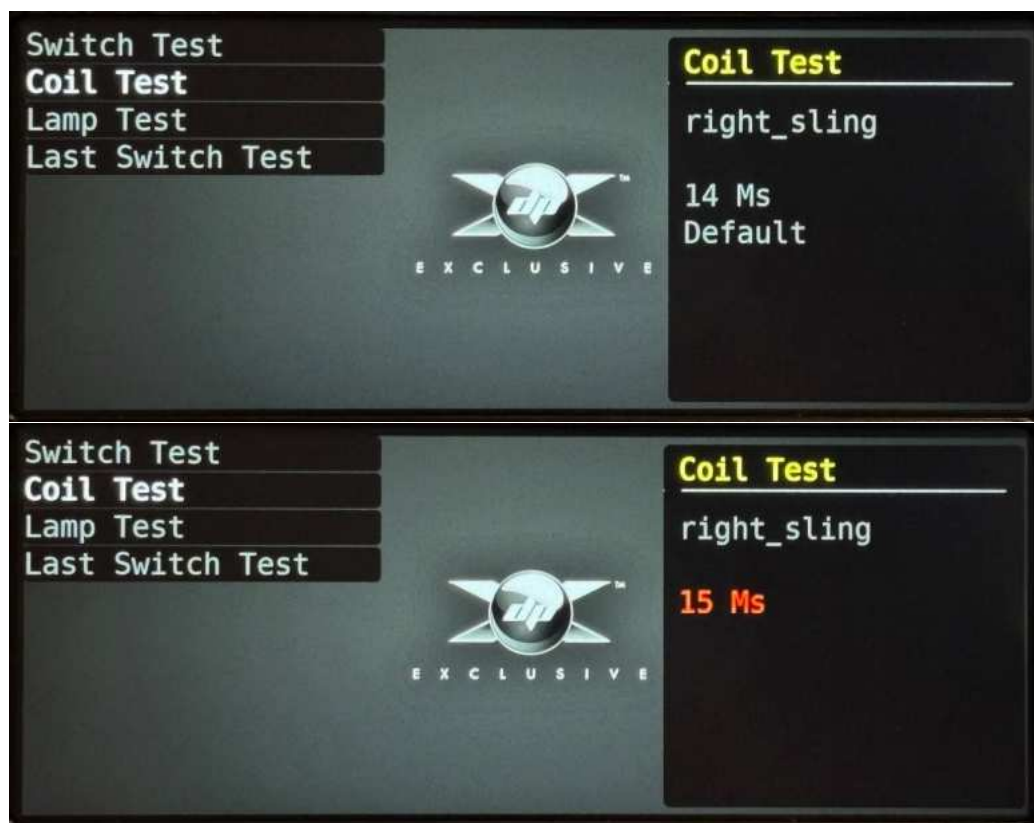
Adjust Coil strength

Here, you can set the strength of each coil independently.

Select the coil you want to change with the + - buttons and increase power (longer time) or decrease power (shorter time) to get the desired strength.

Typically, these values do not have to be adjusted. When you feel the need to adjust them, make sure you are not increasing the strength to overcome a mechanical issue. The solution is then to fix the mechanical issue, not to increase the strength.

The Right Sling (set at 14 ms in this example) is the one needing adjustment in this example. You decrease the value by pushing the left flipperbutton and increase it with the right flipperbutton. Once you put in a value different as the Factory default setting it will color Red.



Magnetic balls

As Alice has 4 magnets it can be that the balls become magnetized over time and start sticking to each other in the ball trough and thus preventing proper function of the trough.

An interesting article on this topic can be read at

<https://www.pinballnews.com/learn/magnetism2/index.html>

Test is easy. Just lay 2 balls next to each other and see if the 2nd ball follows if you move slowly the first ball.



If they are magnetic replace them with balls specially meant for pinballs with magnets. Like for instance https://www.pinballlife.com/20-6500_ZUP.html



Coin-op use FAQ

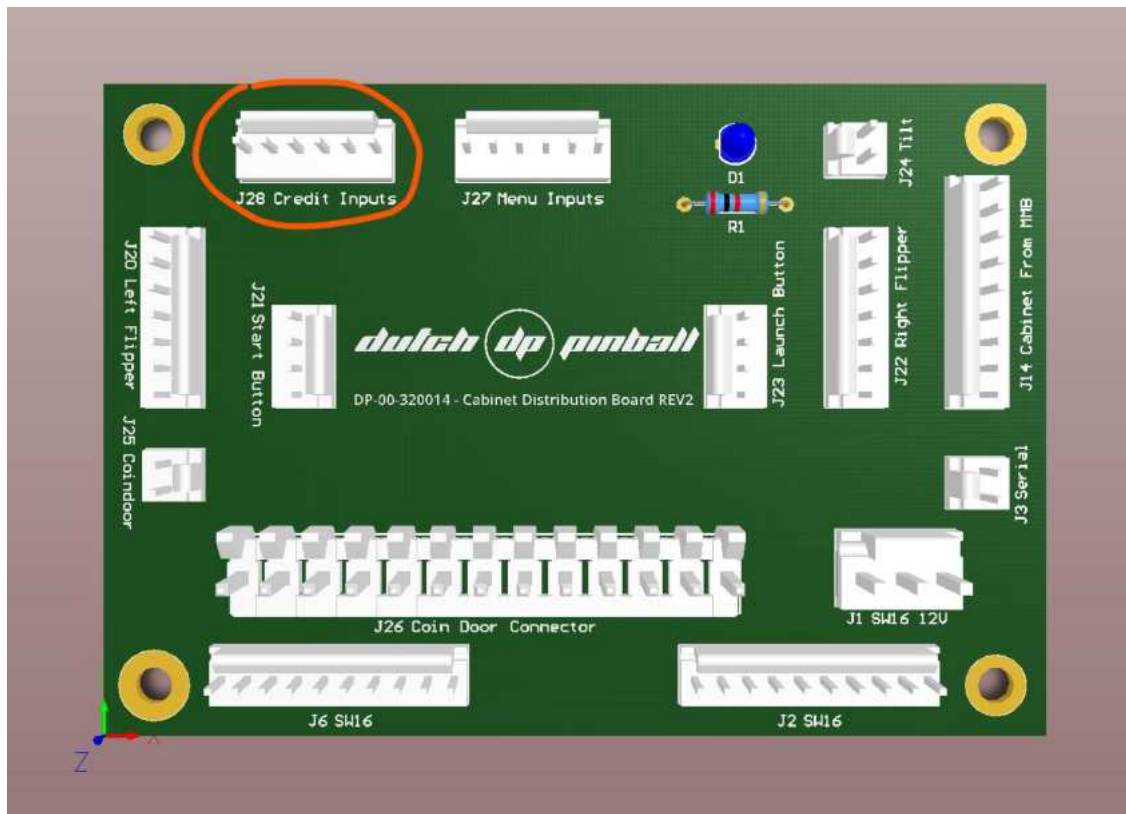
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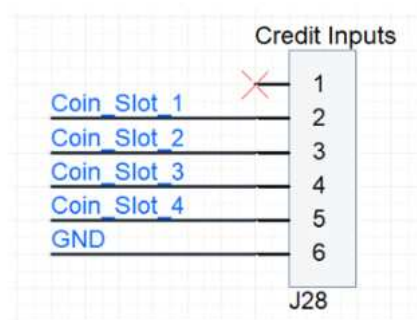
If you want to use a bill acceptor in Alice this is possible. Easiest would be to have an acceptor that runs on 5 or 12 VDC (12VDC is the easiest), because you could take that from the game itself.

Where to hook up the coin acceptor

There is a header on the Cabinet Distribution PCB (located to the left inside of the cabinet near the coindoor) which you can use for the coin inputs:



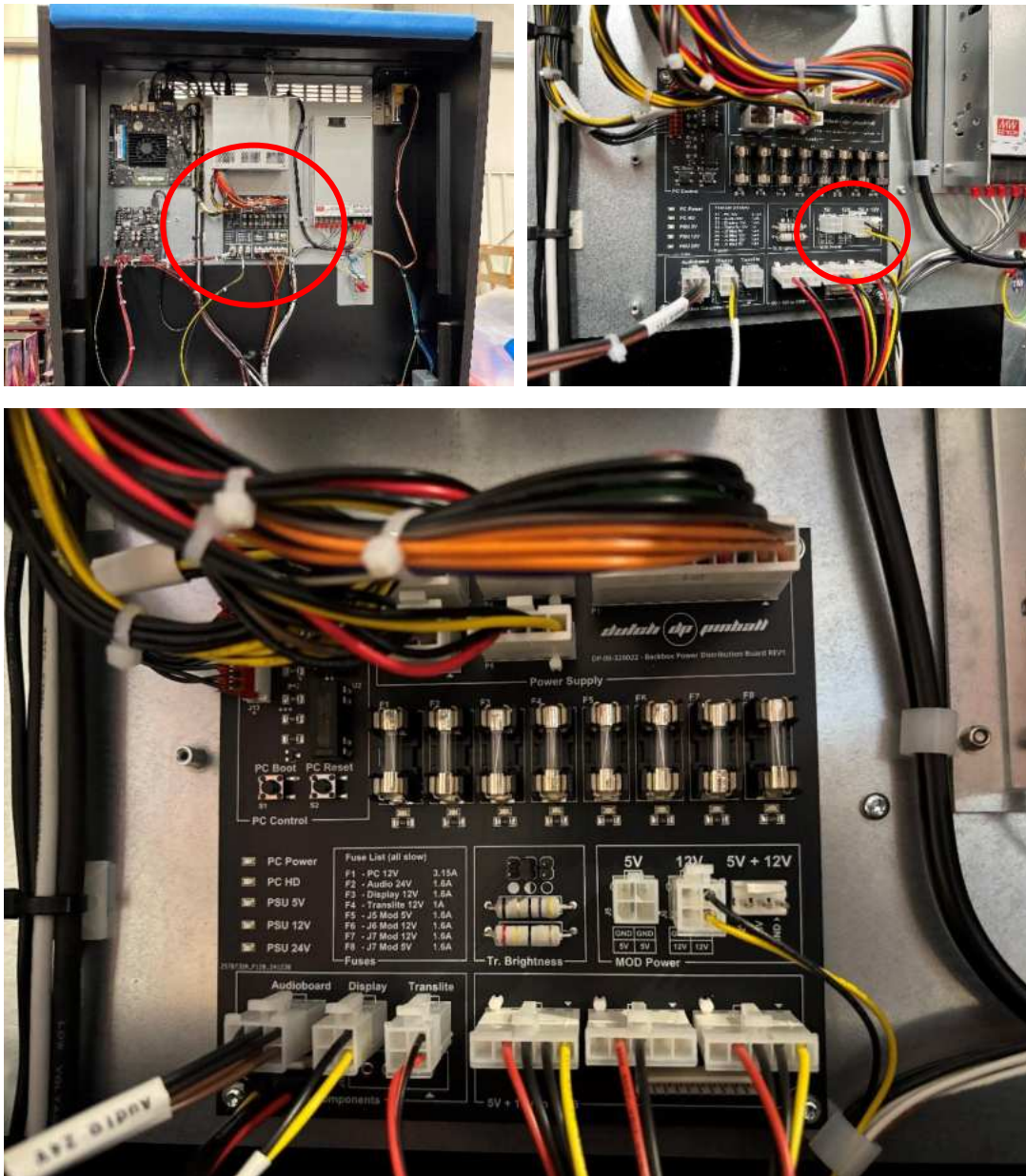
Here's the pinout of J28:



Where to get power for my coin acceptor

A power distribution board can be found in the backbox. This has separate headers to connect mods and these headers are also Fused (1.6A slow).

It looks like this:



Here you have several options for hooking up your coin acceptor to 12 VDC

Software settings Alice for Coin-op

Also, the menu of your Alice offers some functionality regarding using it on coin-op.

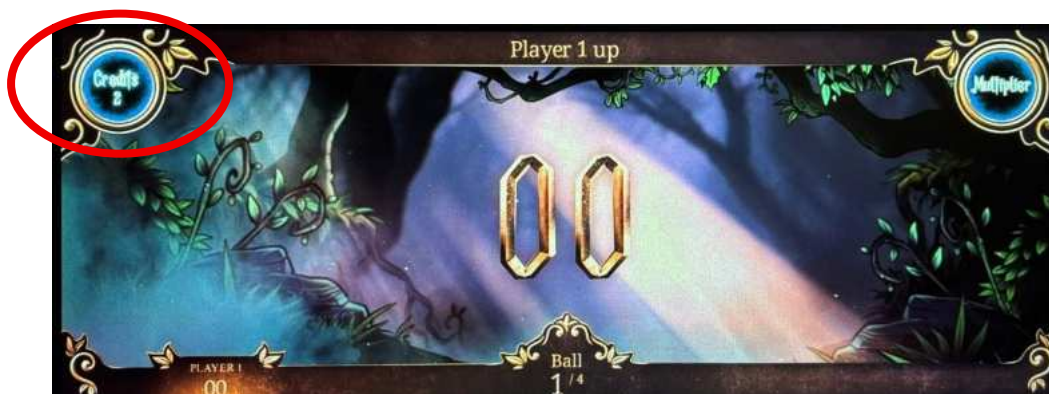
Go into the Menu and select Pricing

In this menu, you can set everything which has something to do with how much it will cost to play a game (or set Free play) and to set the percentage of Free plays awarded to players for matching the last 2 digits of their score to the random number drawn after the game ends.



As follows:

- Free Play. Select Yes to set the game in Free Play mode. Select No to make it coin operated.
- Coin 1-2-3-4 Value. Here you can set how many units are needed for a game. Alice has 2 coin slots. Coinslot 1 is the most right one, Coinslot 2 is the most left one.
- Unit Per Game. Number of Units needed for one Game.
- Bonus unit. Is how much units do you get as a bonus.
- When Give Bonus. Here you can set with how many units customer gets an extra game. As an example, 1 Dollar = 1 Game ; 2 Dollars = 3 Games
- Pricing Preset. Presets depending on country. Typically, this is set on Custom.

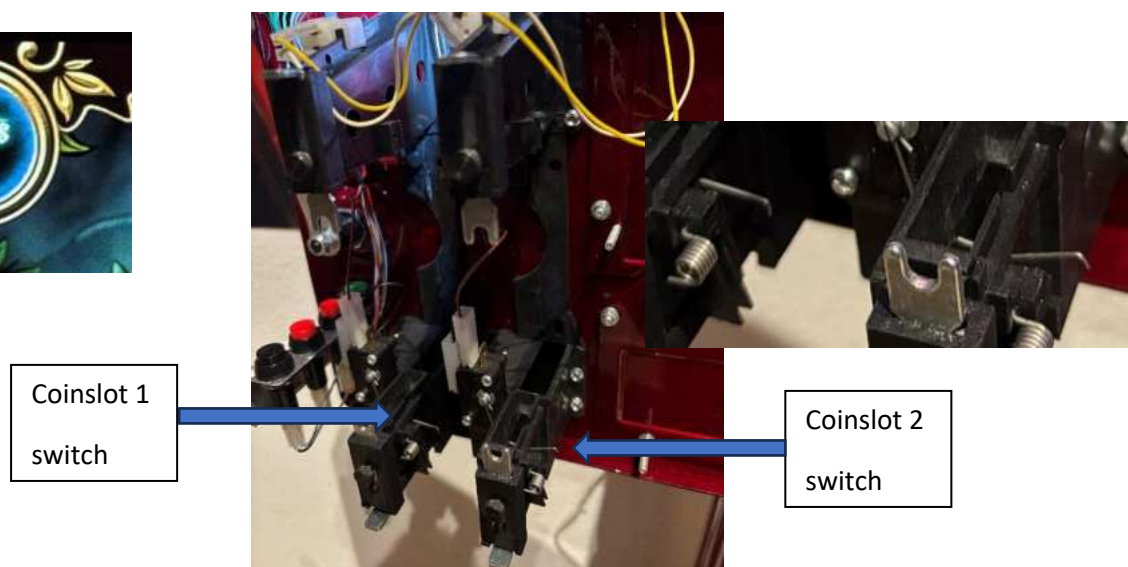
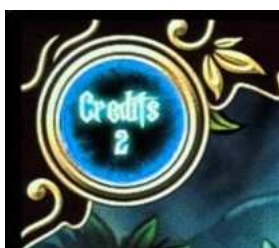


Example Coin-op use



In this example:

- Units per game needed: 50
- Coin 1 value is 50 so if the switch in Coinslot 1 is activated this gives you 50 units = 1 game.
- Coin 2 value is 25 so if the switch in Coinslot 2 is activated this gives you 25 units = 1/2 game. Thus, 2 times a coindrop in Coinslot 2 are needed for 1 game
- When give bonus? In this example when 100 units is reached. So, 2 coindrops in Coinslot 1 makes 100 units and gives you thus a bonus
- How much bonus is mentioned in Bonus Unit. In this case the bonus = 50 units which makes in this example 1 extra game. So, 2 coindrops in Coinslot 1 = 3 games





it's a whole new game!

Flipper issues FAQ

Caution:

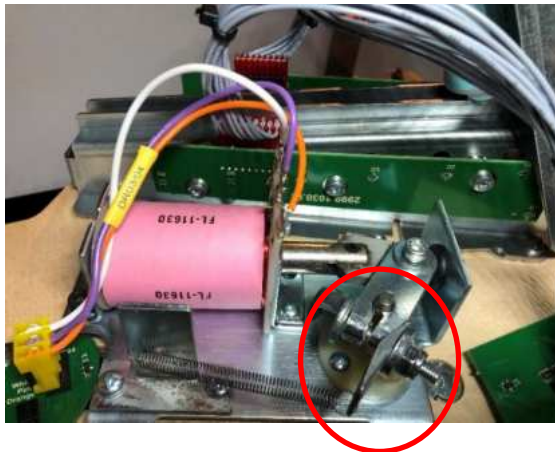
If you are not comfortable working on pinball hardware and/or high voltage electronics, please get professional support for this. In general: use your common sense. Don't experiment. Don't be a nihilist. Only skilled and trained people are allowed to open this system. The manufacturer accepts no responsibility for injuries caused by unauthorized operation. Keep long hair, fingers, jewelry, etc. away from turning parts of the system.

Sometimes 'sticky' flipper

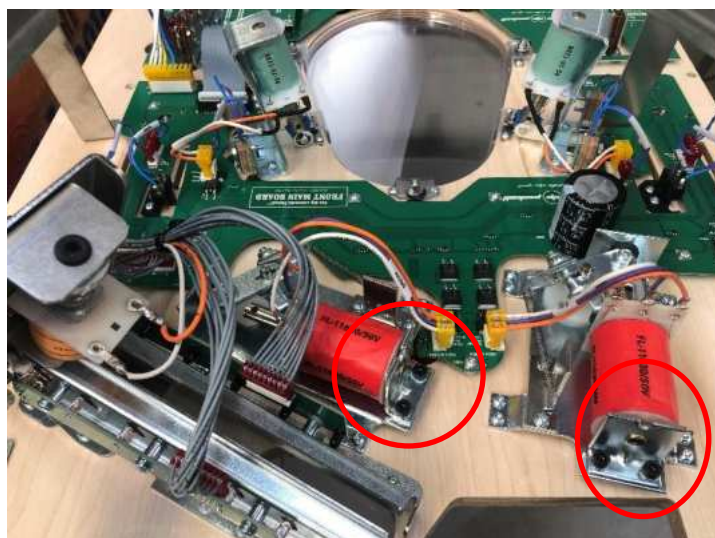
A good video on flipperassy's can be seen at <https://www.youtube.com/watch?v=2JKKMNccPso>

Would advise here to try the following:

- Make sure the flipper has vertical some tolerance to move. Especially if a sticky flipper is experienced after some flipping it can be because the flipper has vertically to little play, it heats up a little and becomes jammed. Loosen the flipper axis at the crank below the playfield and rise the flipper a little so it gets like 1-2 mm tolerance in vertical movement. See section starting approx. 8:50 of above mentioned video.



- Disassemble the flipper assembly (remove coilstop so you can take out the coil), clean and re-assemble
- Swap the coilstop with other side. If the problem moves with it, it's likely caused by a magnetic coilstop
- Have also see bad sleeves causing this issue, replacement is Flipper coil sleeve is type 03-7066-5, https://www.pinballlife.com/2-316-coil-sleeve.html?srltid=AfmBOorlxdvlek-o9aZ74dHXmnhtTbZy_2Xw3_qswCLRT8EvGYtb0i
- Complete flipper rebuilt kit can be bought at <https://www.pinballlife.com/dutch-pinball-flipper-rebuild-kit.html>



Position Coilstops

Factory flipperbat adjustment procedure

Also, the factory has developed a special tool to adjust the flippers. It does height tolerance and angle in one go. It's a 3D printed tool, STL can be downloaded from <https://we.tl/t-9qZdl1w7vy>.



Sometimes flipper remains up, energized

A few cases have been reported that a left or right flipper remained up and was energized while up (so, only way to get flipper down was turn off power).

This turned out to be solved via reseating P3ROC board.

A section describing, among others, how to reseat the P3ROC board can be seen at section starting page 89 ; P3ROC & PDLED Removal & Installation Guide, fix for led issues



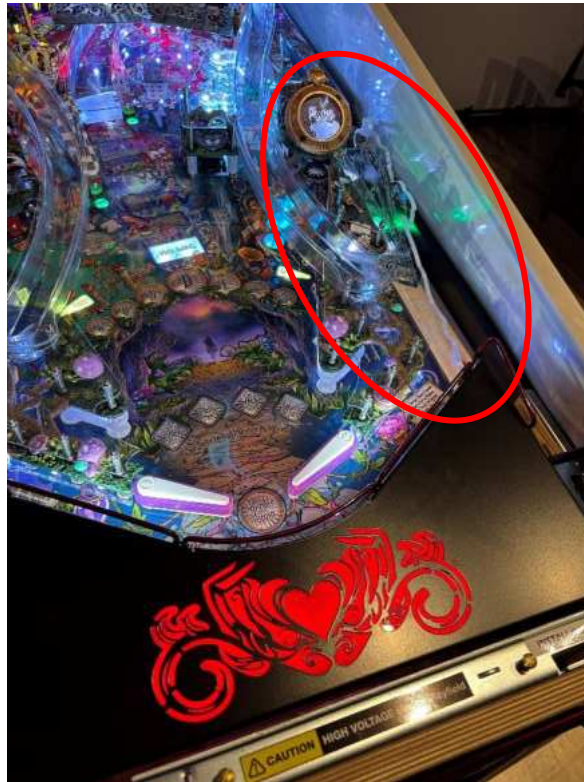
it's a whole new game!

Install-Remove Apron

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When removing the Apron some extra care needs to be taken as it's a tight fit against the plastic in the shooterlane. It's thus our advice to remove this plastic prior to removing the Apron



- Set the playfield vertical according to instructions seen at page 22
- Remove the white plastic strip which contains the LEDstrip. It's held in place by 3 screws.



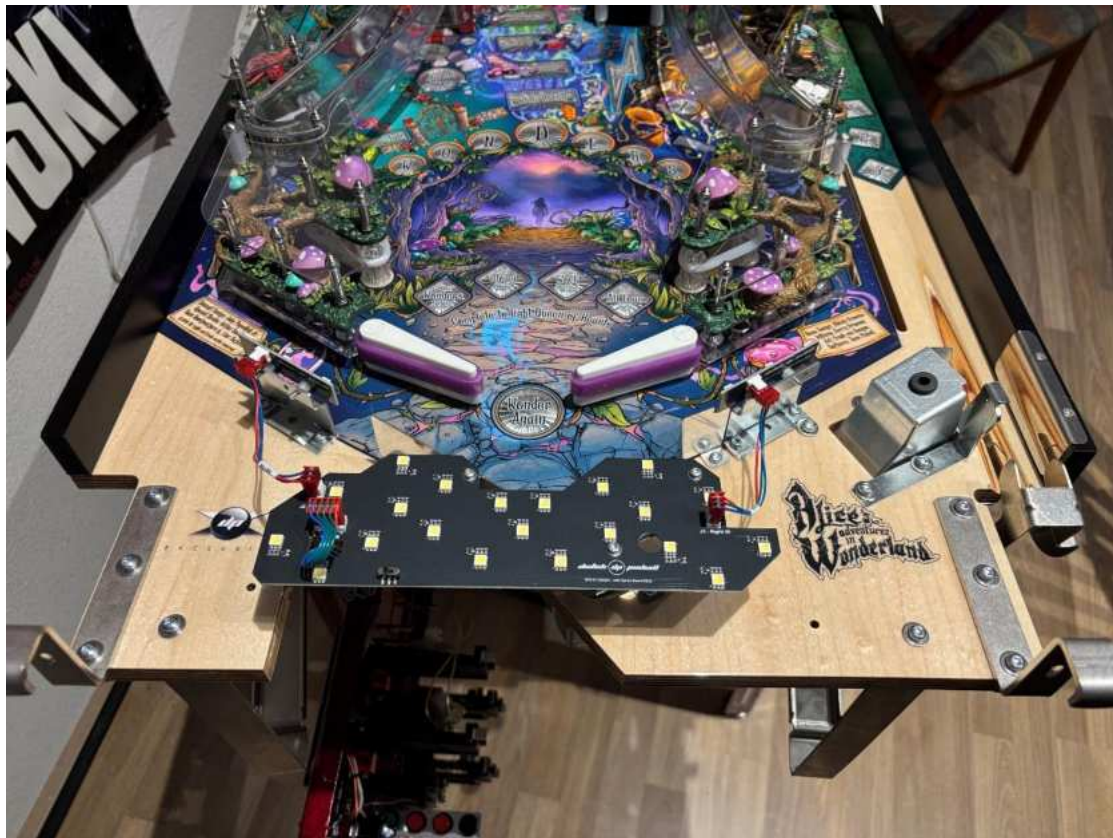
- Remove the 4 screws and take out the metal guide and the shooterlane plastic will come with it



- Set the playfield horizontal resting on the service rails.
- Remove the 2 screws holding the Apron



- Carefully slide the Apron forward and now you can take it out



- To install Apron back again reverse the previous steps



it's a whole new game!



Siderail-Shooterlane Light show Stumbler

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Alice's Adventures in Wonderland features a Lit-up Shooterlane, Lit-up siderails (Wonderrails) and JabbaWock with a moving arm.

These are all controllable (and programmable) via the Lolly boards from well-known modmaker Stumblor.

With this **short** introduction to this app, we only want to make you aware that these lightshows or Jabbawock movement can be user modified. We expect many people will leave it as is but for those who want to tinker, go ahead!

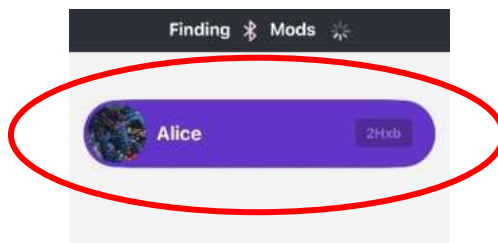
So, no full detailed description here, for this head over to the Stumblor webpage at <https://stumblorpinball.com/>. Full documentation on the App made by Stumblor can be found at <https://stumblorpinball.com/docs/app>

The app can be downloaded from [Apple App Store](#) and [Google Play Store](#).

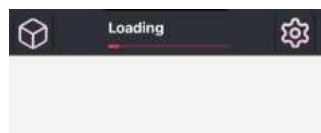
Once installed, click on the app icon to open.



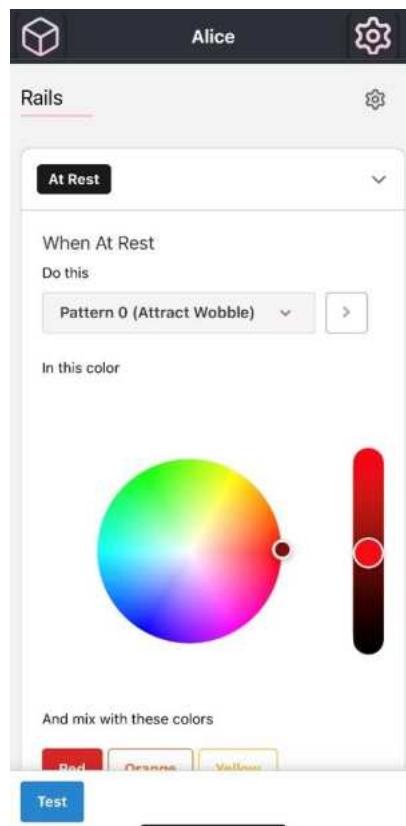
The app will then scan for the Lolly V3 board installed in your Alice.



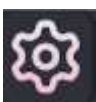
Click on Alice and the app will begin to open the configuration.



Once loaded, the app will show you the control panel, which allows you to configure the colors and the patterns shown on the mod. In this example for the Rails.

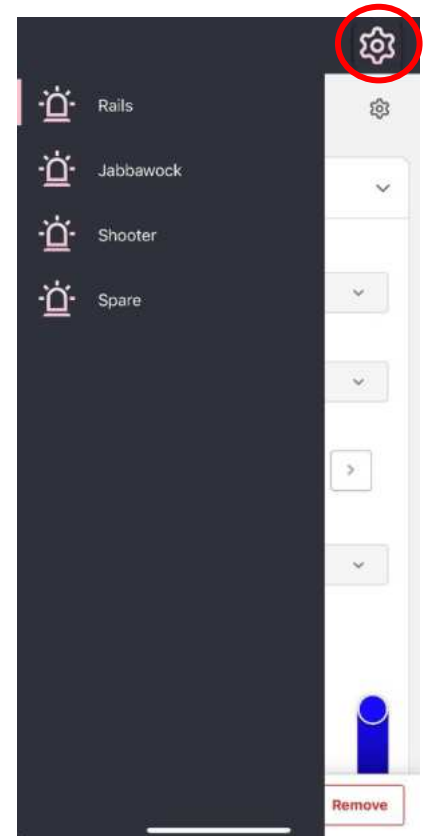
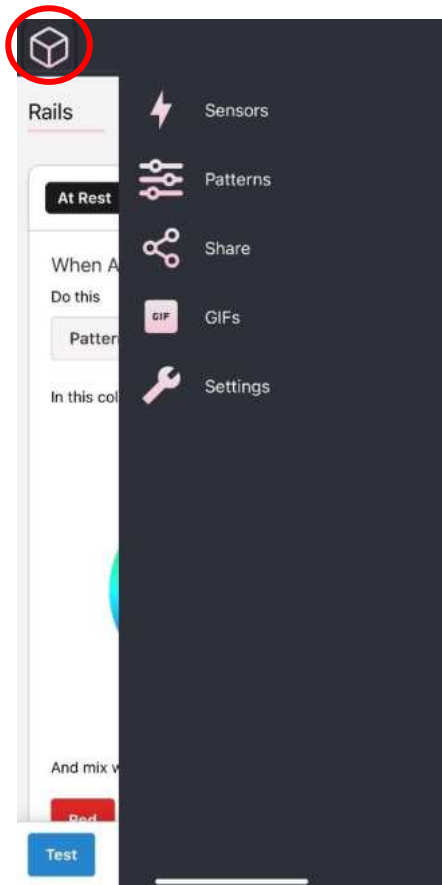


There are two navigation menus, one on the left, and one on the right, which can be accessed either

by clicking the  and  icons at the top left and right of the screen.



The  icon shows you which items you can program – modify. Select the one you want to modify and adjust it to your liking.



The  icon shows you all possible settings.

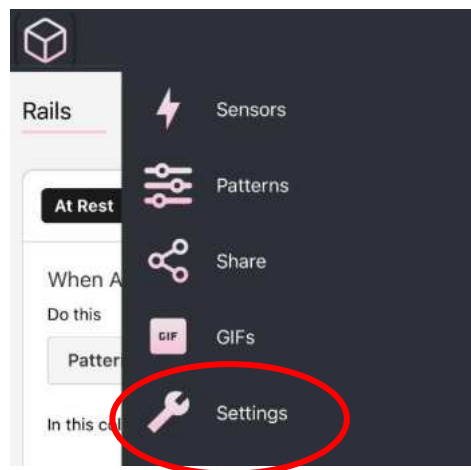
Firmware upgrade Stumblor board

We recommend using IOS for firmware upgrade as it has proven to be the most stable. Also, we recommend putting your phone in Airplane mode so no incoming call can interrupt the upgrade process and crash the firmware.

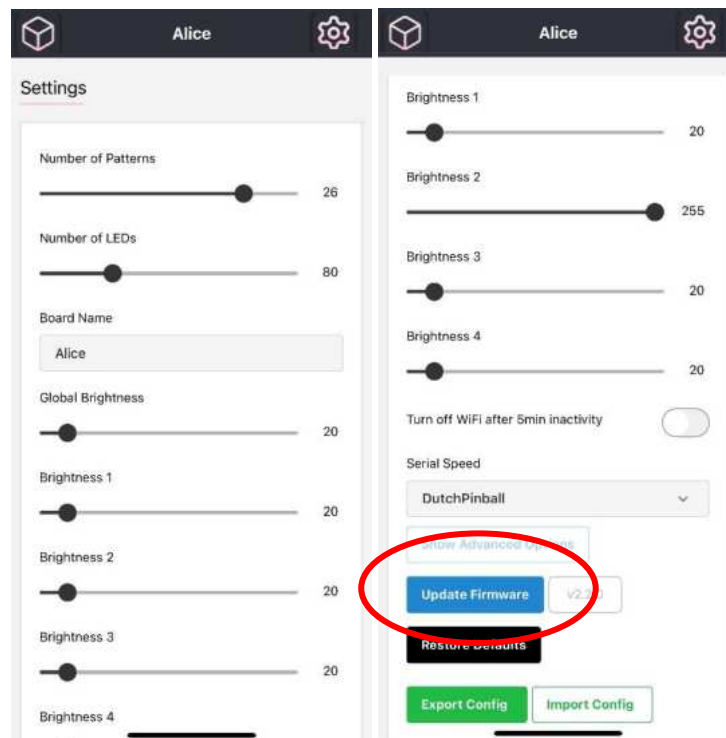
- **Enter the service menu** on your machine. This step is critical, as the attract mode triggers can interfere with the update. You can do this by opening the coin door and pressing the service menu button. You leave the door open during the complete update process.
- Start the App



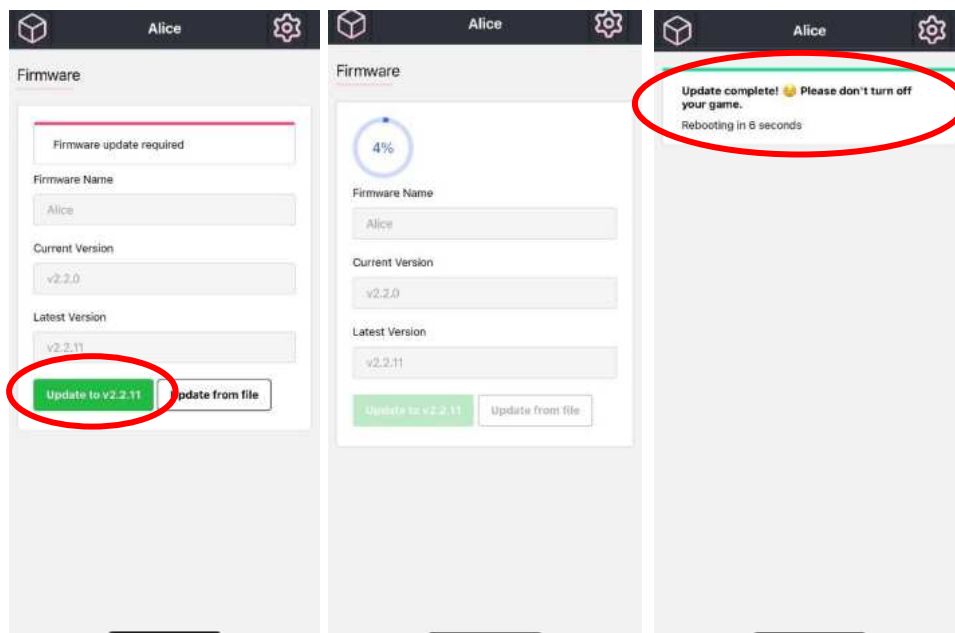
- Go into setting via  and then select Settings



- Scroll to the bottom where you will see Update Firmware



- Click on Update Firmware. It will show you Current version and Latest version. If they are the same you are already running latest version, otherwise push the Green update button. Firmware will start downloading, installing and once finished it will display Update complete message. Total takes approx. 5-10 minutes.



- Close the Coindoor
- Done



Loop Diverter adjustment

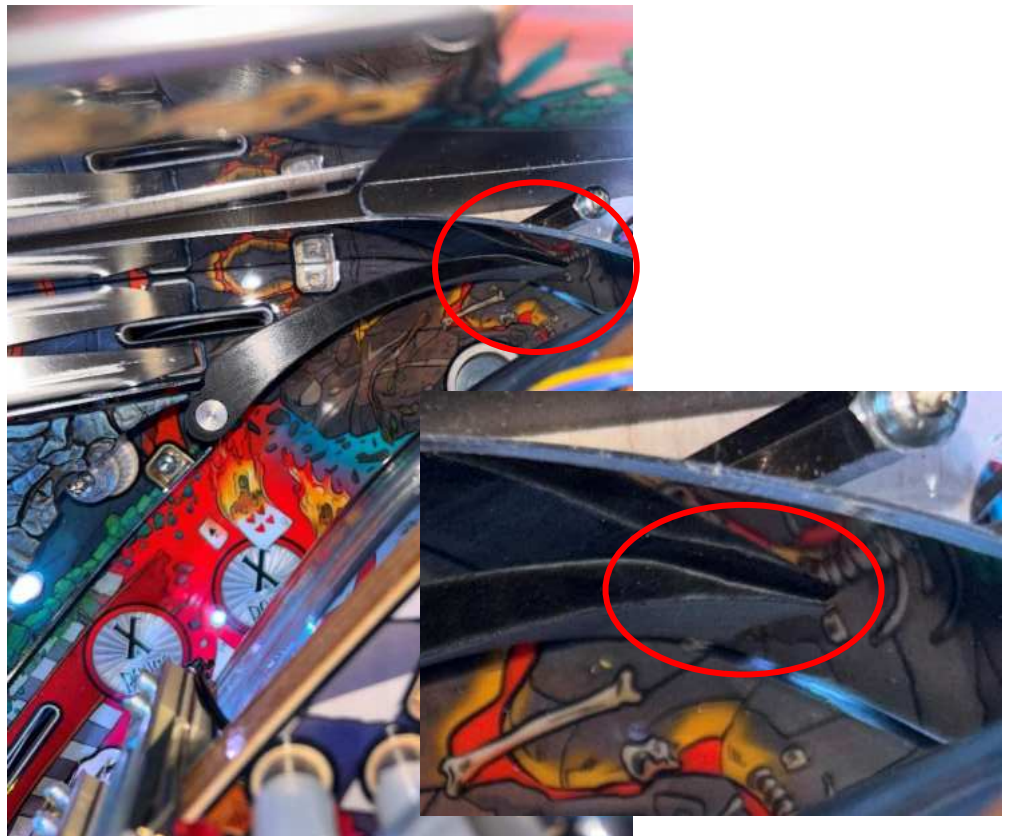
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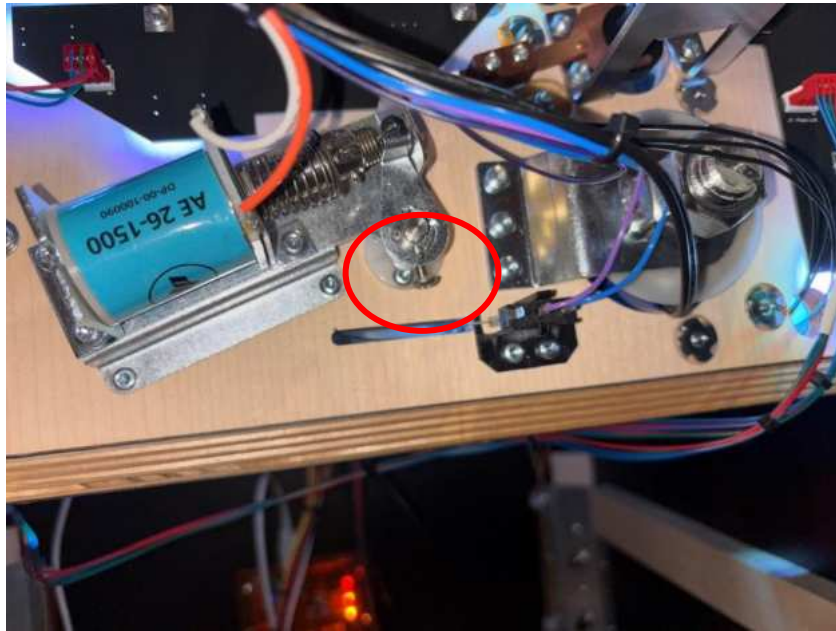
At the backside you will find a diverter which determines the ball path in the outer loop. In standard (not-energized) position the ball will continue its way along the outer ball guide. If active (energized) the ball will or go via another up-down rampdiverter to the left plastic ramp or to the Physical ball-lock below the Jabbawock.

If this diverter is loose or needs some adjustment advice is as follows. When securing this diverter into position you want it, in not-energized position, positioned against the ballguide but than with a little open space so it just doesn't touch the ballguide. This as in below picture, see the red circle. You see a small gap.

This avoids it slamming against the ballguide each time it's used which can loosen the diverter over time.



Below the playfield you will see the diverter mechanism and the Torx screw which holds the diverter. Tighten it with some force and put some Loctite on it if it loosens again.



For this procedure you don't need to set playfield vertical, just put it on the service rails, hold the diverter with one hand and with the other hand you secure the screw with a Torxdriver.





Entrance ramp adjustment

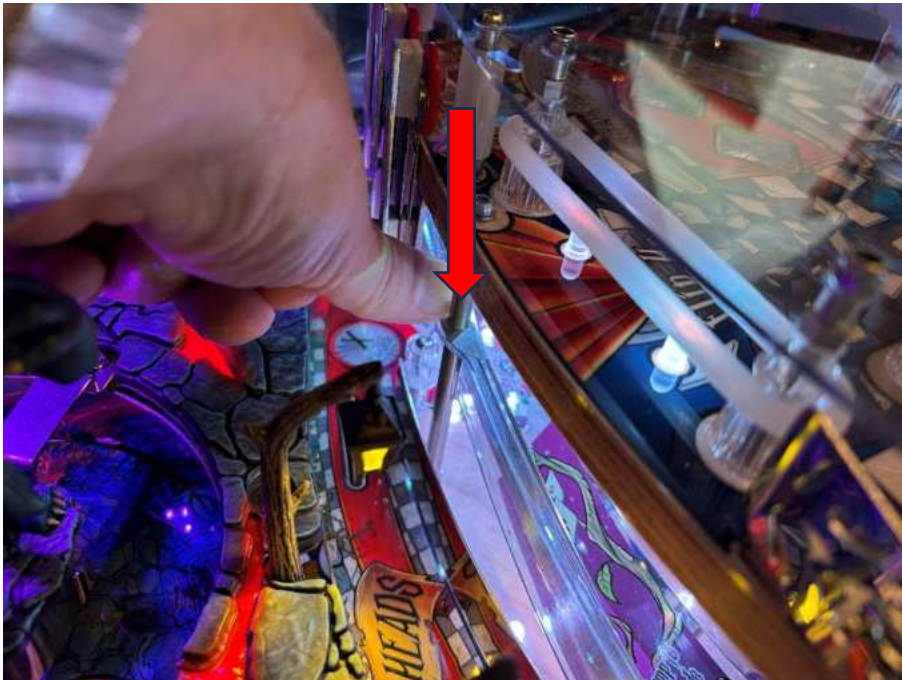
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If you experience difficulty in shooting the ramp there are two possibilities, you have either need to Play Better in Steve Ritchie's famous words or you can check to see if some adjustments are applicable.

We have found two issues which can influence the ramp shot.

1. During transport the ramp has moved a little upwards. Push it as much as possible downwards as shown in below picture. Place your finger on topside ramp and push it downwards.



2. The rampprotector present left-side ramp entrance is not following exactly the plastic ramp. Remove the screw at the entrance and bent it a little so the protector follows the ramp as much as possible.



Remove the screw in the red circle

Bent the protector so it sits as tight as possible against the plastic ramp. It requires some fiddling but it very doable. You best bent it a little too strong, so it forces itself against the left wall of the plastic ramp when screw is back in place.



End result



Watch shot refinement

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The watch shot requires some skill but check if the ballguides are as wide open as possible.

Bent this ballguide at the left side of the shot as much as possible towards the standup target.



And push on the right side the ballguide as much as possible towards the silicone rubber



Before



After

These two changes make the shot as open as possible. As said, it's a shot which requires some skill & practice but is surely doable.



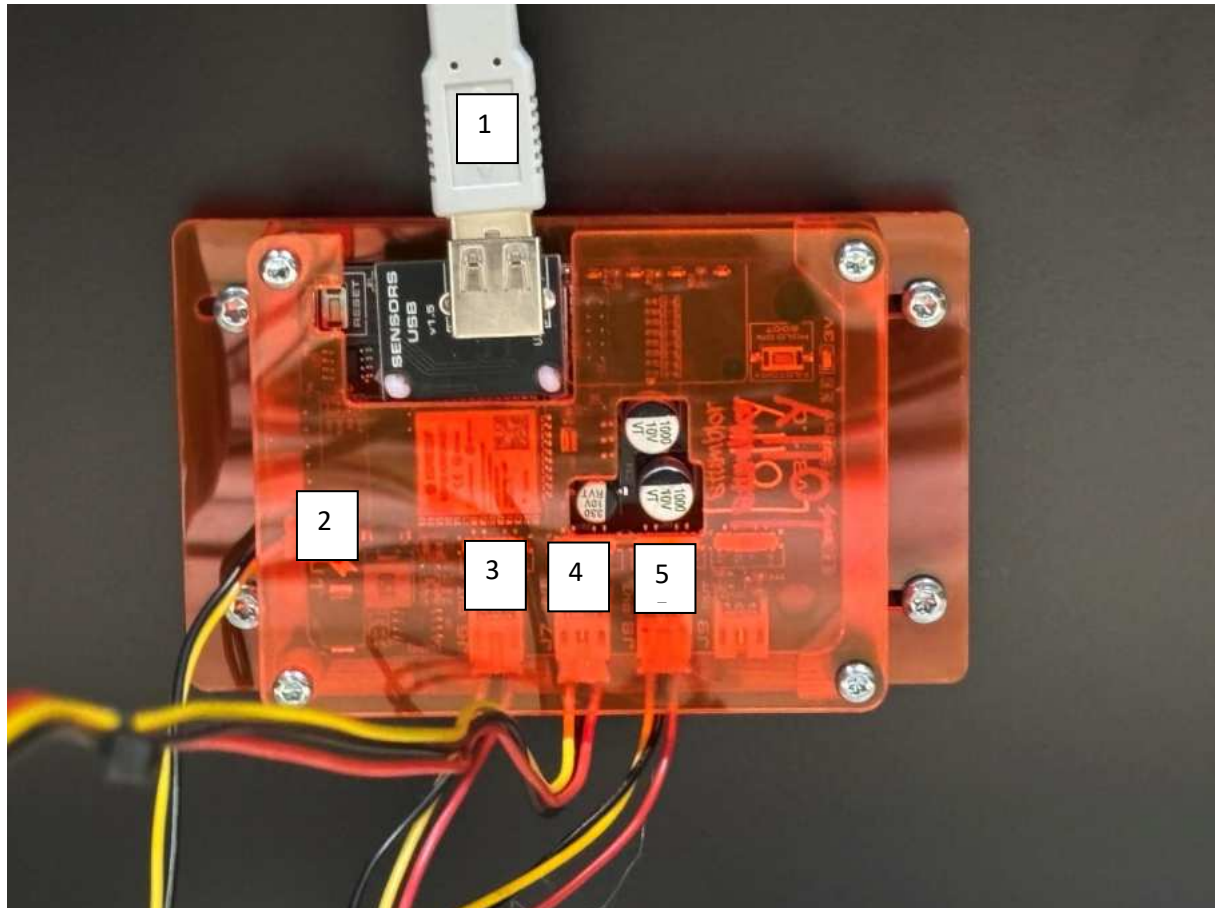
Connections Stumblor board

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The siderails, shooterlane strip and Jabberwock are all controlled via a so-called 'Lolly' board from Stumblor, <https://stumblorpinball.com/>

The connections are as follows:

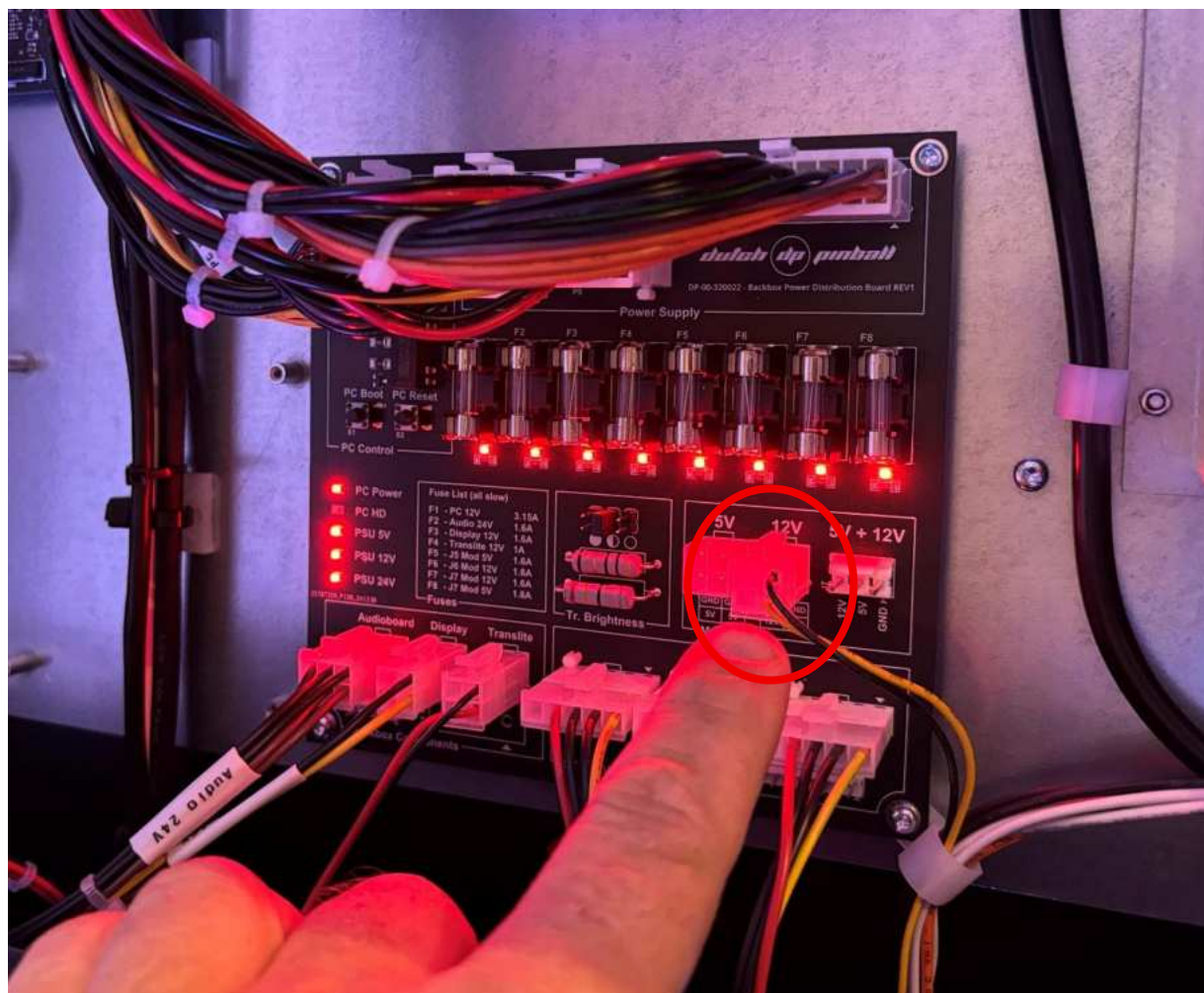


Connections are as follows:

1. USB towards PC
2. 12 VDC power connection, comes from backbox
3. Siderails
4. Jabberwock
5. Ledstrip in shooterlane

Dependable on build-date connections can be secured with a small dot of hotglue. This in order to avoid them coming loose during transport. If you want to reseal the connection you will have to remove this dot of hot glue.

The Stumblor board gets its power from a 12VDC connection in the backbox.





Removal Scoop

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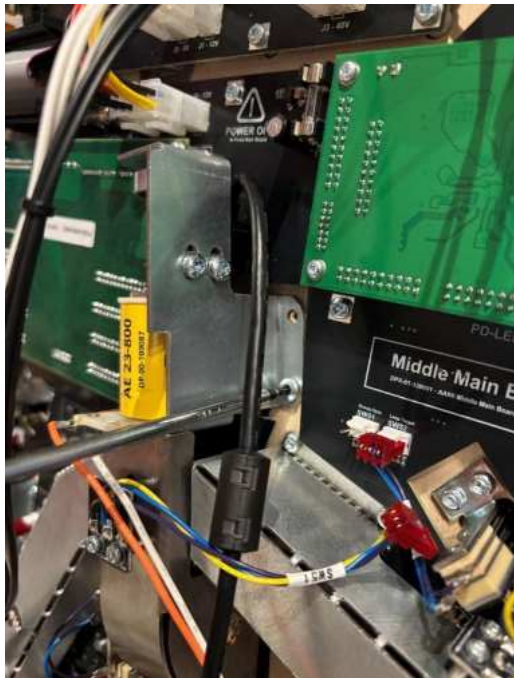
The removal of the scoop is not difficult but requires some fiddling as it's a tight fit.

Procedure is as follows

- Raise playfield vertical, see section Setting playfield vertical starting page 22
- Identify scoop



- Remove Coil on top of scoop.



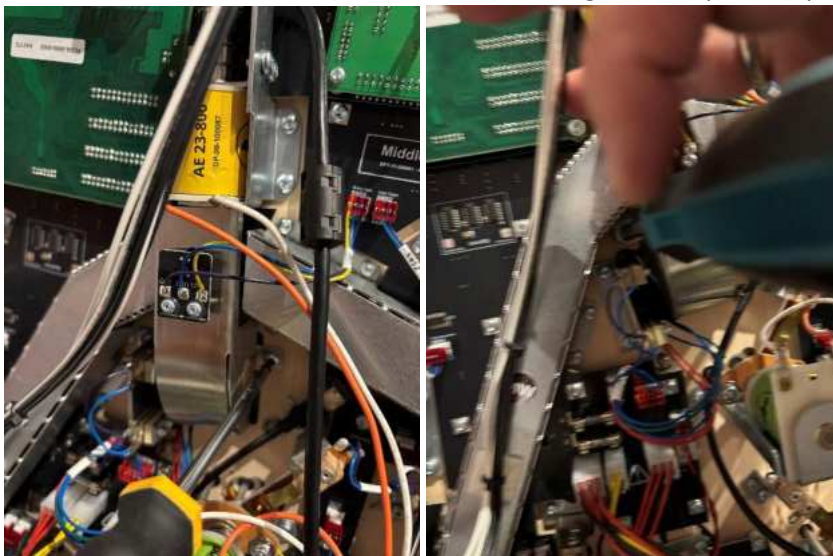
- Remove switch at left side. Be careful of the wires



- Remove connector of Opto pcb



- Remove the screw and nut (has a washer) holding the scoop to the playfield



- Push the scoop top playfield a little to the left and take scoop out. This requires some patience and fiddling as it's a tight fit but it's really doable



- Done



- For re-installing use reverse order of the above. Installing the scoop requires again some fiddling. Just be a little patient than it's not a big deal.



Safe Motors - Swirls Service bulletin

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It has been notified that it can be that with some Alice's Adventures in Wonderland the Safe - Swirl Motors are turning in the wrong direction. This can be caused by either a wrong soldering on the Motor or wires put reversed in the connector.

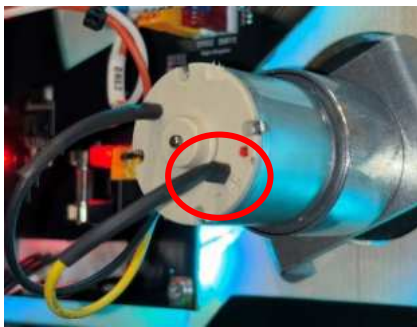
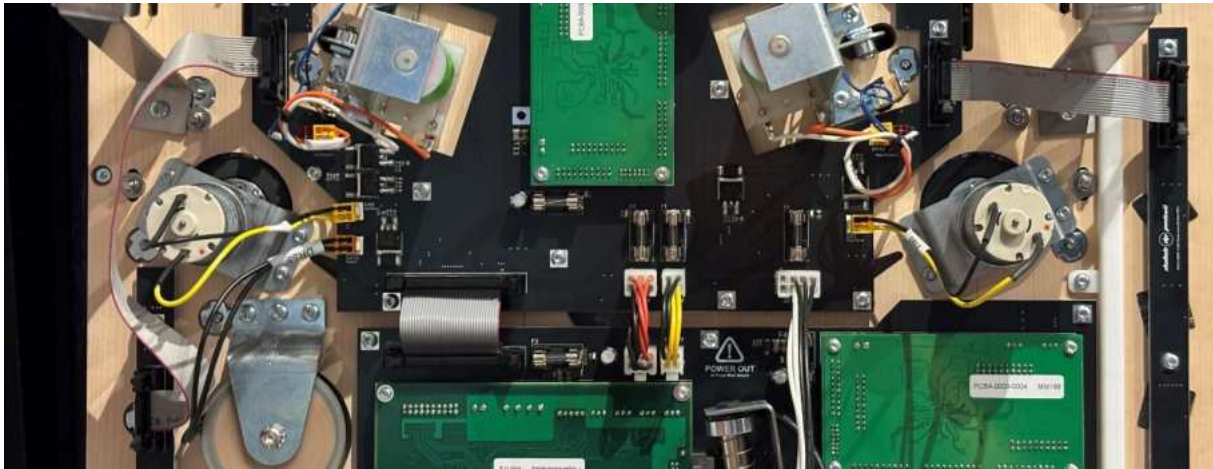
So, the **left swirl should turn anti-clockwise** and the **right swirl should turn clock-wise** as indicated in below picture.



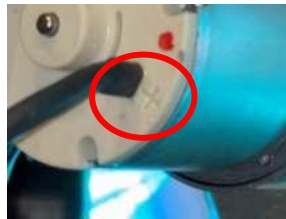
Testing correct direction is easy. Put Alice in Coiltest and activate the Left and Right motor while holding a finger on the Swirl. You can than easily feel it its turning Clock or Anti-Clockwise.



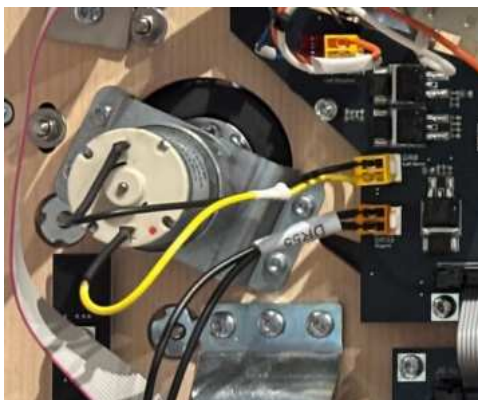
Below the Playfield it should look like this:



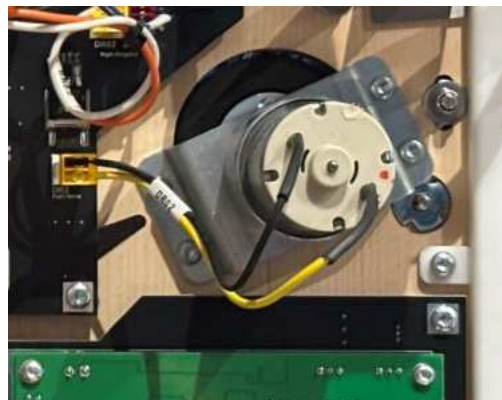
The Yellow wire should be connected to the +. If not, resolder the two wires to the proper lug.



Wires should be in the connector as per below pictures. If not, remove the 2 wires from the IDC connector and re-insert them in proper position. You can use a small flat screwdriver to push the wires into the connector.



Left motor



Right Motor



it's a whole new game!



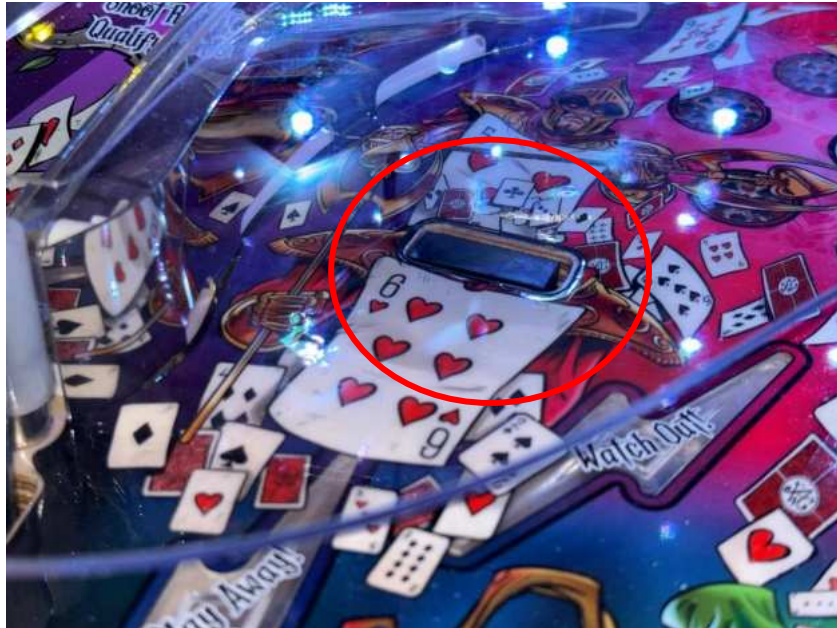
Droptarget Adjustment

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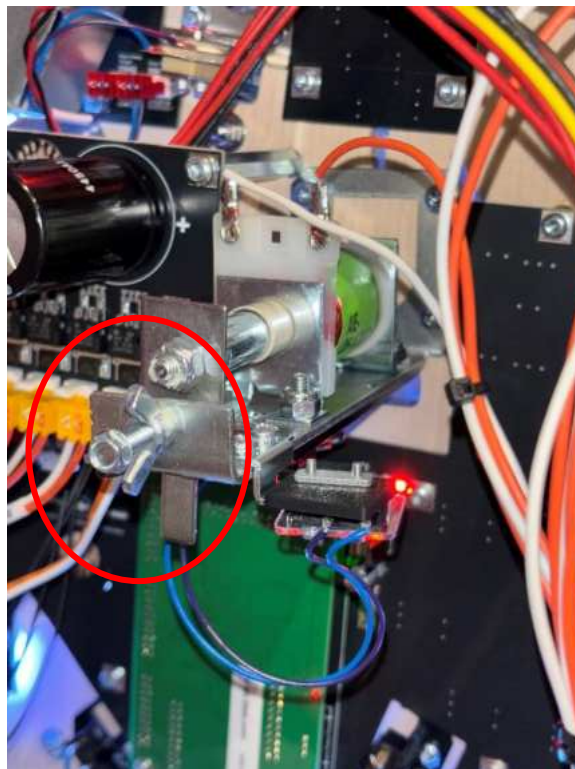
The droptarget has several adjustment possibilities.

Height



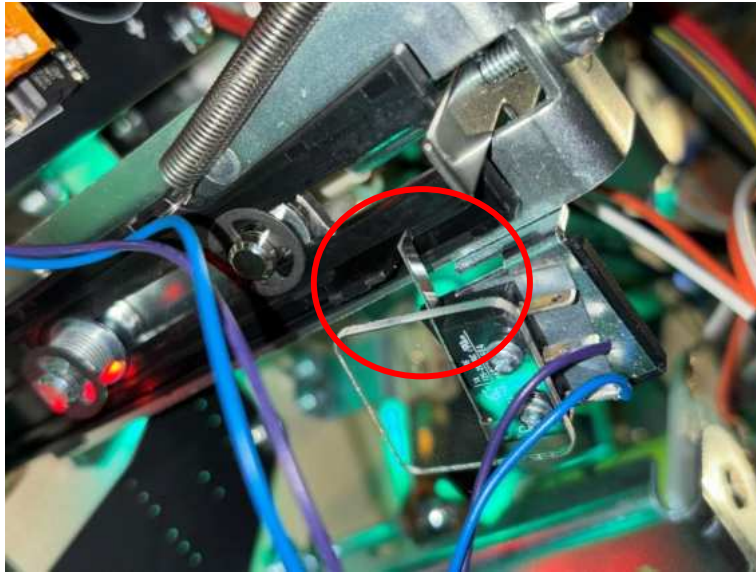
The top of the droptarget has to be flat in-line with the playfield. This to avoid the ball hopping (if droptarget is too high) or ball damaging the playfield if set too low as it will hit the edge

If not, easy to adjust height with this screw. The wingnut is to secure the position once set

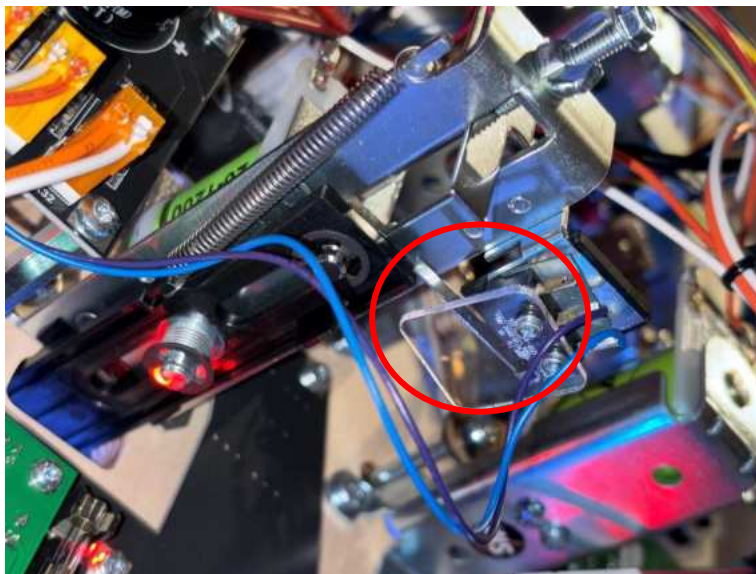


Switch adjustment

Now, the droptarget has also a switch to be able to detect if droptarget is up or down.



Down position

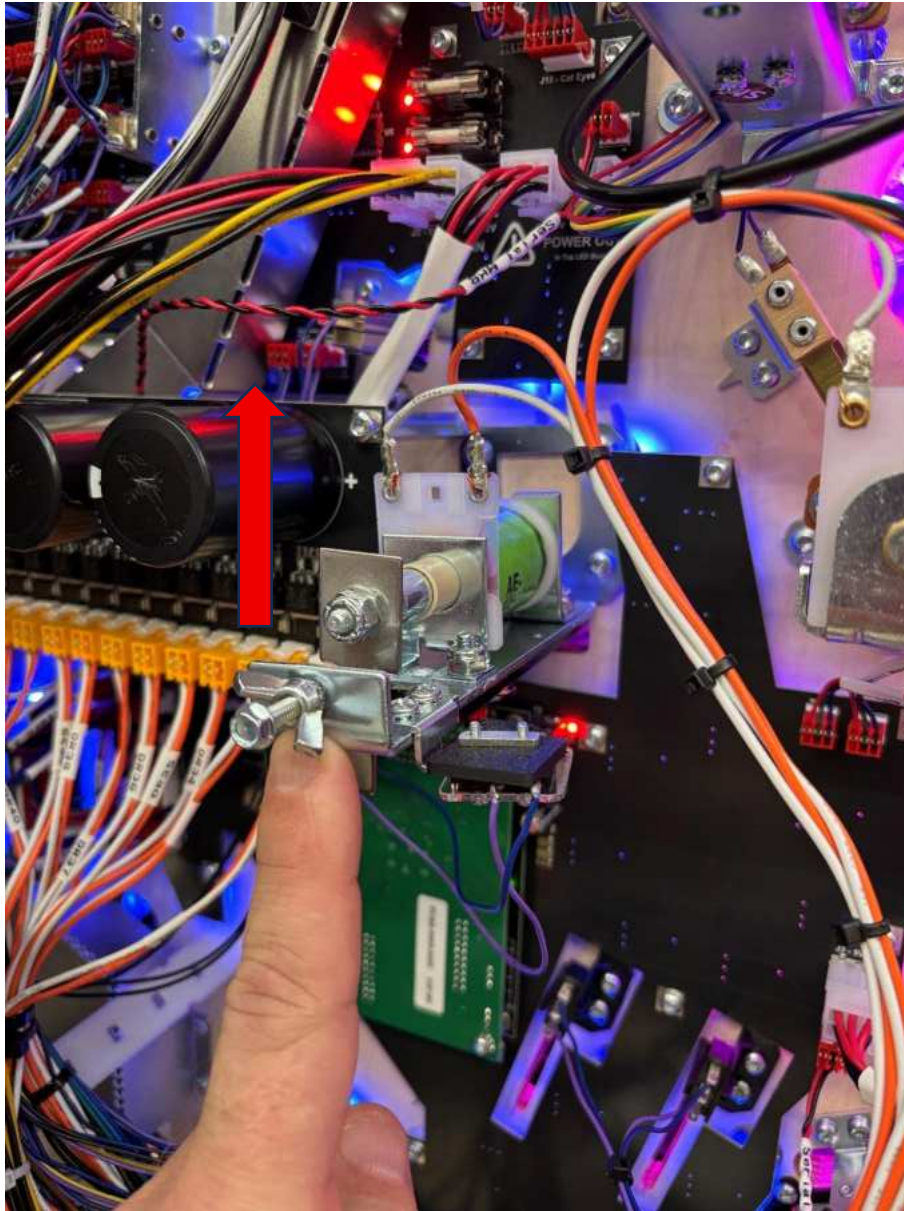


Up position

If its not detected in down position put Alice in switchtest and adjust switchblade (or loosen the 2 screws which hold the switch and move entire switch) till the switch is seen in switchtest.

Droptarget doesn't stay up

If this happens some minor bending to the bracket is usually the solution. Typically, this means bending it upwards with the playfield vertically. See the picture below.





it's a whole new game!

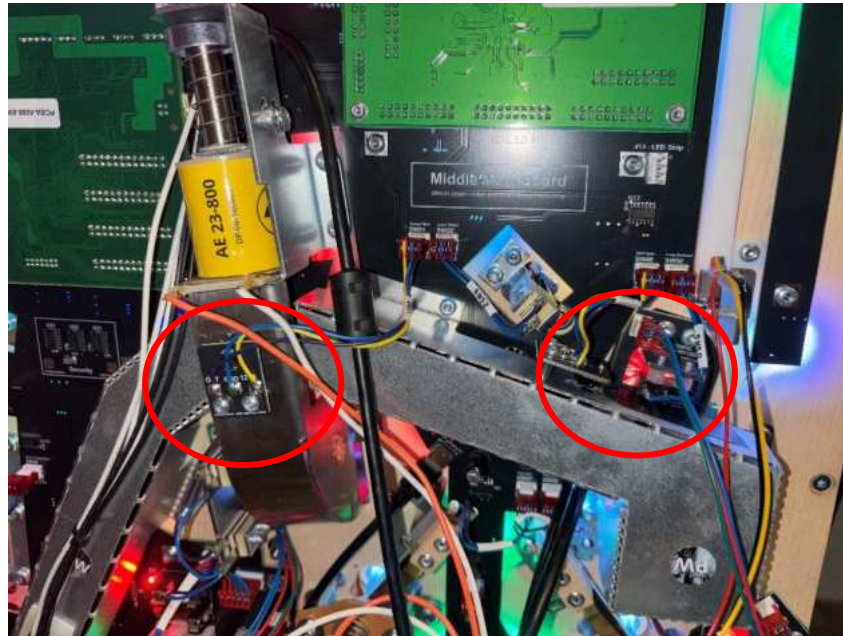
Checking Opto's

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If you are having an issue with the Opto's I recommend the following check (I assume you already verified working yes-no in the switch Testmenu).

As an example, I take here the Opto Scoop PCB. As several others in Alice this Opto works on reflection. If a ball is in front of the transmitter the ball reflects the light back to the receiver and this is detected. Typical Optopait in a Pinball its detected when light is blocked, here its thus the opposite. The transmitter and receiver are mounted on a small PCB.



Shows Scoop and Skillshot Opto

This pcb has three wires running to it:

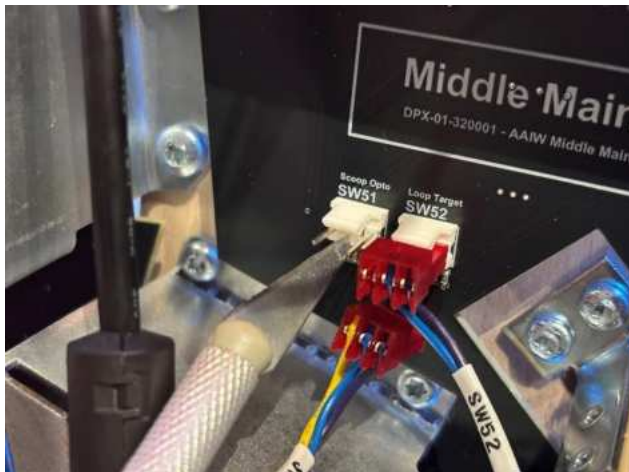
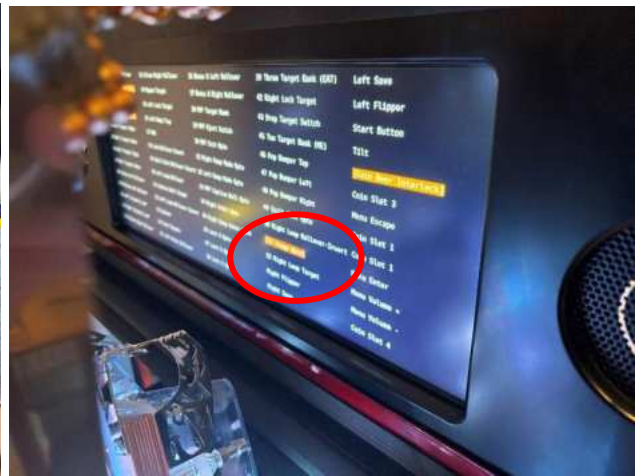
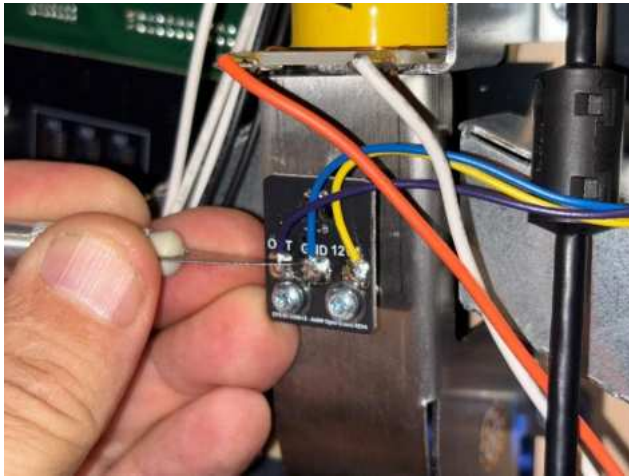


Left to right:

- Purple : Switch wire
- Blue: Ground (a switch or opto will pull the switch wire to ground)
- Yellow: 12 VDC

First test:

Put Alice in Switch test and jumper/short the **purple & blue wire**. **DO NOT SHORT THE YELLOW WIRE!!** Now Optoscoop should appear in the testmenu.

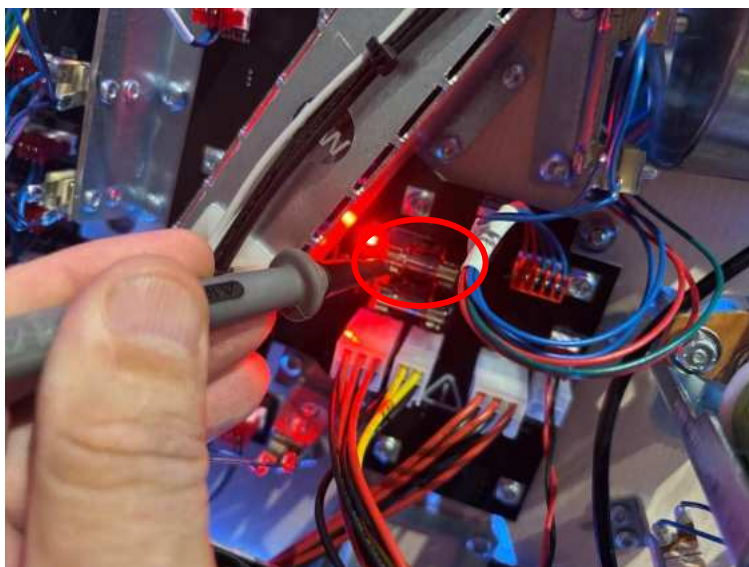
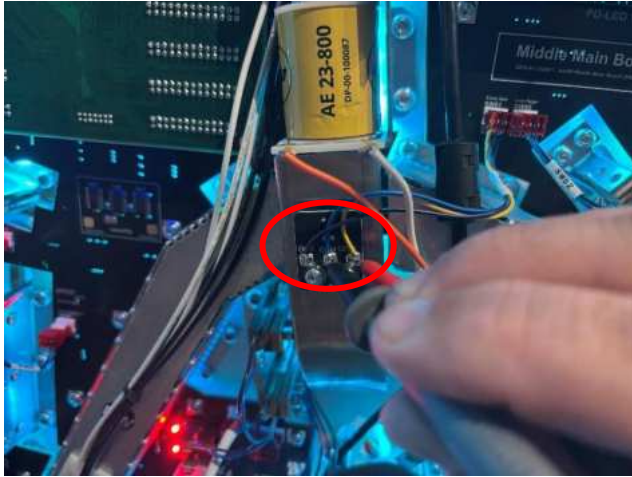


If not, check the wiring and short the pins on the header which has the connector on it. **Make sure you only connect the headerpins which are connected to the Blue & Purple wire !!** So, the middle and right pin in this example.

If this is shown, we know now that the detection upstream does its job. If its only shown when you short the pins on the header check wiring and push with a small flat screwdriver the wires deeper into the connector

Second test:

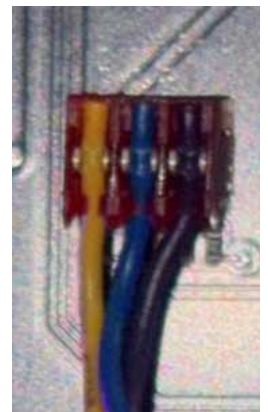
Take a multimeter, set it on DC and measure between the Blue (GND) and Yellow (12VDC) wire. Your meter should read approx. 12VDC.



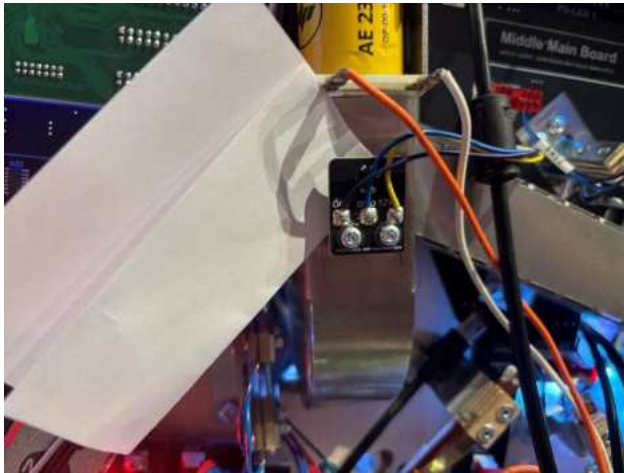
If the meter doesn't show 12VDC but 0, check Fuse located at F1. This is a 8A Slow-Blow fuse.

Check also the wires running in the connector

It should run from left to right: Yellow, Blue, Purple.



If you block the opto with a white piece of paper it should also be detected if everything is working as intended.



Similar procedure is applicable to for instance the Skill Shot Opto. Its just another switch which pops up in the menu.



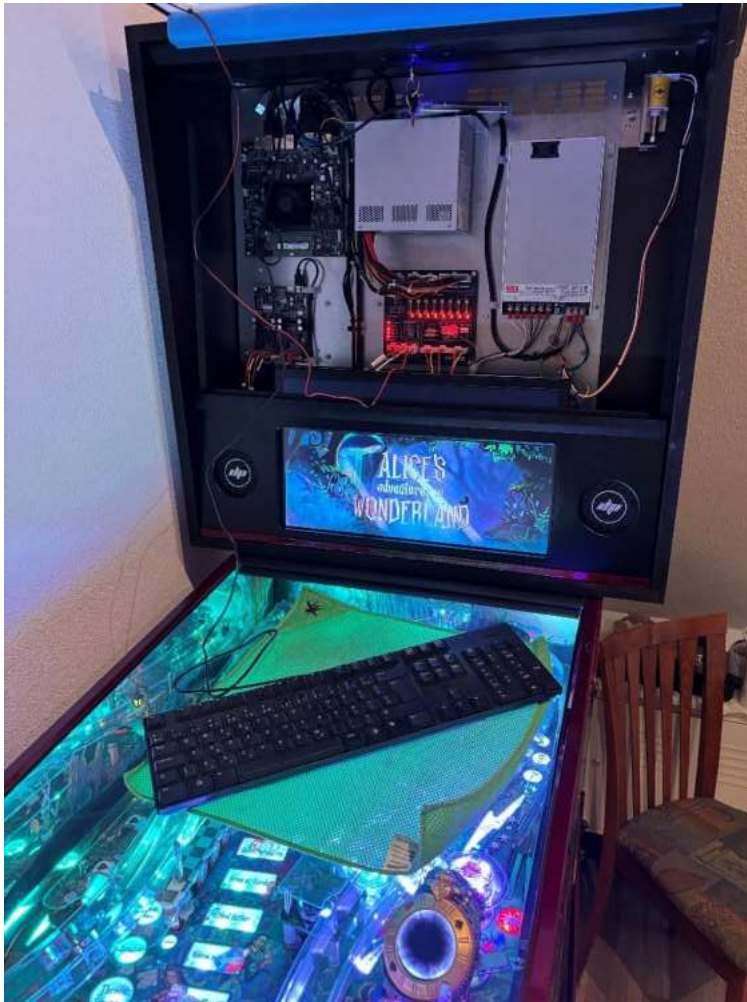


Operate AAIW from keyboard

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- Connect USB keyboard to a free USB spot. If no Free USB spot available you can connect the USB leading to the audioboard or Stumblor baord
- Startup Alice



You can now operate the Alice with the following buttons:

- START a game : 1
- Coin door menu buttons (ESC, Volume Down, Volume Up, ENTER): 7, 8, 9, 0

So, to go into the Testmenu just press 0.

7,8,9,0 function as menu control buttons just as in the coindoor.





Ball stuck in CAT-scoop Adjustment

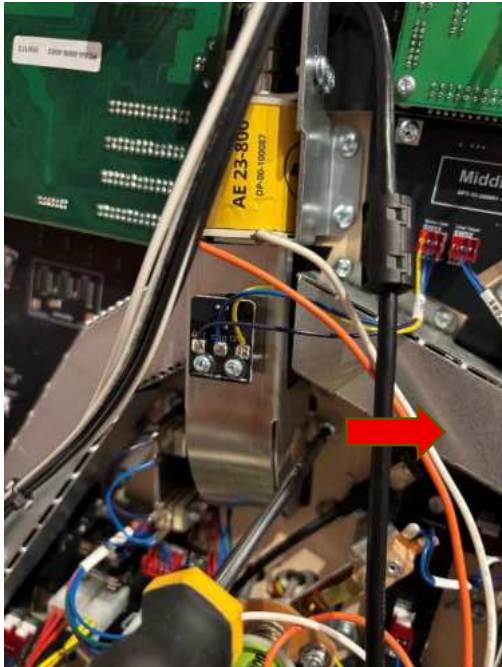
Caution:

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The scoop below the scoop is quite narrow and have seen ball gets stuck in there as there is only little tolerance.

Likely during transport the position of the scoop shifted a bit making it to narrow.

So, I suggest first to try the 'simple' method. Loosen the right screw of the scoop and retighten it while pushing this 'wall' outwards, see below pictures.



The more difficult method involves taking the scoop out as described page **Fout! Bladwijzer niet gedefinieerd.** and bent the sidewalls with a plier outwards to make more space. Check with a ball to see if the scoop has enough space for the ball.





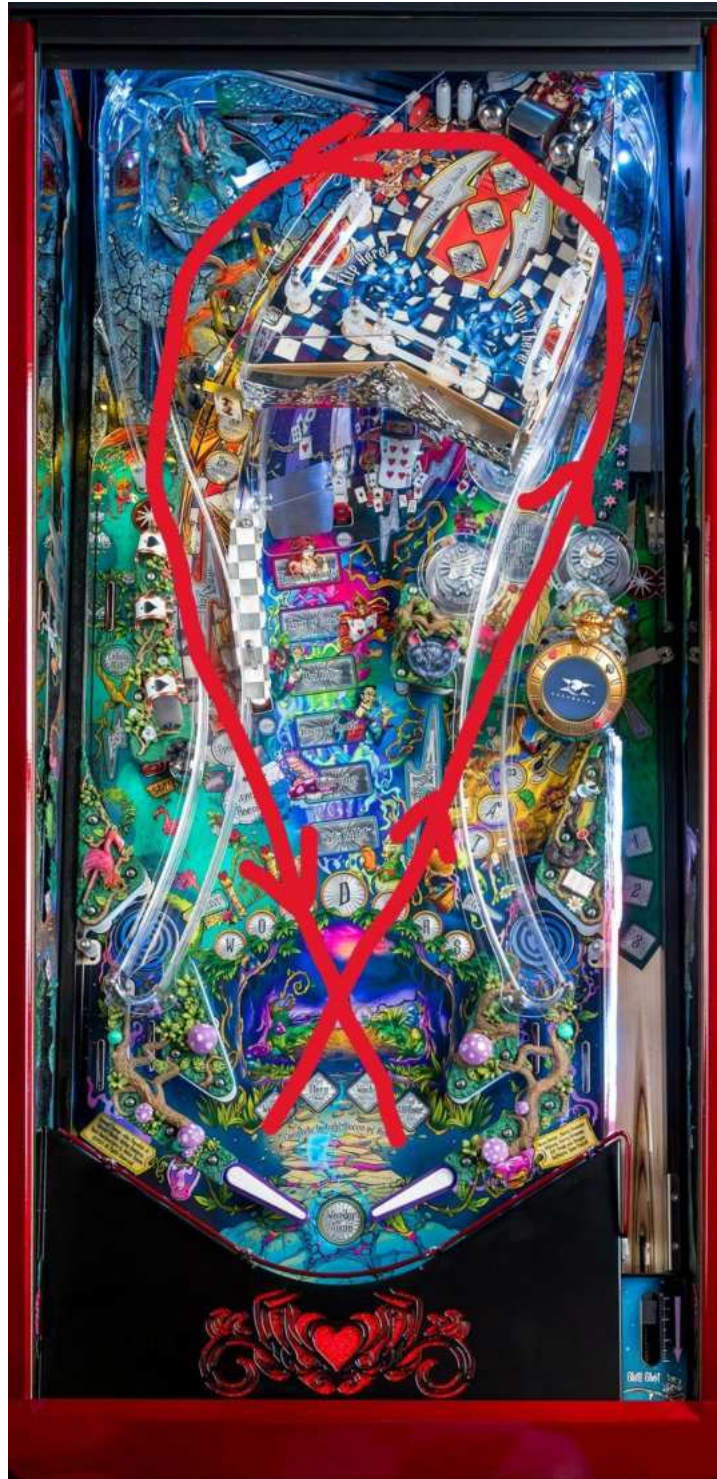
Adjust right to left side Orbit shot

Caution:

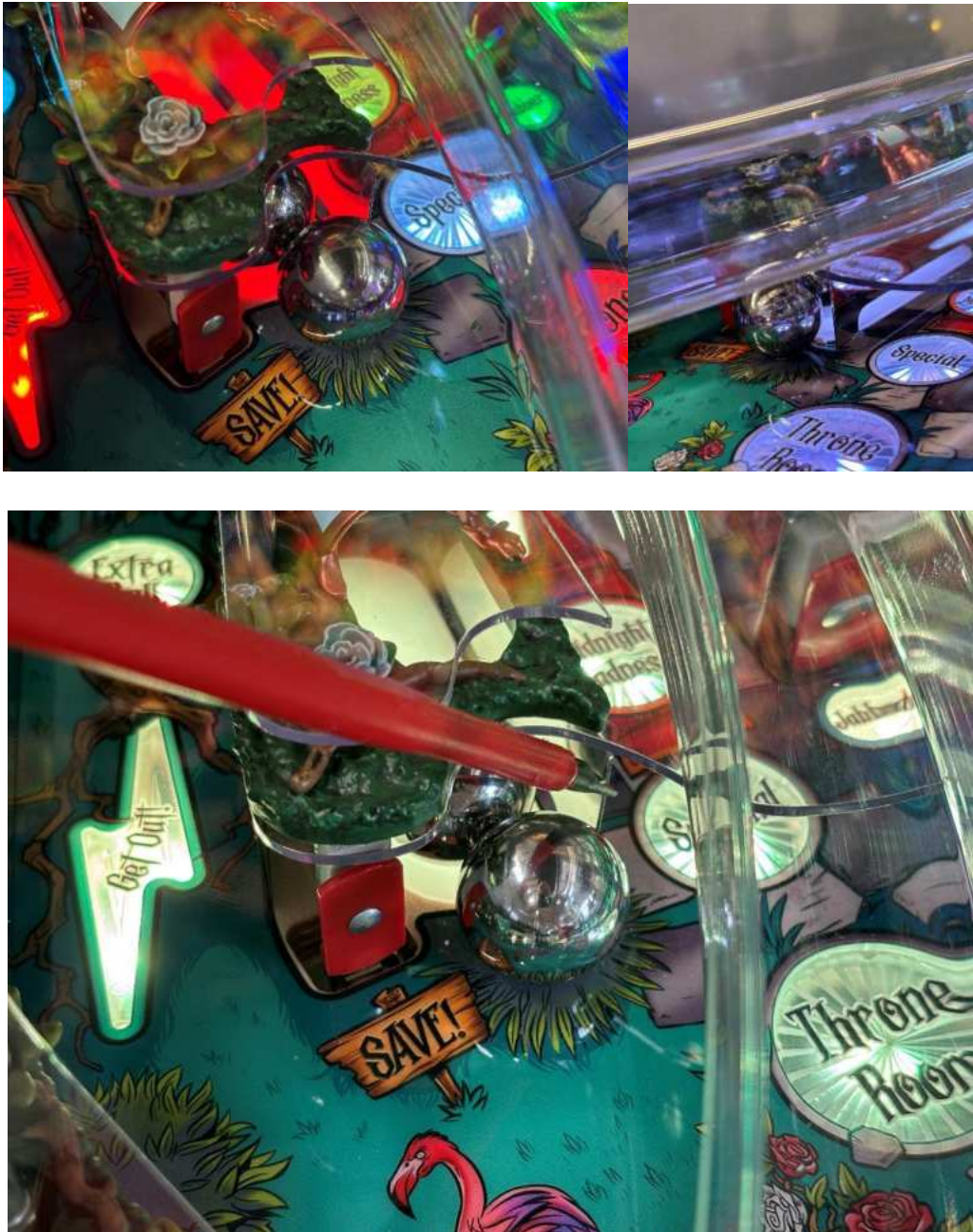
If you are not comfortable working on pinball hardware and/or high voltage electronics, please get professional support for this. In general: use your common sense. Don't experiment. Don't be a nihilist. Only skilled and trained people are allowed to open this system. The manufacturer accepts no responsibility for injuries caused by unauthorized operation. Keep long hair, fingers, jewelry, etc. away from turning parts of the system.

If you shoot the Orbit from Right to Left the ball should end on the right flipper enabling you to shoot for instance the ramp and make so a combo

So, a shot would go like this:



So, key is that the ball at the end of the orbit just touches mildly the Newton ball. If it doesn't, bent the end of the ball guide at the left end so it does. Pushing it with for instance a screwdriver like in the picture below should do the job. Depending on which way you want the ball to go you must push the ballguide from the left or right. Again, designed is that the ball slightly touches the newton ball and ends at the right flipper. So, if the ball for instance doesn't touch the newton ball you have to push the ballguide from right to left.





Remove-Replace Watch Sculpt

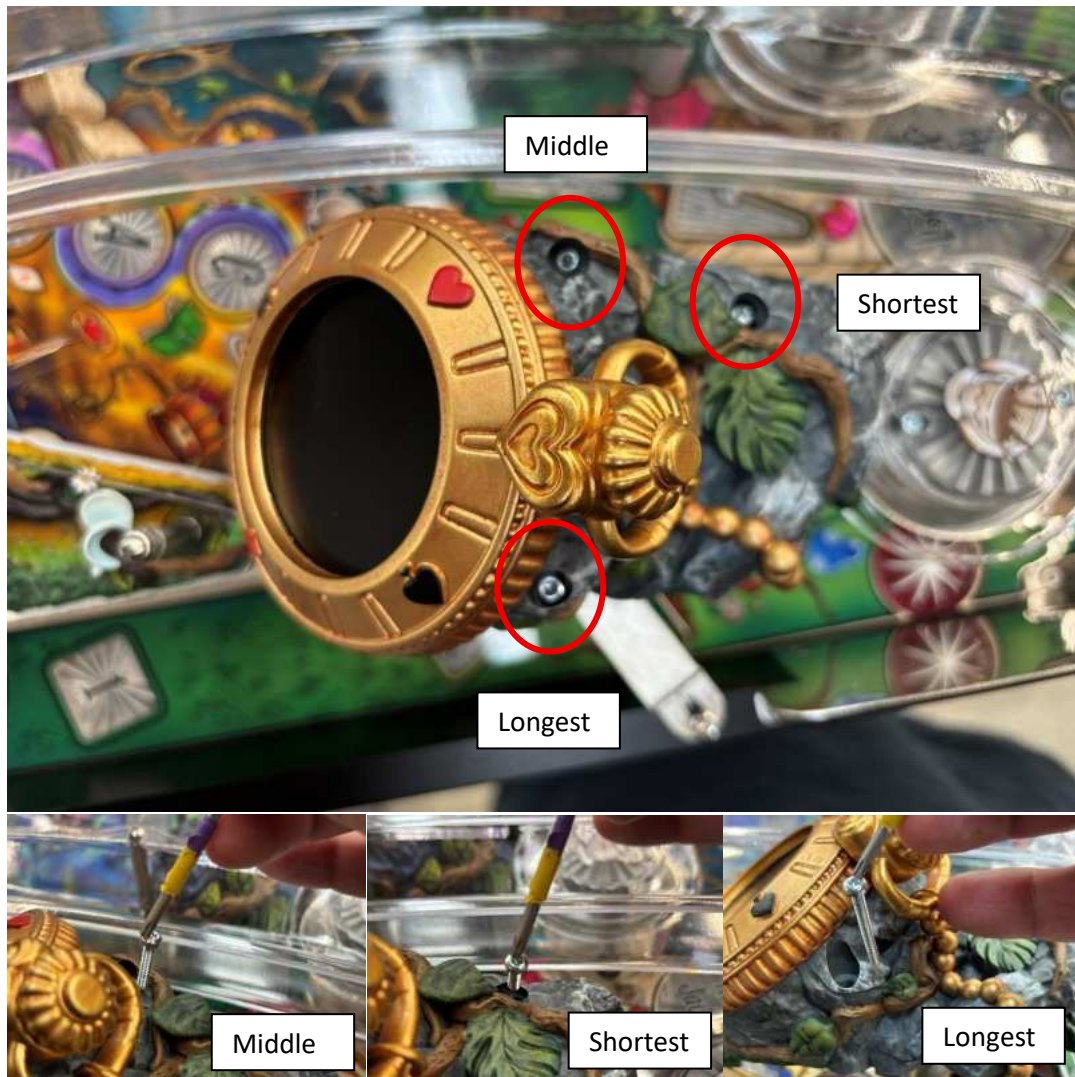
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Removing/Replacing the Watch Display Sculpt is a relative straight forward procedure which involves just three screws and two cables. Do this procedure with Alice turned OFF.



- Remove the three Torx screws. Please do note that all three screws have a different length.



- Raise the Sculpt with care, tilt it and remove the HDMI and USB-C cable at the bottom. Remove sculpt.



- Take new sculpt, identify USB-C and HDMI connection and re-install cable one-by-one



- Put sculpt back in position and re-install the three screws.

Please take note of the length of the screws and do NOT overtighten the screws !!

- Done



Flashers Backplate Service bulletin

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Around approx. Alice wondernumber 200 it was noticed that we had a batch where the supplier of the cables has mislabeled two wires which causes the right and left backplate flasher to be reversed.

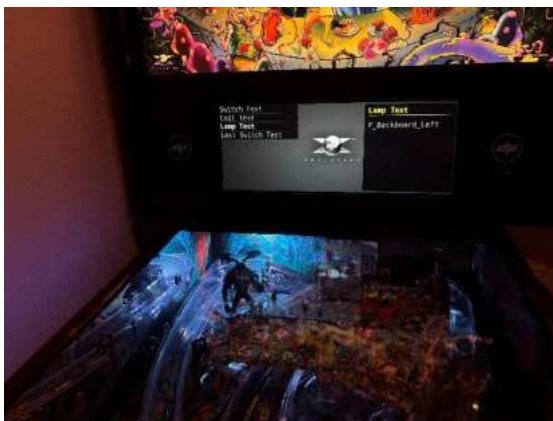
Eg, selecting left backside flasher lits up the right one and vice-versa.

As follows:

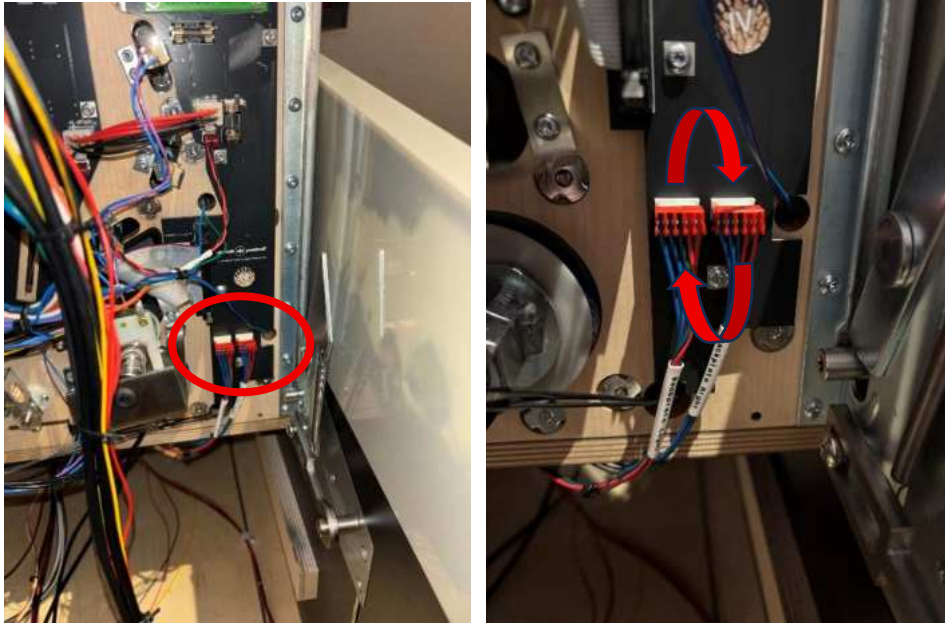
- When you shoot the right ramp the right side backboard should turn red as in below picture



- In Test this should be the result



- If you a reversed result the solution is simple. It's just a matter of swapping two connectors on a PCB. To do this do the following:
- Set Playfield vertical as per instruction in the service manual
- Locate the two connectors (they have a label marking them backplate right – left) and swap position.



Picture is an example with cables having the correct label

- Lower playfield again
- Redo the test to verify result
- Done



Flash topper software on PC

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If you have a corrupted software on the topper which causes the eyes no longer to function properly always try first to flash the software via the Testmenu in Alice (for how-to see end of this bulletin).

If that doesn't work, we can try to fix the issue doing it manually from a PC which is more thorough and also re-installs the bootloader. If the bootloader is corrupted the Eyes will not be shown.

The procedure requires first installing a bootloader and then the Eye-software itself.

The files needed for this can be downloaded from <https://we.tl/t-B2CswzObFs>

You will get a Zip-file containing 2 files:

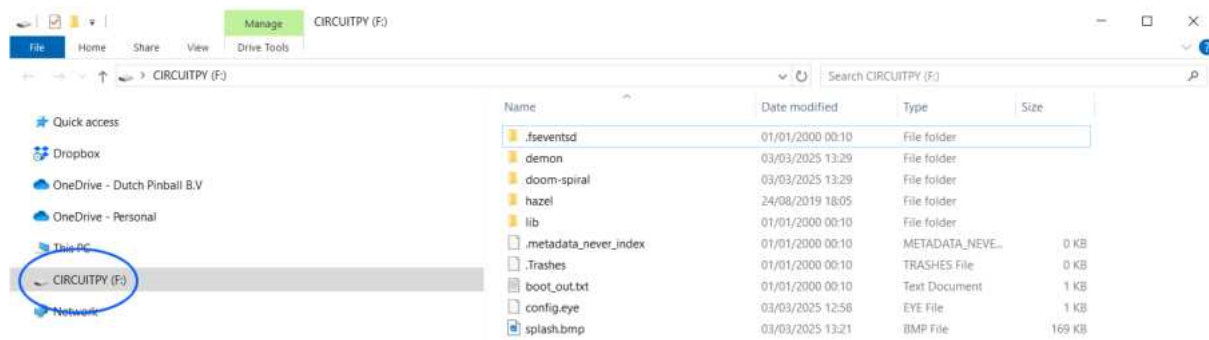
 M4SKEYES.UF2	5-11-2025 19:45	UF2-bestand	1.024 kB
 update-bootloader-hallowing_mask-v3.16.0.uf2	5-11-2025 19:37	UF2-bestand	37 kB

Unzip these 2 files.

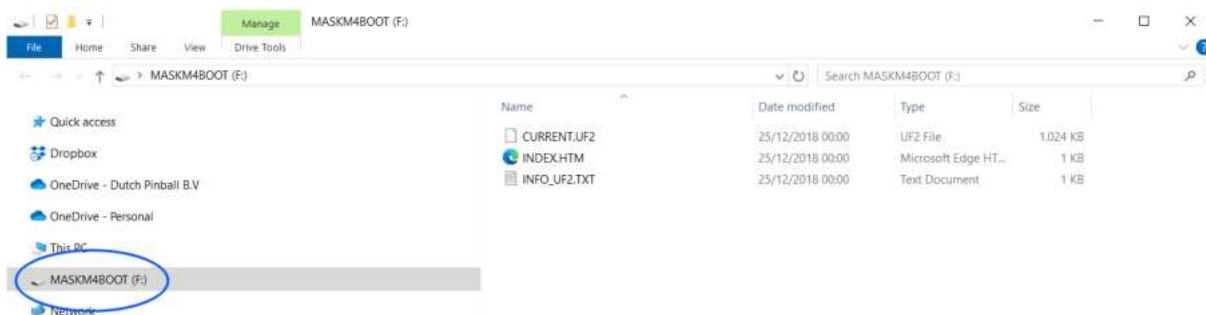
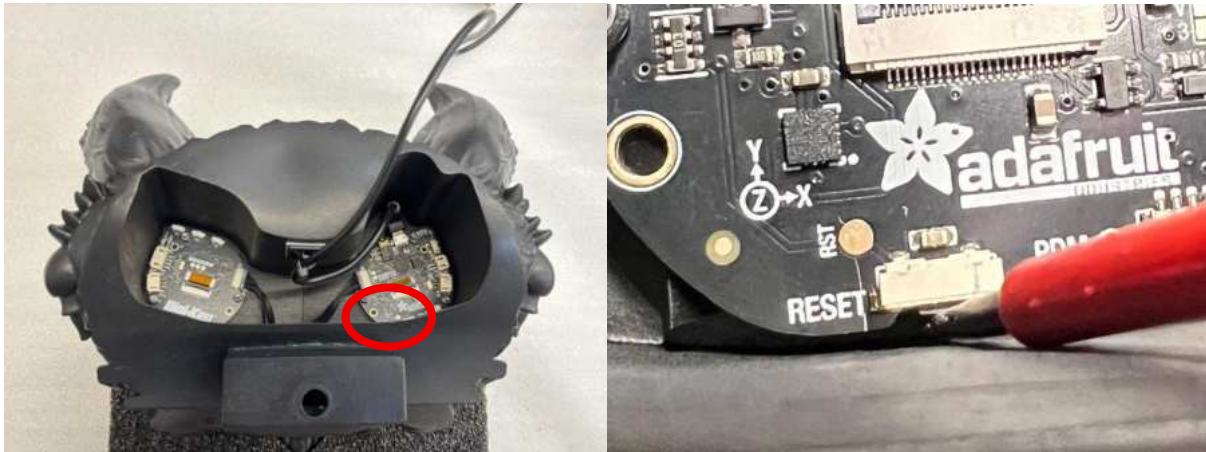
You will need to remove the CAT head from the topper and connect it to a Windows PC via USB.

Cat Eyes PCB software Installation

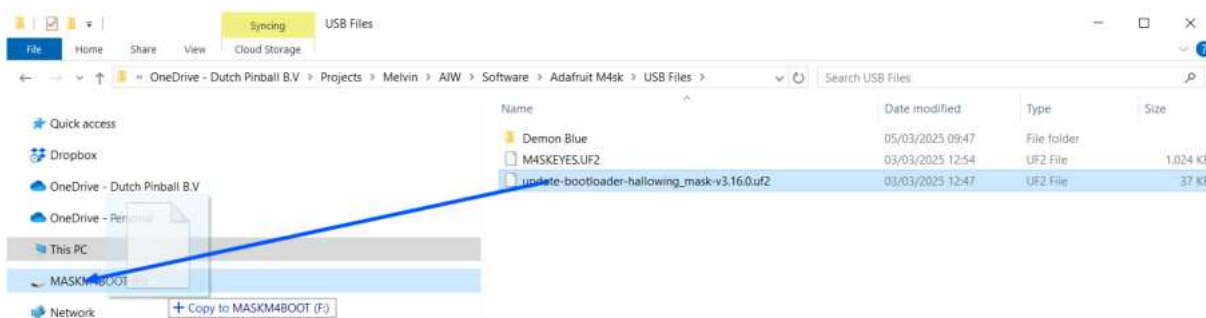
1. Connect to PC with USB cable; File Explorer will then usually open automatically.
2. De drive-naam is CIRCUITPY



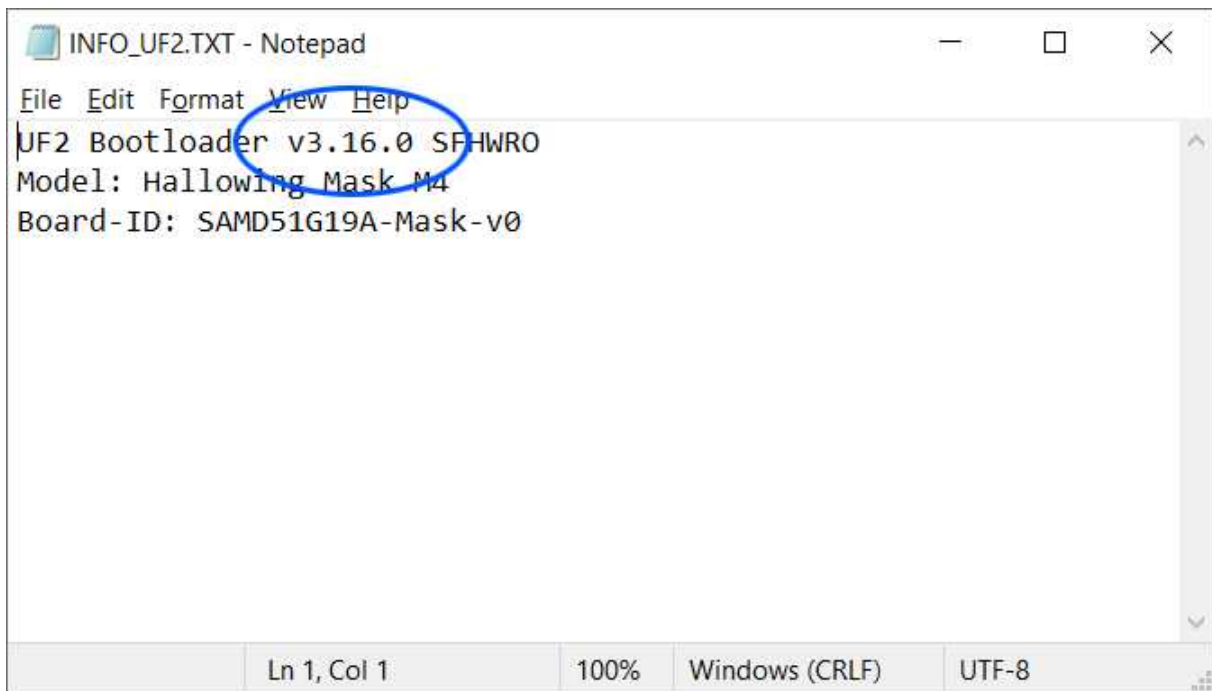
3. Push quickly RESET button **twice**. Position is shown in red circle. Use a flat screwdriver to be able to do this and push the button **quickly twice**. The drive name should become **MASKM4BOOT**



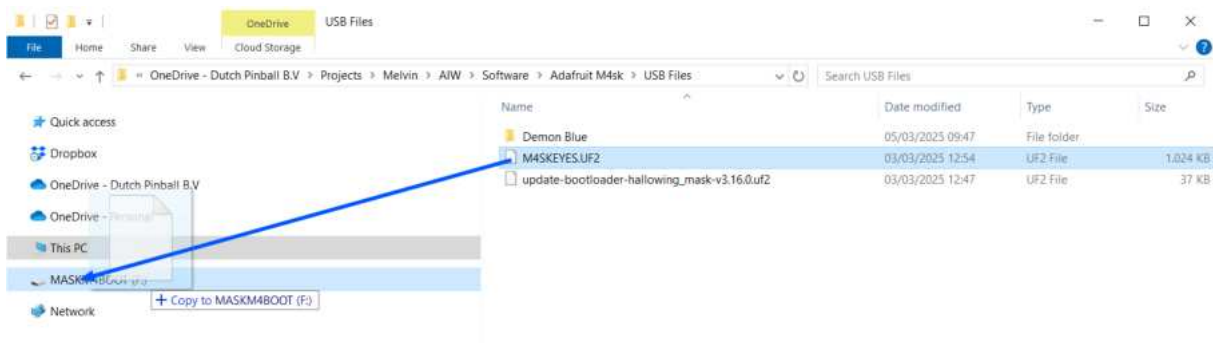
4. Drag file **update-bootloader-hallowing_mask-v3.16.0.uf2** to drive name MASKM4BOOT (Explorer closes and then usually opens again, if not automatic then do this manually). Display will be dark.



5. Open INFO_UF2.TXT and make sure v3.16.0 is installed.



6. Drag File **M4SKEYES.UF2** to drive name MASKM4BOOT (Explorer closes and then usually opens again, if not automatic then do this manually). Drive name is now CIRCUITPY again. The display should show now Eyes.

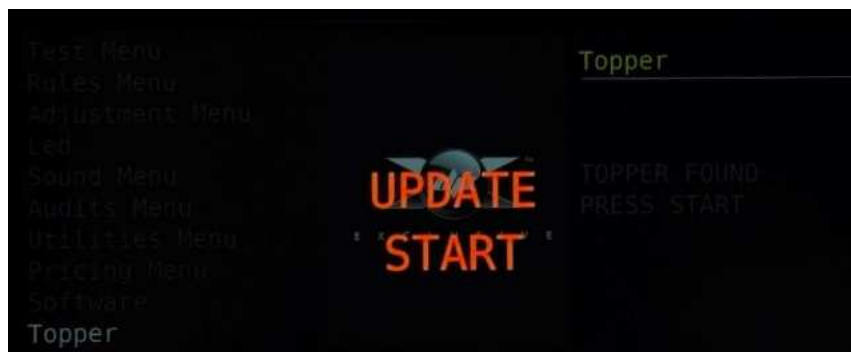


7. Reinstall toppler on Alice and flash software via the Testmenu. Procedure is as follows:

Select Topper



Press Start. Following screen will appear.



Wait (should take less than 1 minute) till below screen appears which tells you Update has been done successfully.



DONE



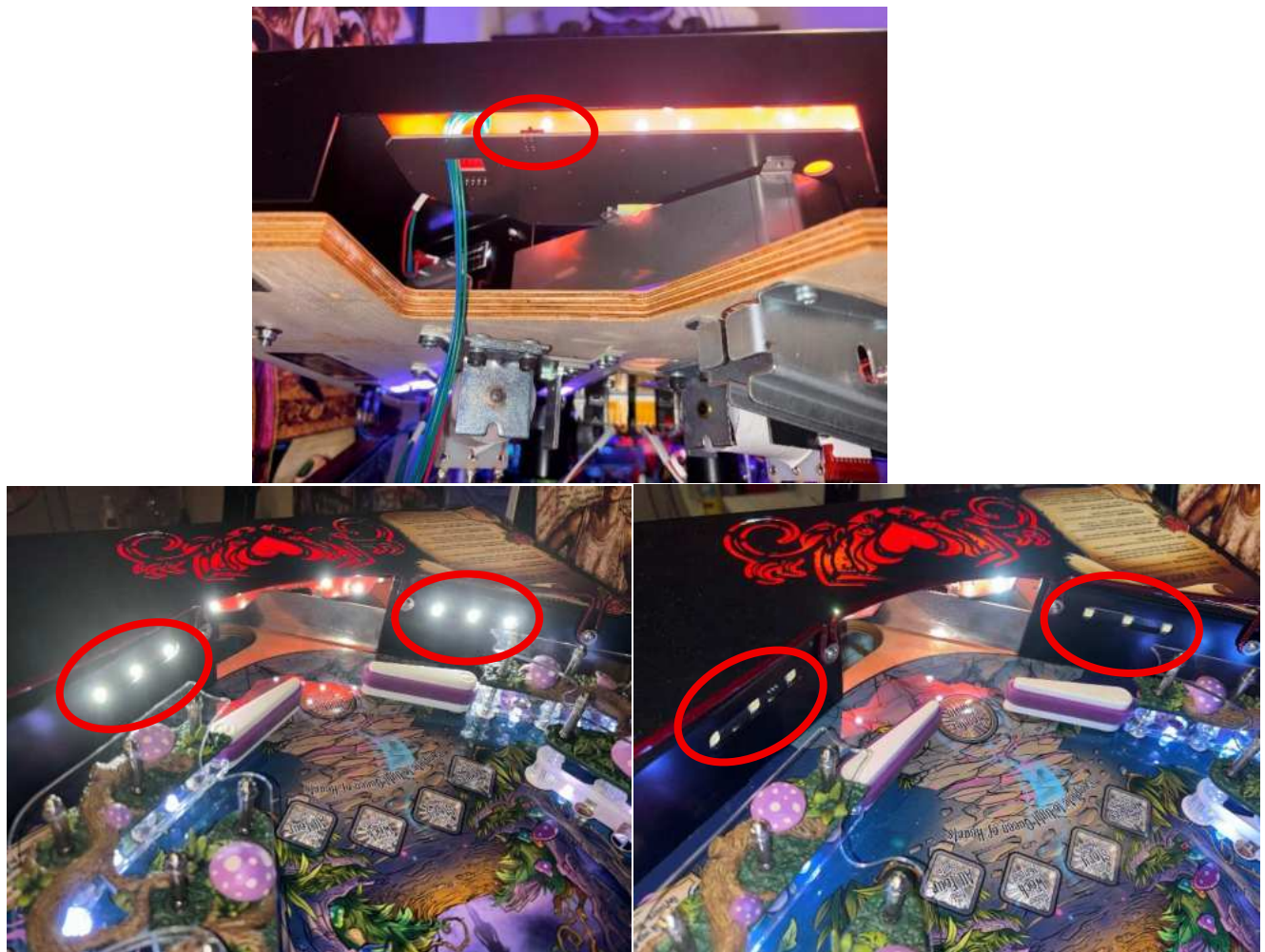
Switch Apron lightning OFF-ON

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Alice has the possibility to disable the Leds under the apron illuminating the bottom of the Playfield.

For this a small switch is present on the PCB below the apron, see below pictures





Fuse F2 blowing

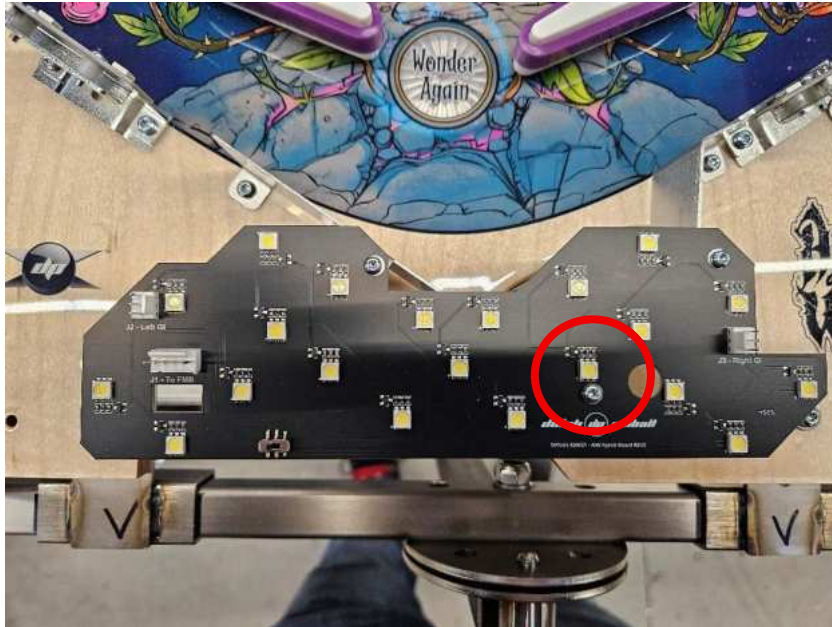
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If you have a Fuse F2 blowing on the MMB without any apparent reason, please check the pcb-board which does the apron lighting. Up to approx. Wondernumber 200 a washer was used here which turns out to be too close to a 5VDC line causing a short which blows fuse F2 (8A slo-blow).

REMOVE THIS WASHER IF INSTALLED!!

When F2 is blown likely Alice will also not boot.



PCB ledboard apron

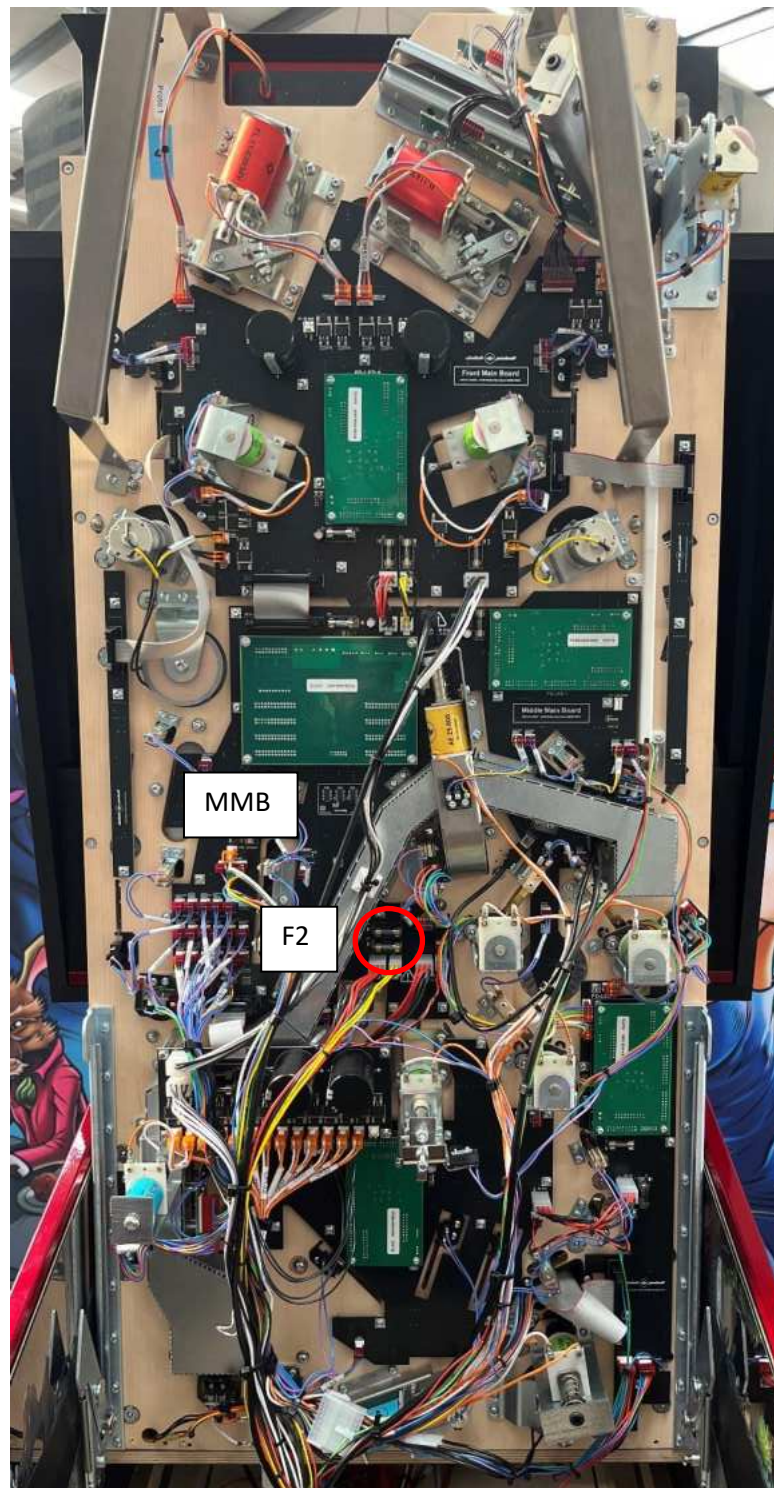


No washer as it should be



Washer installed, must be removed

F2 Fuse is to be found in the red circle in below picture.





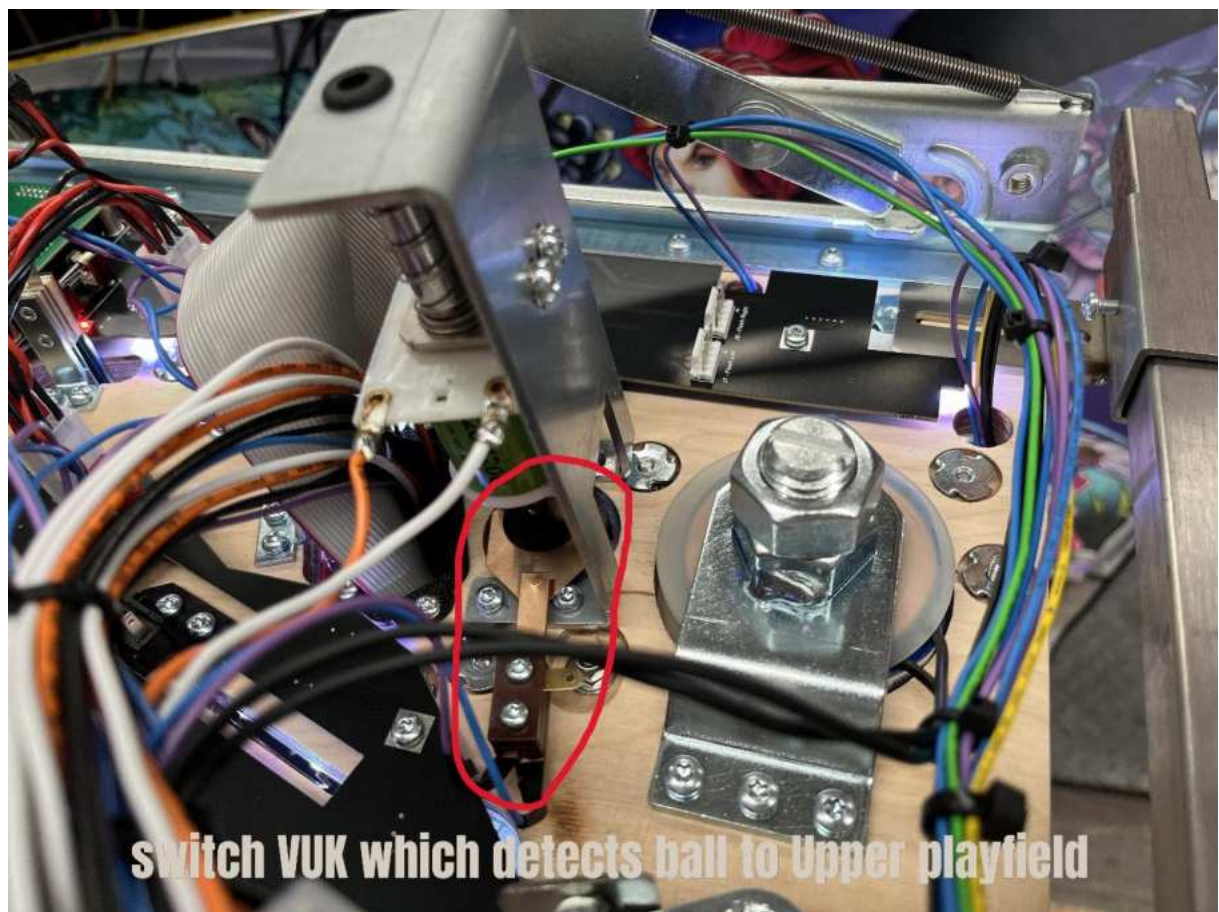
Bottom flippers drop dead mid game

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If during gameplay suddenly the flippers drop dead without any apparent reason it is likely because Alice thinks the ball is on the upper playfield. The switch used to let Alice know a ball is going to the upper playfield is the switch present at the VUK which brings the ball to the upper playfield. Most probably it's too tight and because of vibrations (like popbumper activity) it closes when it shouldn't close. It should also be visible for the player that Alice thinks a ball on the upper playfield as the lighting bolts on the upper playfield should lit up when a flipperbutton is pressed.

Widen the gap of the blades just a little and this issue should disappear. Make sure you don't widen the gap to much, when a ball is really in there it should be detected after all.



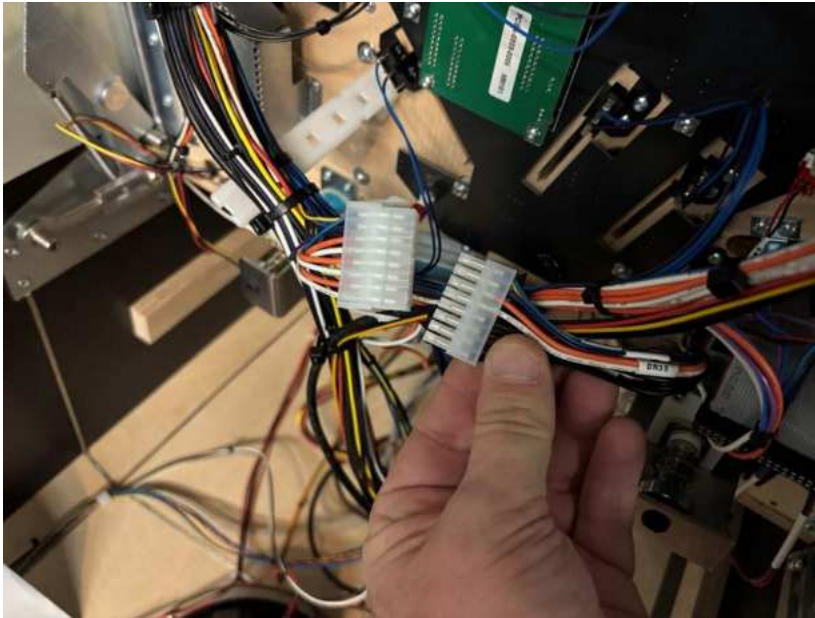


it's a whole new game!

Remove upper playfield

This section contain instructions how to remove the upper playfield. It's a relatively simple procedure

1. Set playfield vertical (for how-to see page 22)
2. Disconnect the big connector below playfield



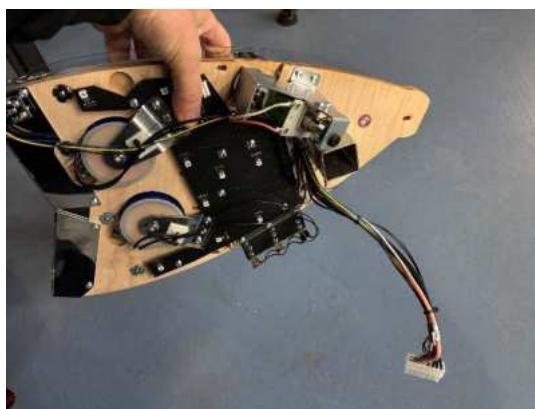
3. Set playfield horizontal again resting on the servicerails and remove the 3 screws holding the upper playfield and put them safely aside



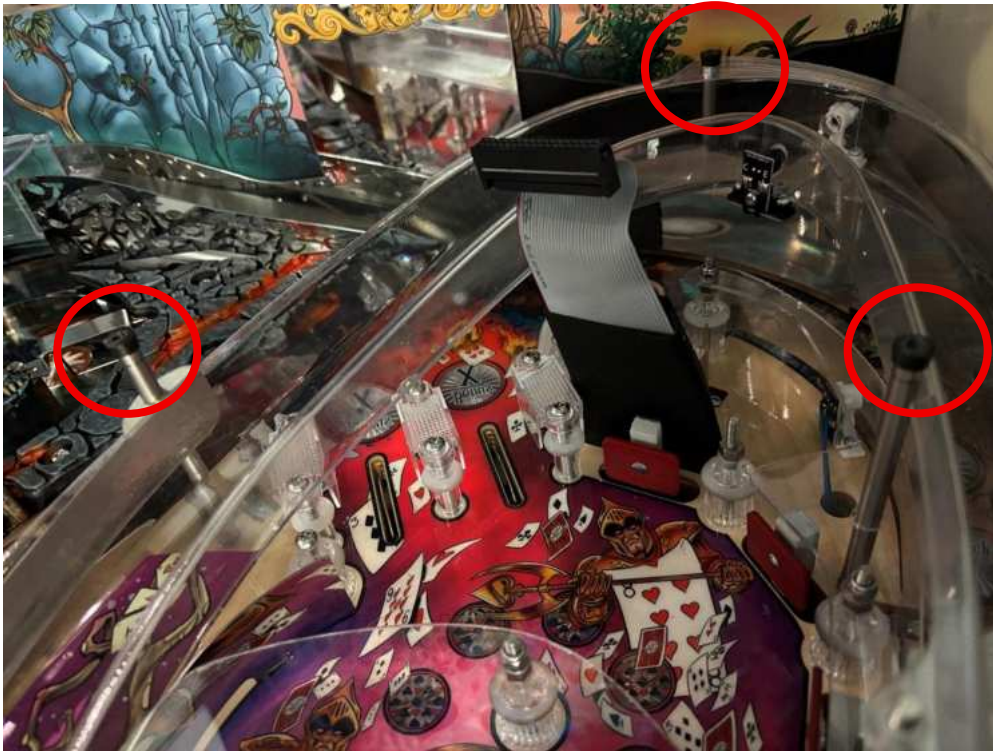
4. Lift the upper playfield upwards and disconnect carefully the ribbon flatcable from the bottom side upper playfield.



5. Now lift the playfield more upwards and 'fiddle' the big connector you disconnected below the main playfield through the cable channel. I find this most easy with playfield resting on its service rails, lift with left arm the upper playfield while with right arm reaching over the backside of the playfield to the underside, feel for the connector and guide it towards the channel and rotate the connector so its in line with the cable channel.



Make sure you don't lose the 3 black spacers in below picture !

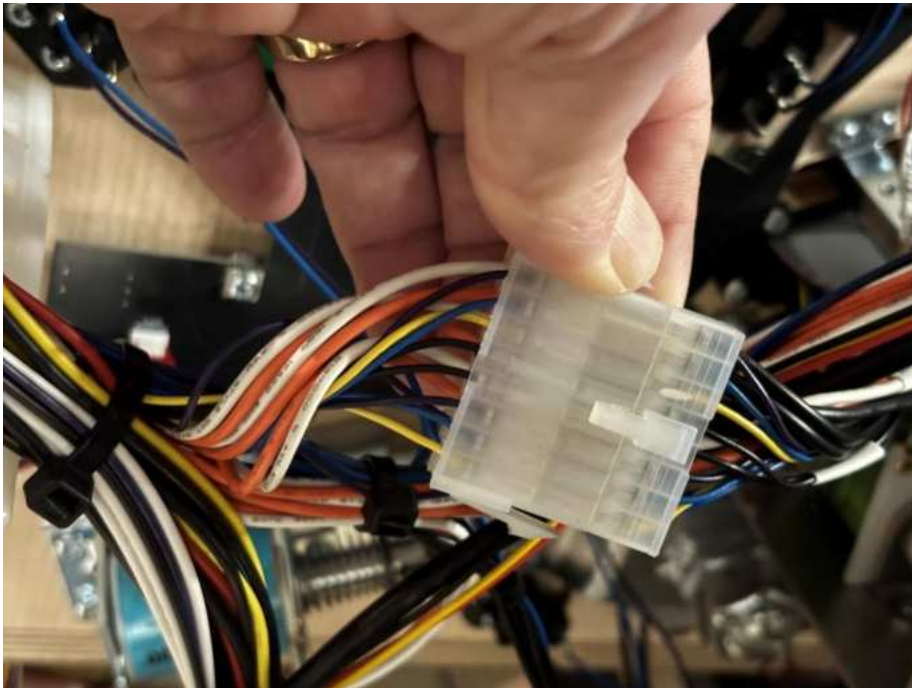


6. For re-assembling reverse the earlier described steps. Start with guiding the big connector through the cable channel

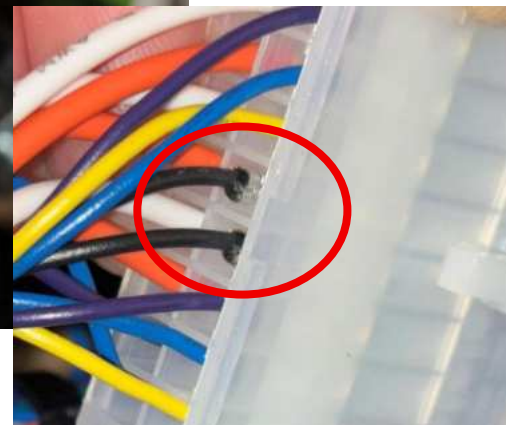
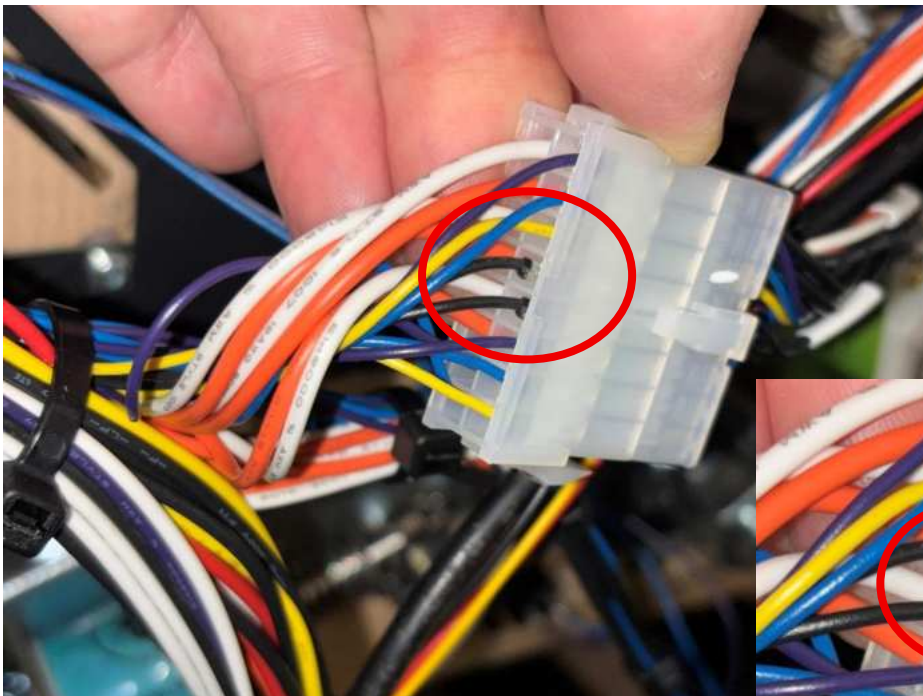


7. Put the upper playfield on its 3 posts (make sure the black spacers are present) and put the screws back in and tighten them

8. Set playfield vertical (for how-to see page 22)
9. Re-connect the 2 big connectors you disconnected at the beginning.



Check if all the pins are properly in place. If not, use a small flat screwdriver to push the pins back in. See below picture how it looks when pins are **not** 100% correct in.



10. Set playfield horizontal again, go into switchtest and check functionality of the targets. If not working check if the pins are properly in place in the connector like mentioned above.

11. If the ball has an issue getting to the upper playfield you can play a little with the position of the upper playfield compared to the VUK as the 3 screws. See also for another tip for this the procedure at page 190
12. Slide playfield glass in place and enjoy flipping!

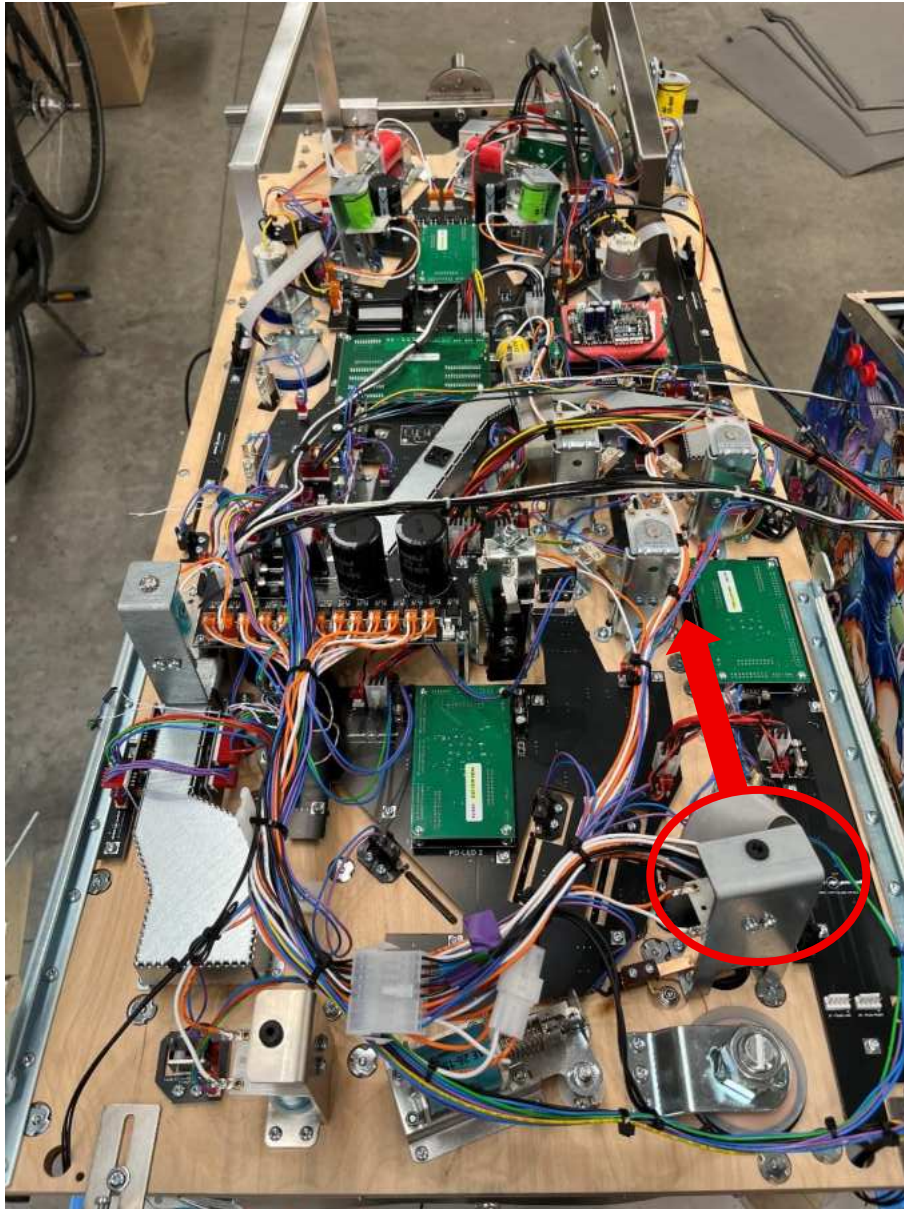


Adjust VUK to upper playfield

If the ball has difficulty to get to the upper playfield you can 1) play with the coilpower but start with 2) bending slightly the VUK bracket.

Made a video on this which can be seen at <https://youtu.be/EYUwlzhxigo>

This video explains that a very likely solution is just to bend the VUK bracket a little as per arrow in below picture. Just a tiny bending should do the trick. This positions the plunger better under the ball and makes it hopefully reach the upper playfield.





Ball gets stuck under tiltramp

When you shoot a ball very fast in the right orbit with Jabberwock lock lit it can happen the ball bounces back so quickly from the starpost at the end that it goes back into the circled loop and get's stuck under the tiltramp.



The ball goes (to) fast through the one-way wiregate, bounces back from the starpost, wiregate hasn't closed yet and thus letting the ball back in the circleloop towards the closed tiltramp where it will get stuck.

Possible solutions are:

- Remove the transparent silicone rubber around the starpost. This will make it less bouncy and gives the wiregate more time to close



- Oil the wire gate wireform at the hinges which makes it close faster

