

- 6HP Eurorack Module
- Designed in E.U.



# Shakmat Clock O'Pawn mk2 Building Guide

# Thank You for purchasing a Shakmat DIY Kit!

We spare no effort in our packaging process to prevent any mistakes or missing parts. In this document as well, we tried our best to describe the assembly process in the most practical and comprehensive way. Therefore, we strongly advised you to follow the steps as described in this guide :)

If by any chance there is a missing or damaged part in your kit, feel free to contact us at [shakmat.com/support](https://shakmat.com/support)

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# Content

## Pack 1

4x Jack mono  
1x Jack stereo  
5x Push buttons  
4x Small button caps  
1x Big button cap  
1x 8pin male header  
5x Amber LED  
2x 14mm nylon spacer  
2x M3 nylon screw  
2x M3 metal screw

## Pack 2

4x Green LED  
3x 7 segments display  
1x 2x8 pin power header  
1x 3 pin male header  
1x 4 pin male header  
1x 2x2 pin male header  
3x jumper  
5x Jack nuts

## Pack 3

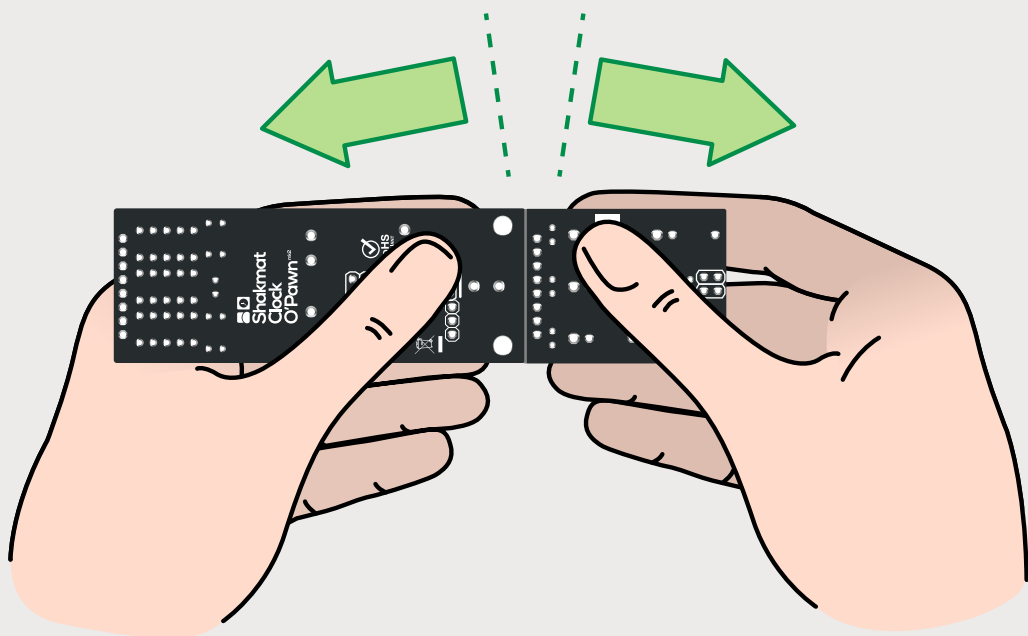
1x Top & bottom PCBs  
1x Front panel

## Loose parts

1x Power cable  
1x Jack/Midi adaptor  
1x User manual

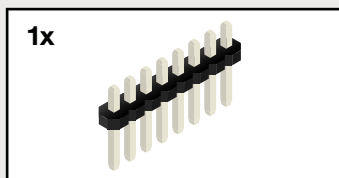
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# 01



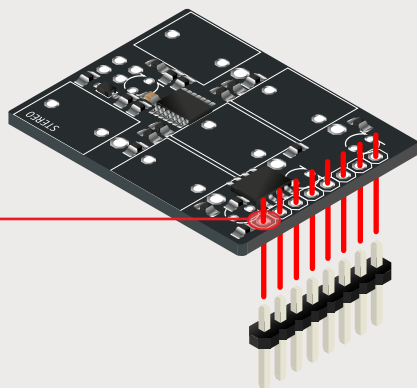
**Separate the two PCBs  
by applying pressure to  
the side without components.**

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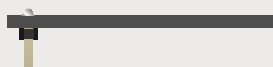


# 02

Solder  
one point

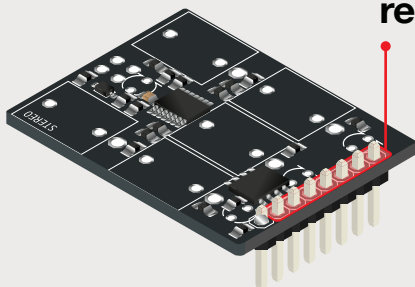


Check perpendicularity!



# 03

Solder  
remaining points



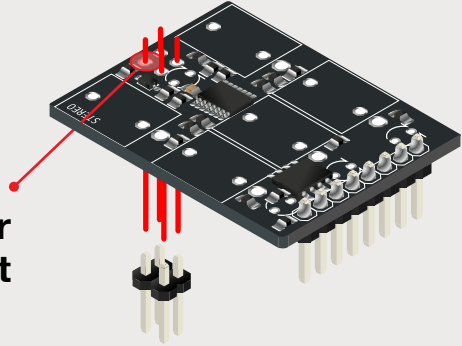
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1x



# 04

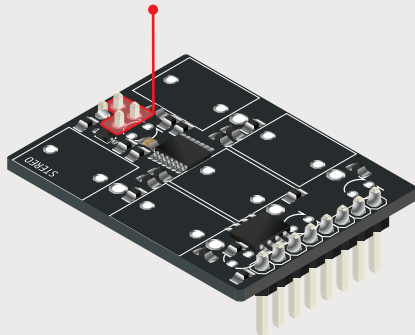
Solder  
one point



**Check perpendicularity!**

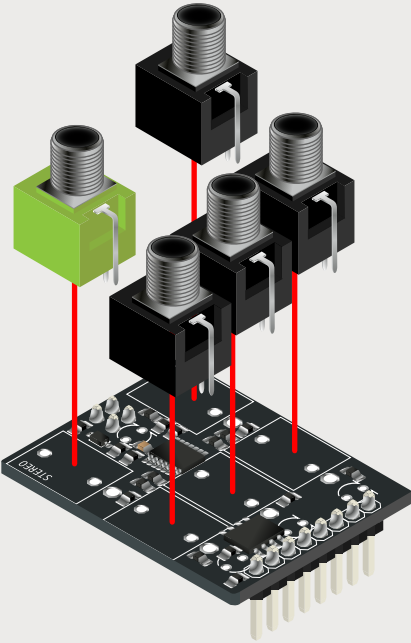
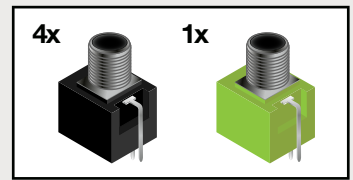
# 05

Solder  
remaining points

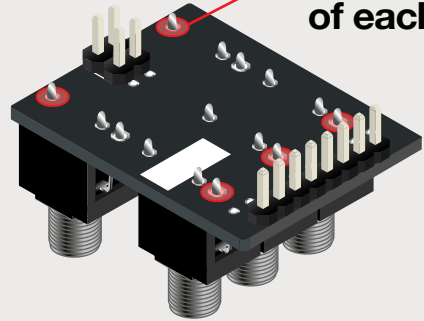


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# 06

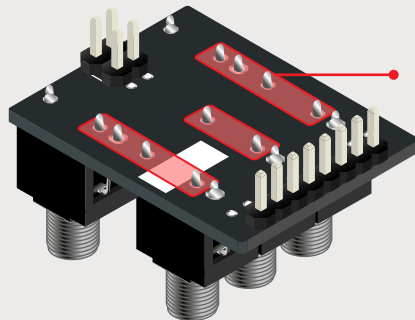


**Solder  
one point  
of each**



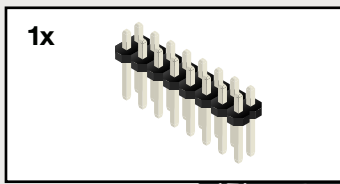
**Check perpendicularity!**

# 07

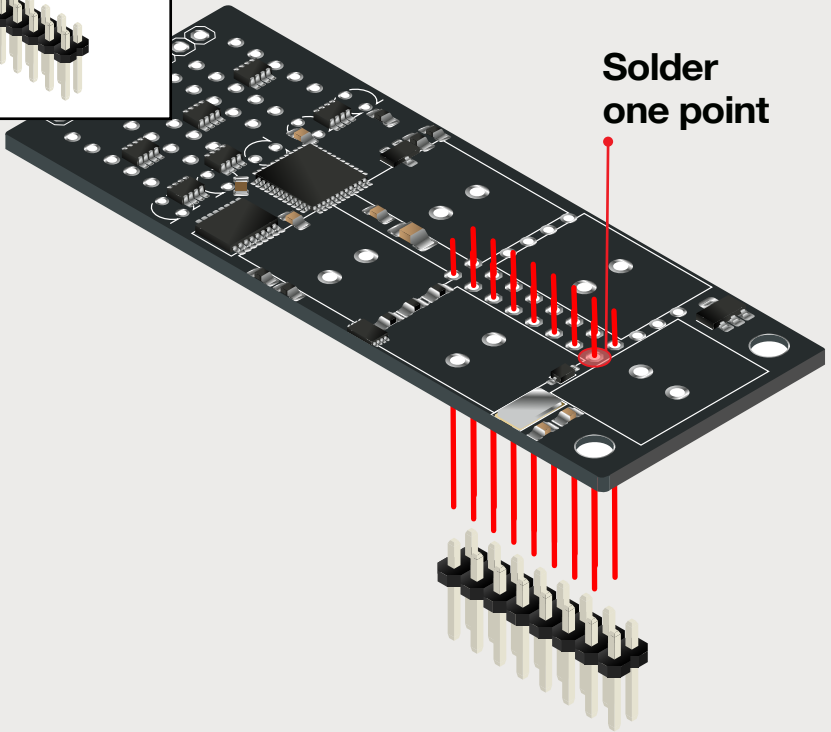


**Solder  
remaining points**

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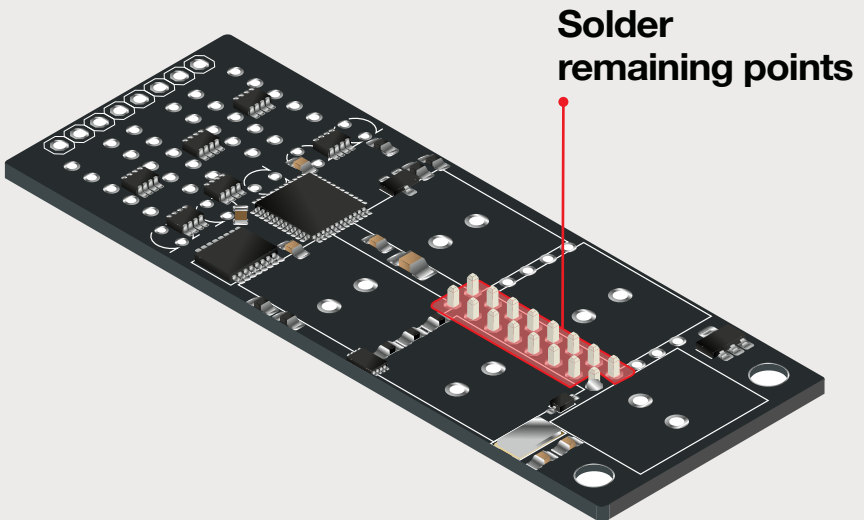


08



Check perpendicularity!

09



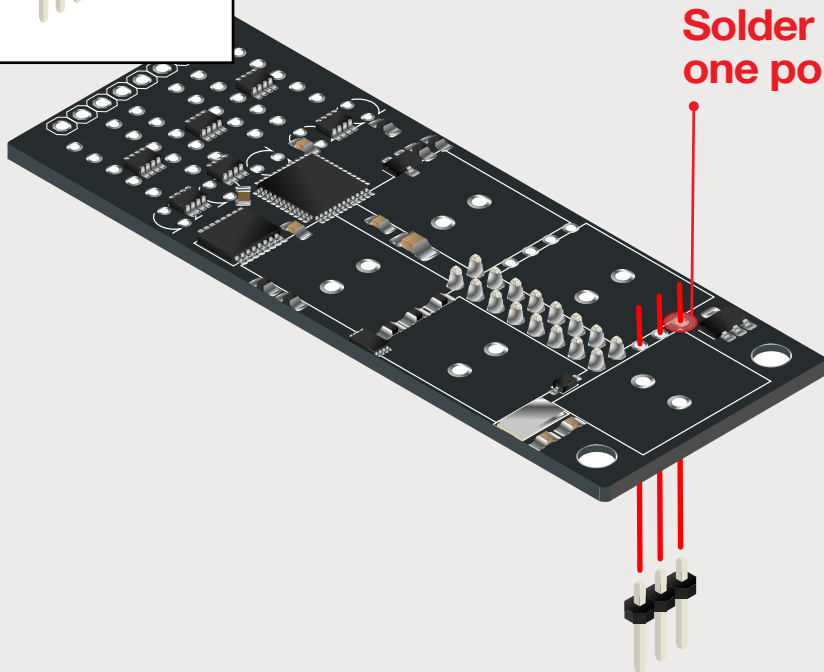
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1x

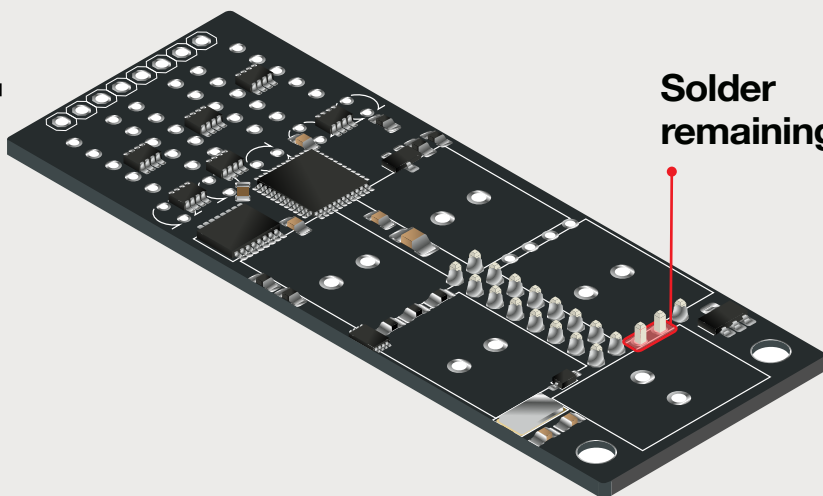


10



Check perpendicularity!

11

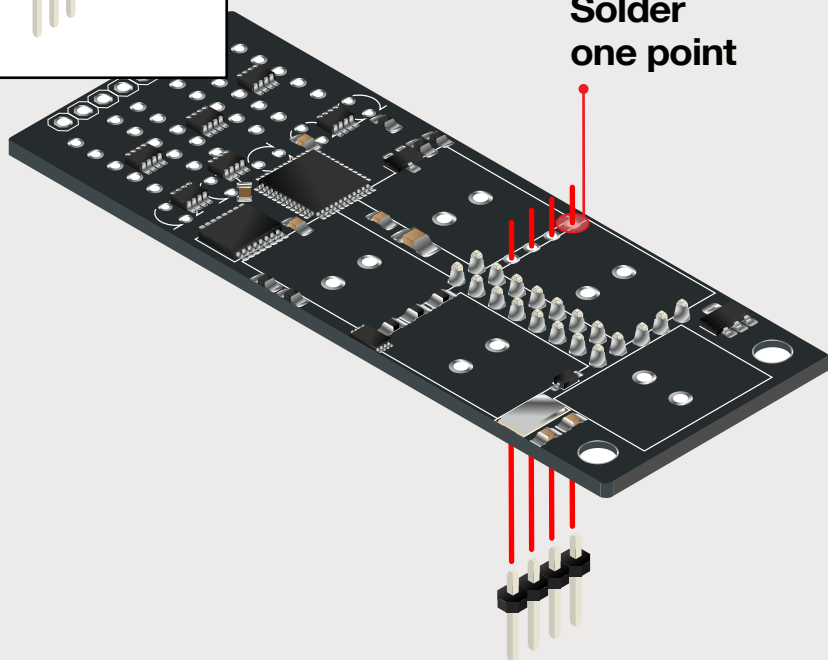


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1x



12

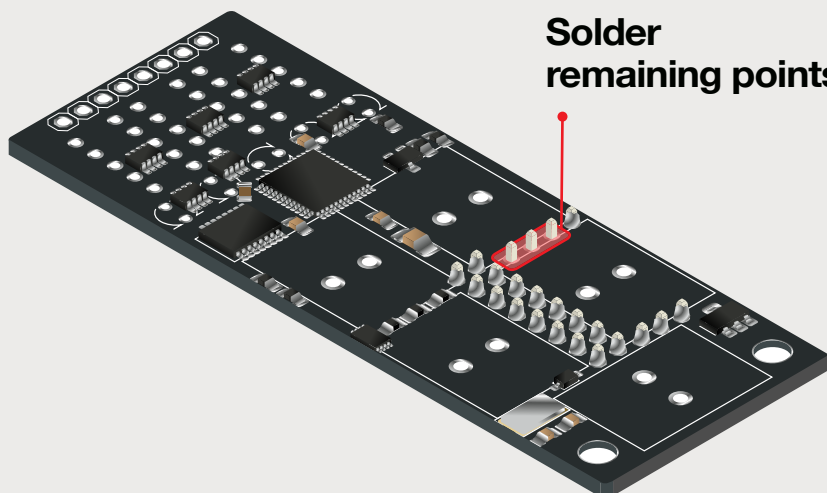


Solder  
one point



Check perpendicularity!

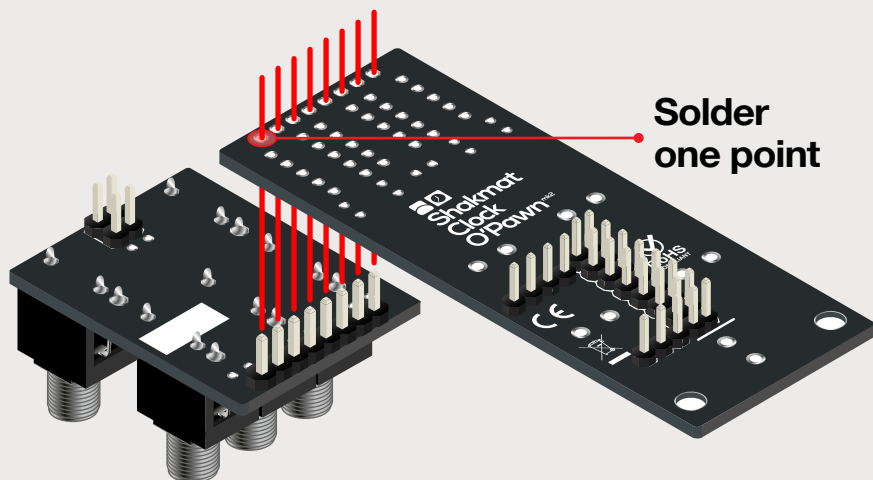
13



Solder  
remaining points

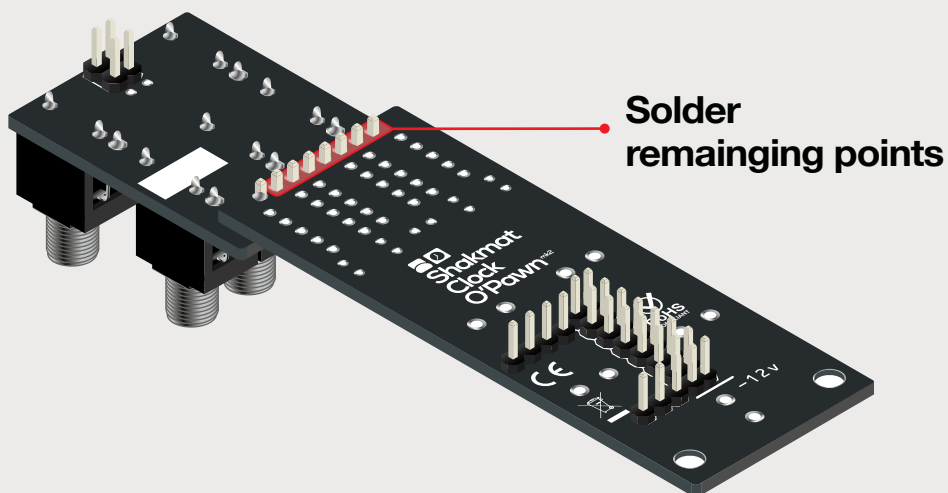
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# 14



**Check PCBs parallelism!**

# 15

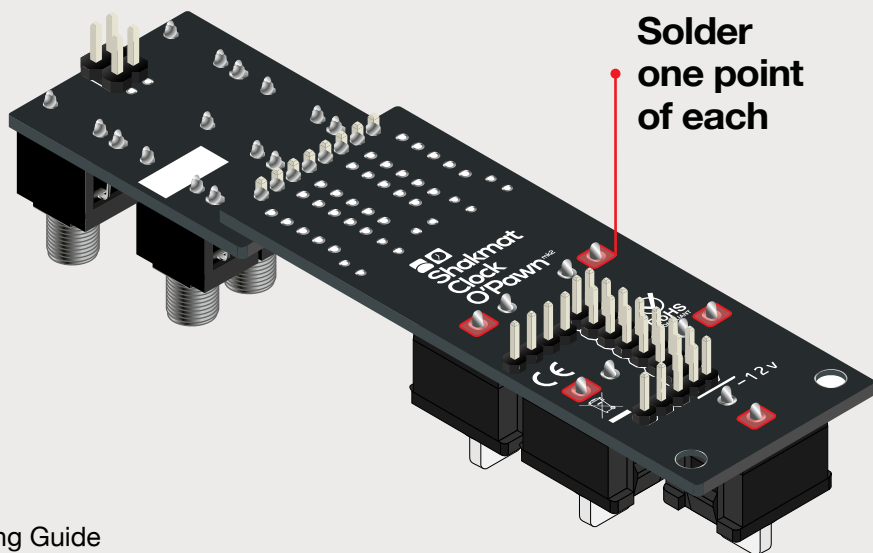
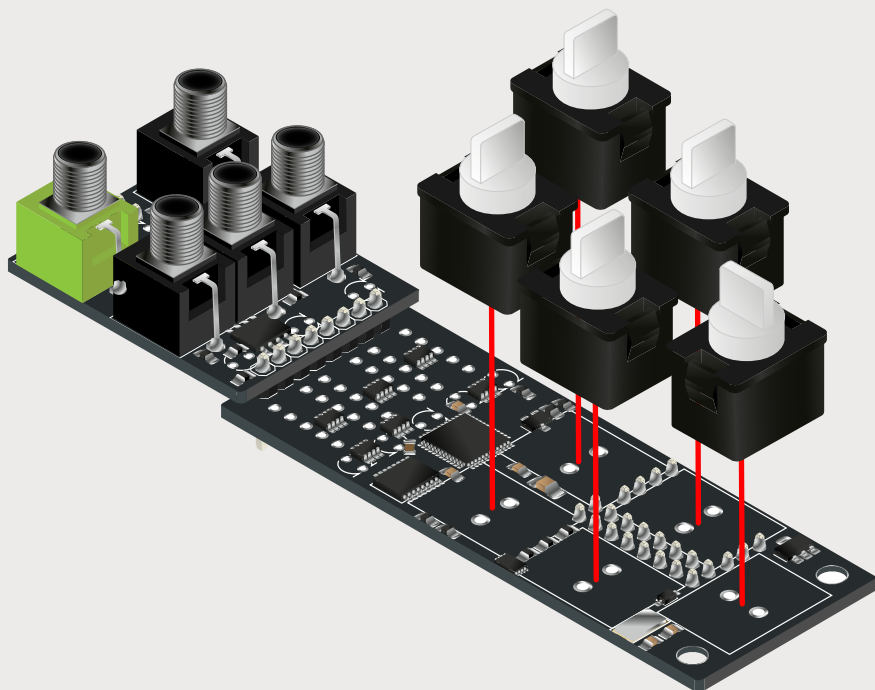


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5x



# 16



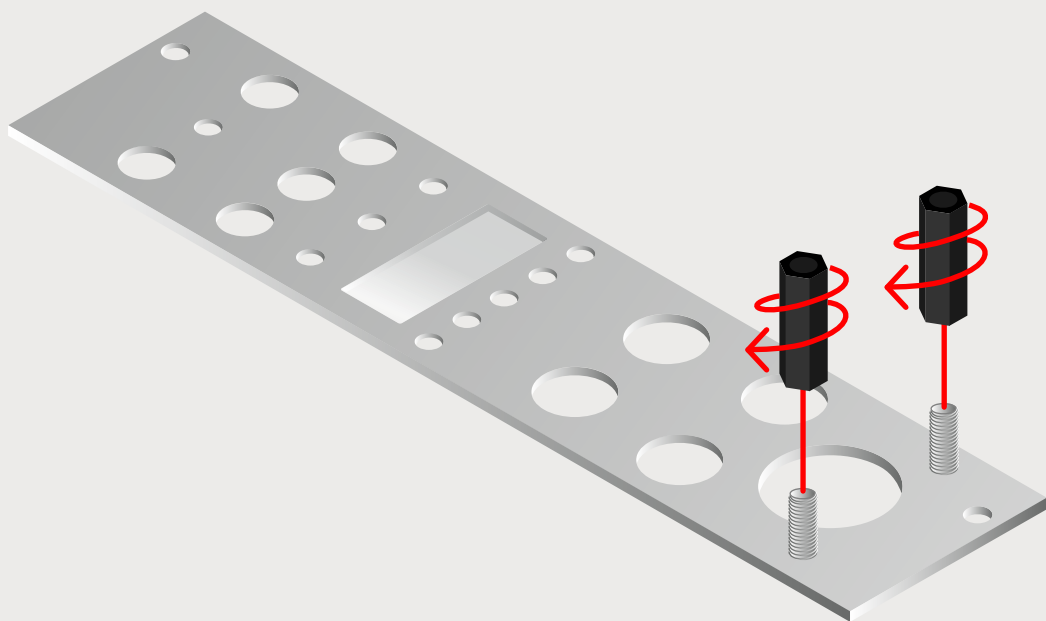
**Solder  
one point  
of each**

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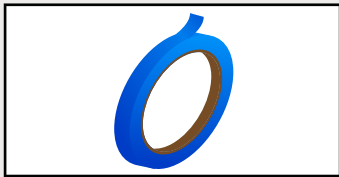
2x



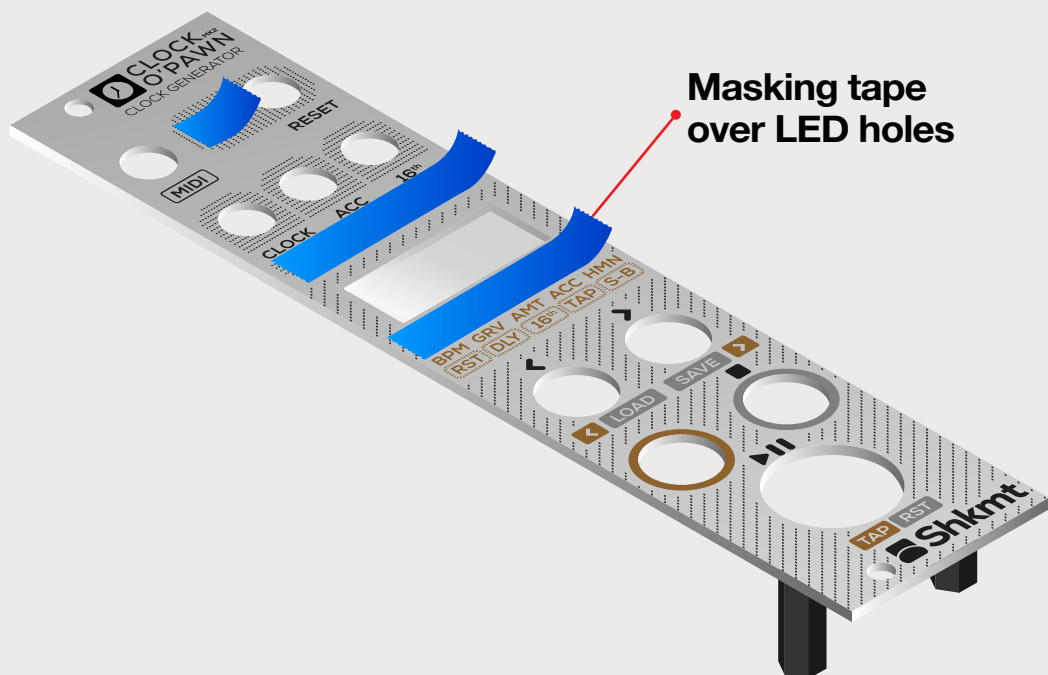
17



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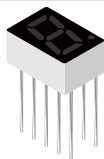


# 18



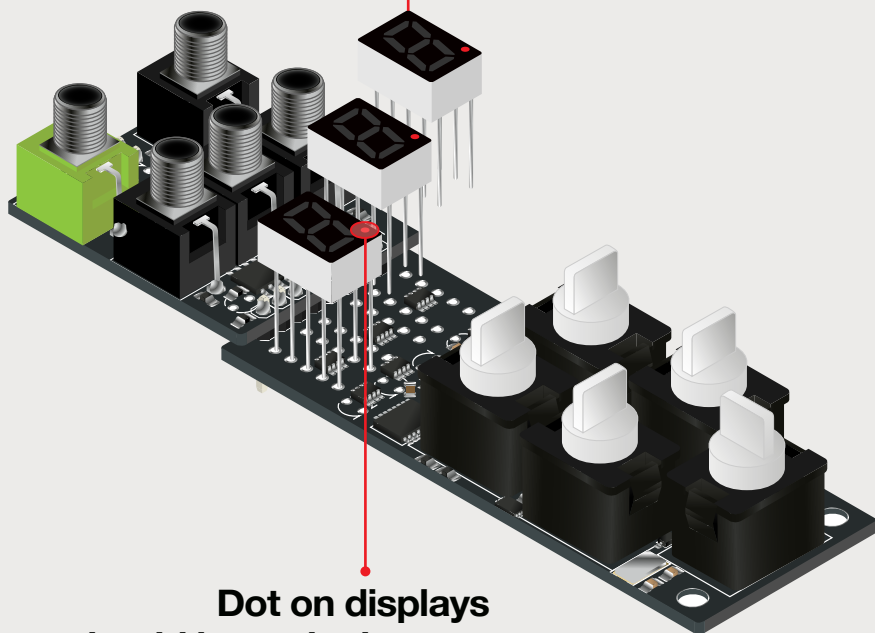
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3x



# 19

**Place the displays  
but do not solder them!**



**Dot on displays  
should be at the bottom**

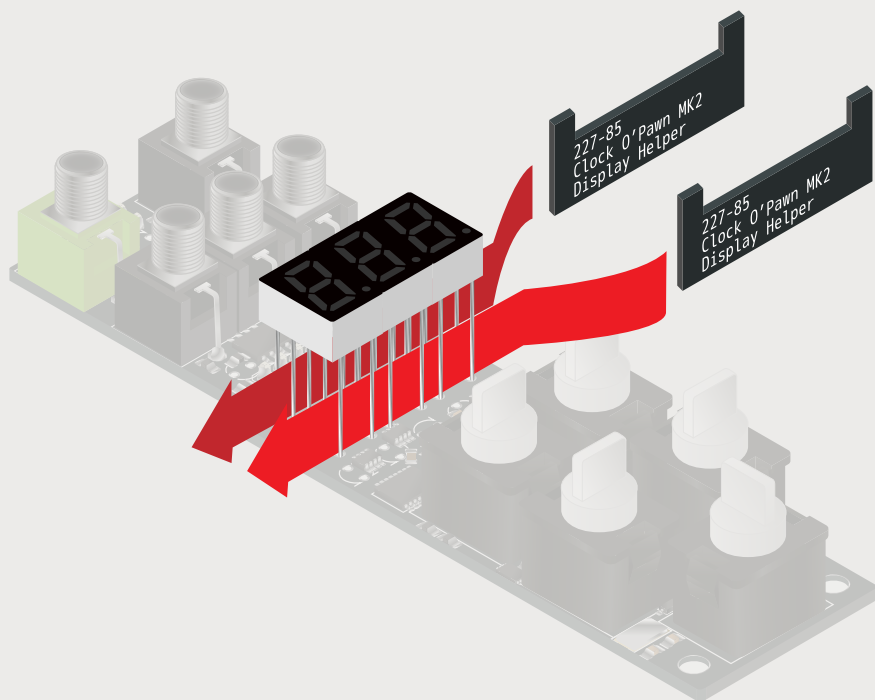
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2x



# 20

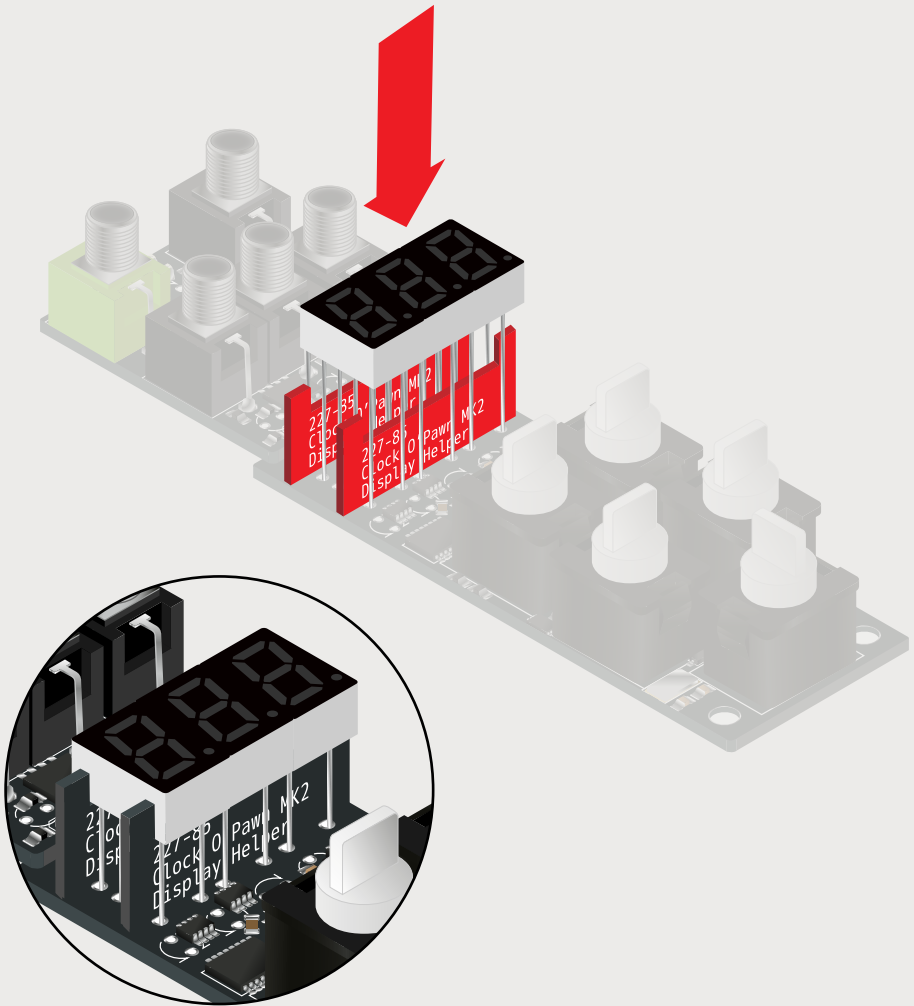
**Slide the Display Helpers  
between the first two and  
last two rows of display pins.**



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**Press the displays into place  
with the Display Helpers so that  
they are all held together and aligned.**



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4x



+ -

=



+ -

=



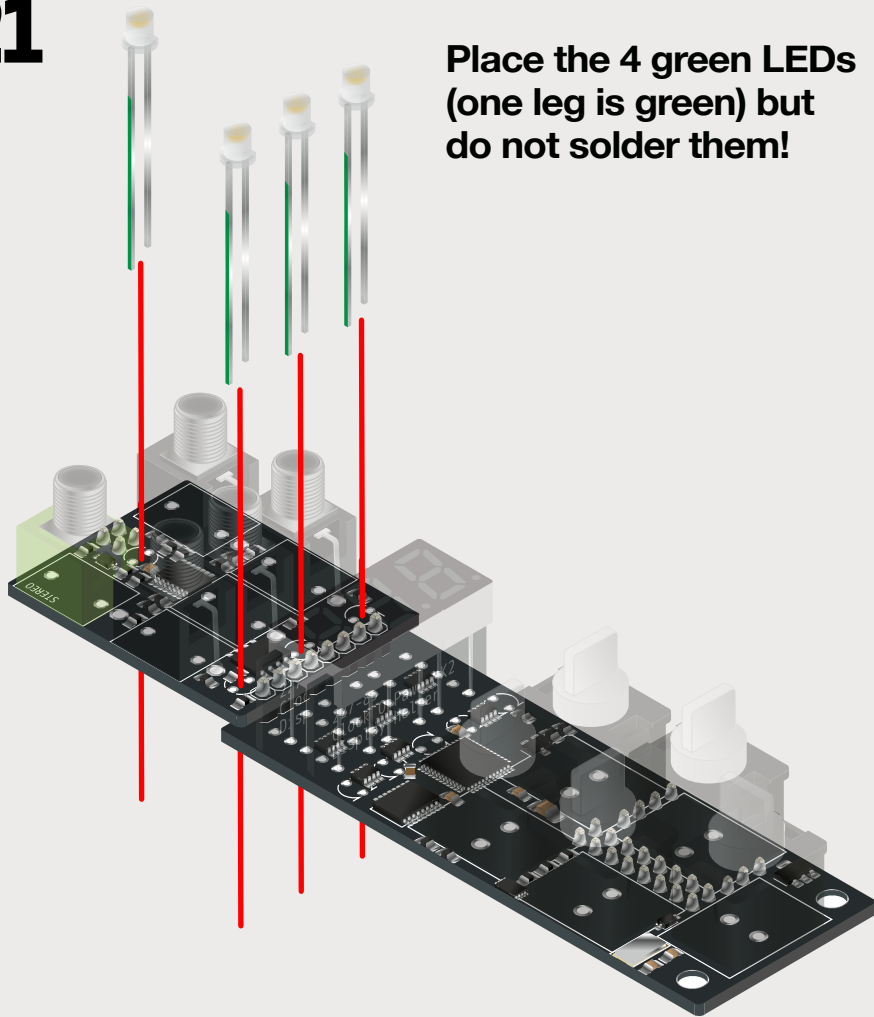
+ -

**LED polarity**

+ -

# 21

**Place the 4 green LEDs  
(one leg is green) but  
do not solder them!**



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5x



+ -

=



+ -

=



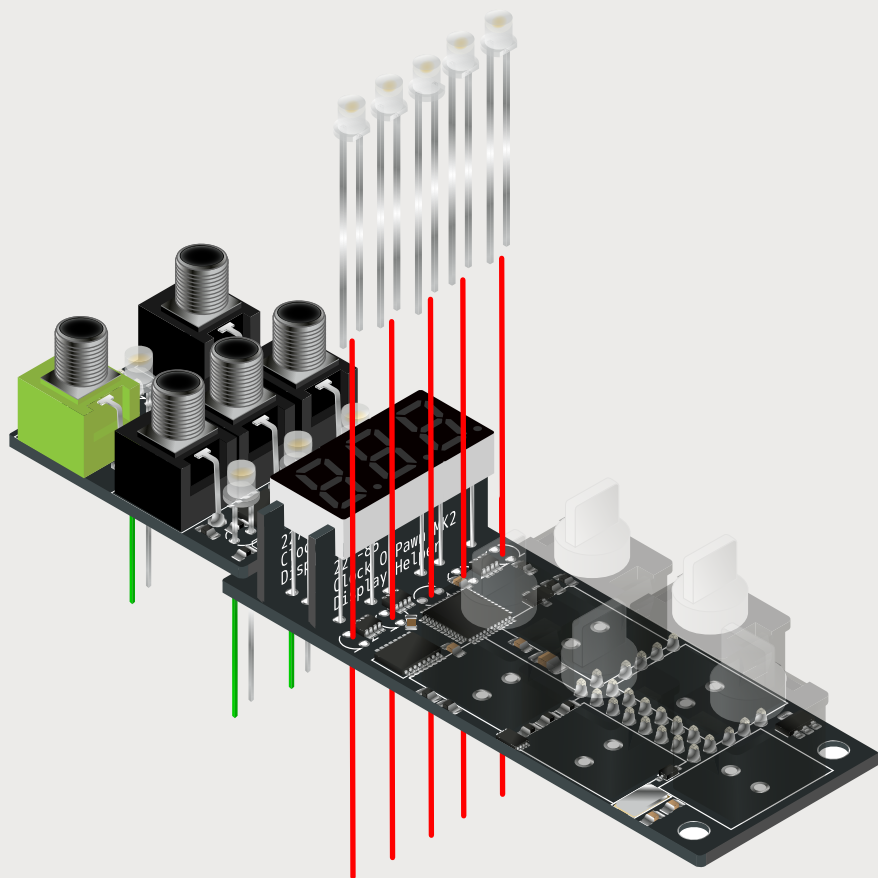
+ -

**LED polarity**

+ -

# 22

**Place the 5 amber LEDs  
but do not solder them!**



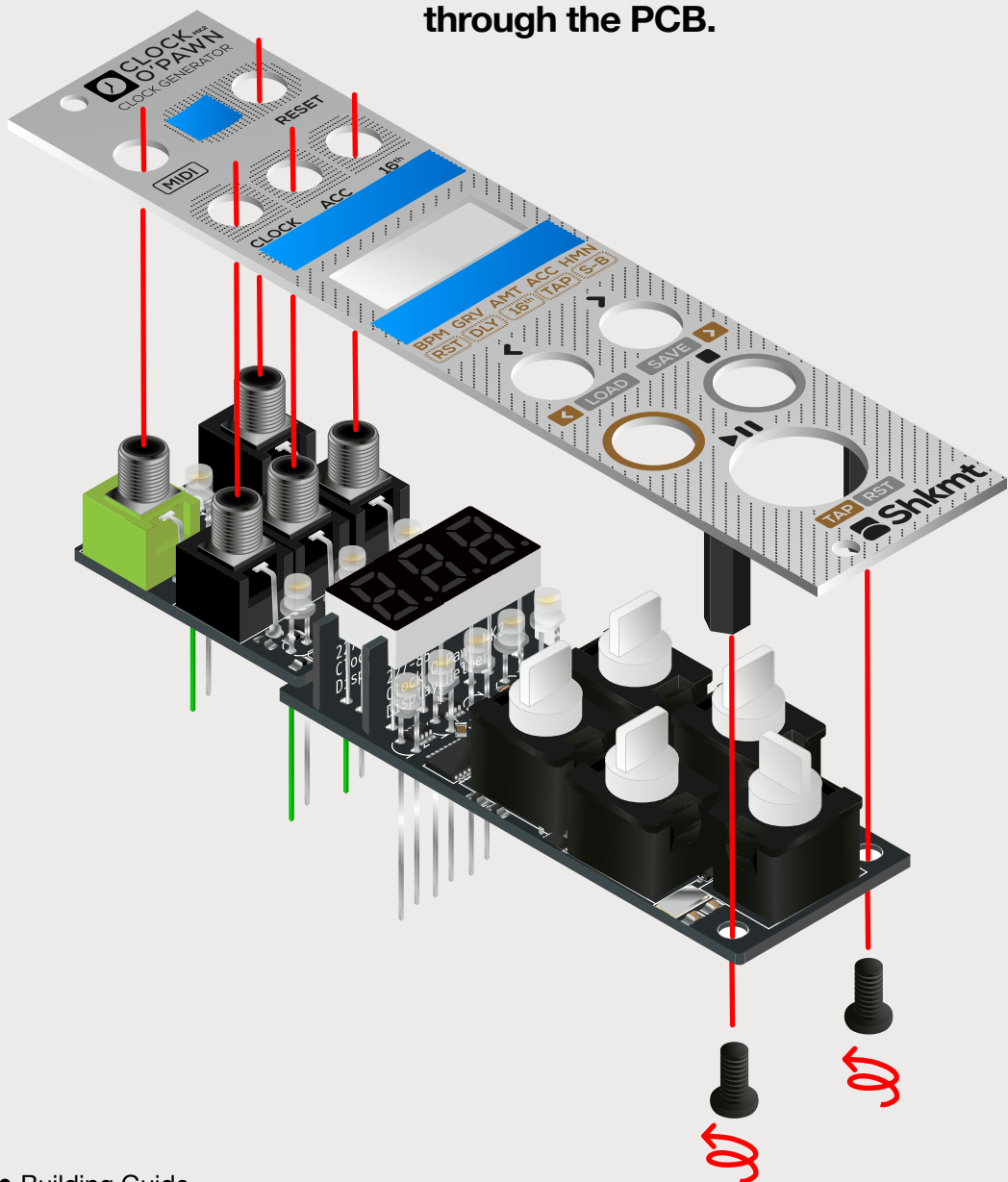
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2x

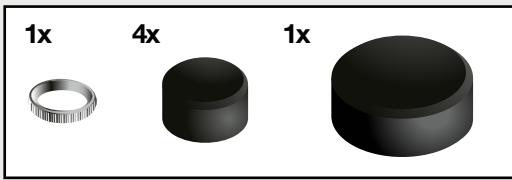


# 23

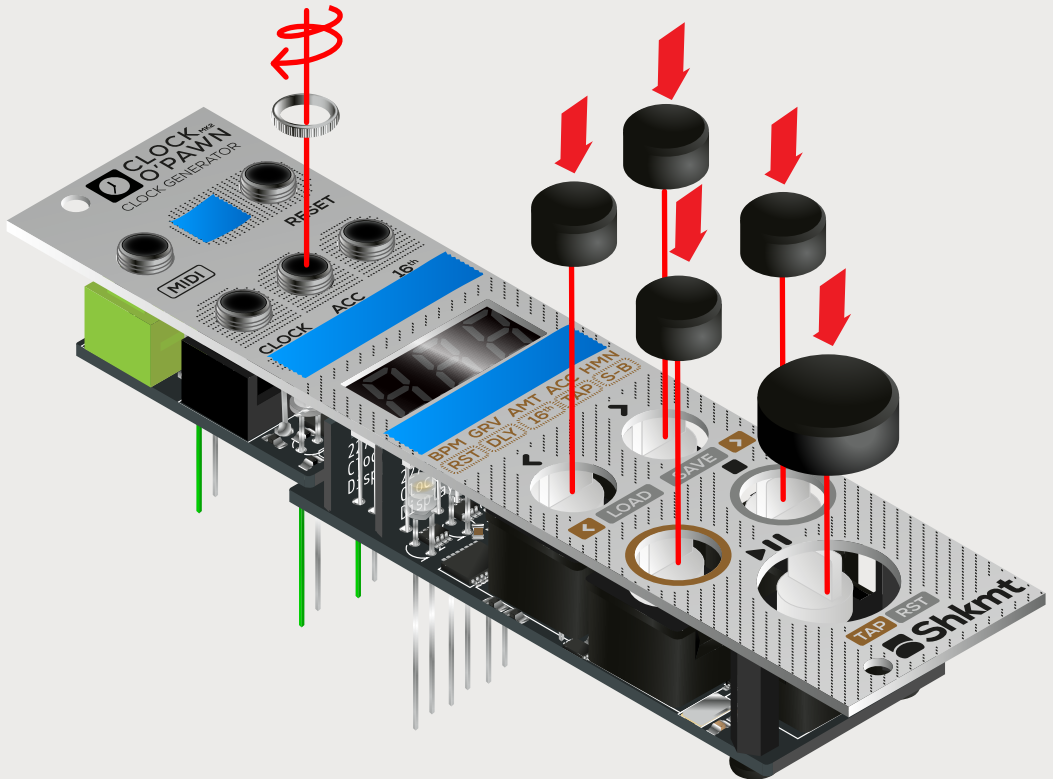
Mount the front panel and screw two nylon screws through the PCB.



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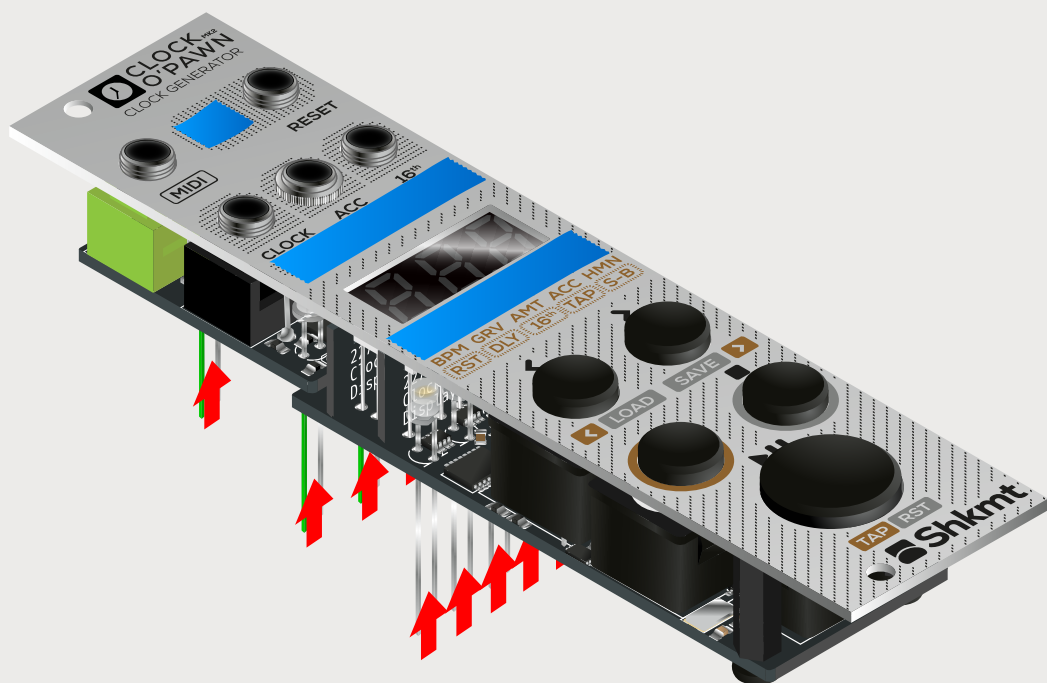
## 24 Screw a nut onto the ACC jack and place the caps on the push buttons



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# 25

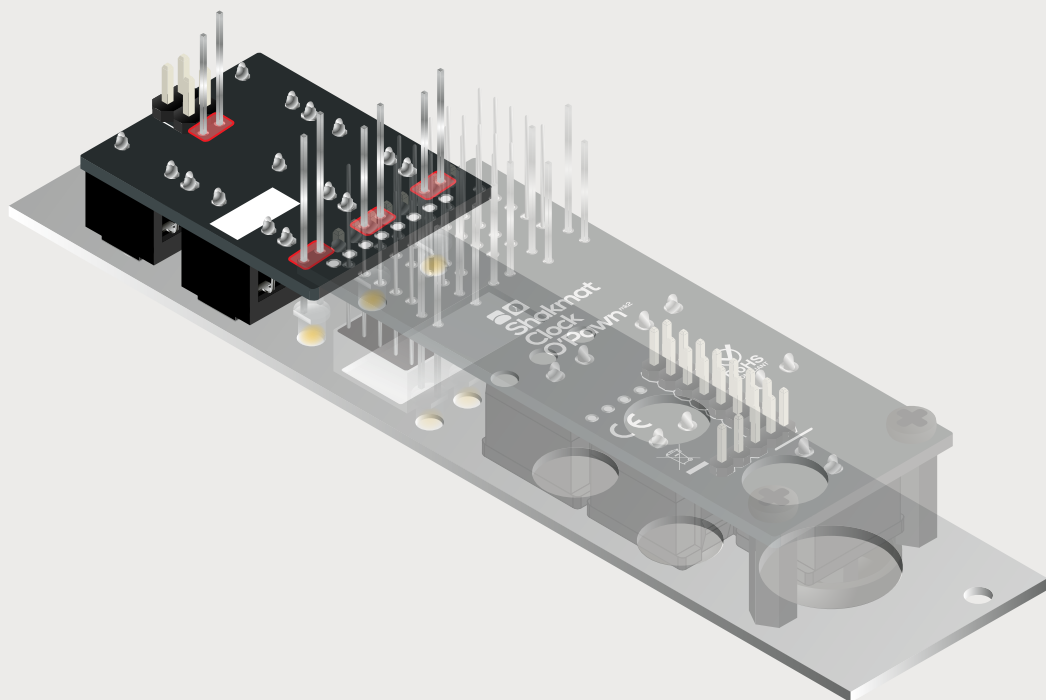
Push each LED through the front panel until they stick to the masking tape.



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# 26

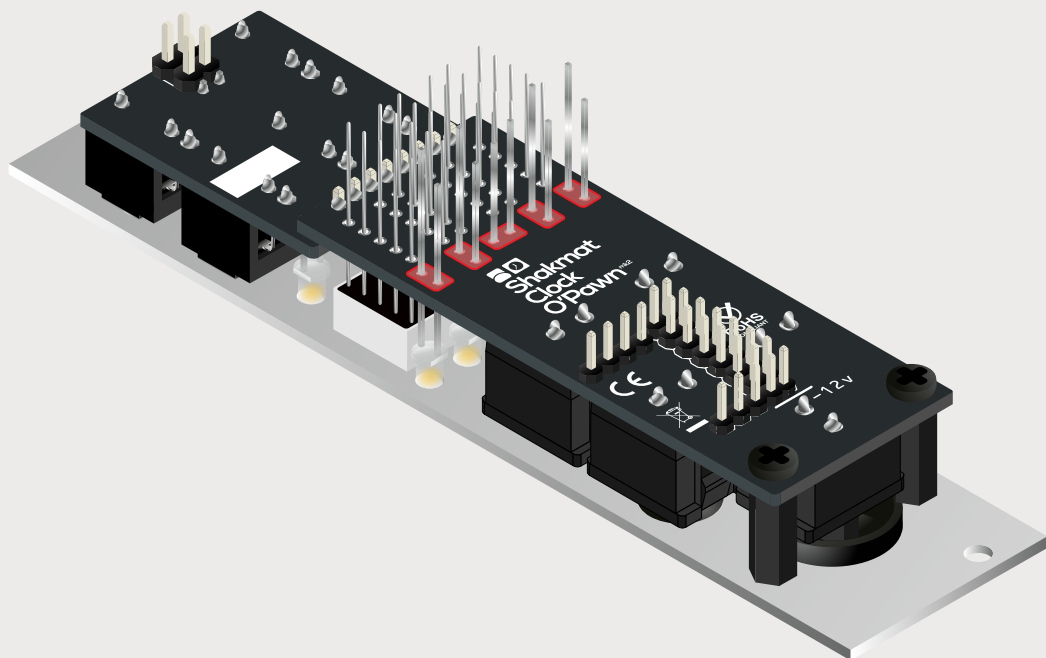
**Solder the 4 green LEDs and cut off the excess leg.**



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# 27

Solder the 5 amber LEDs and cut off the excess leg.

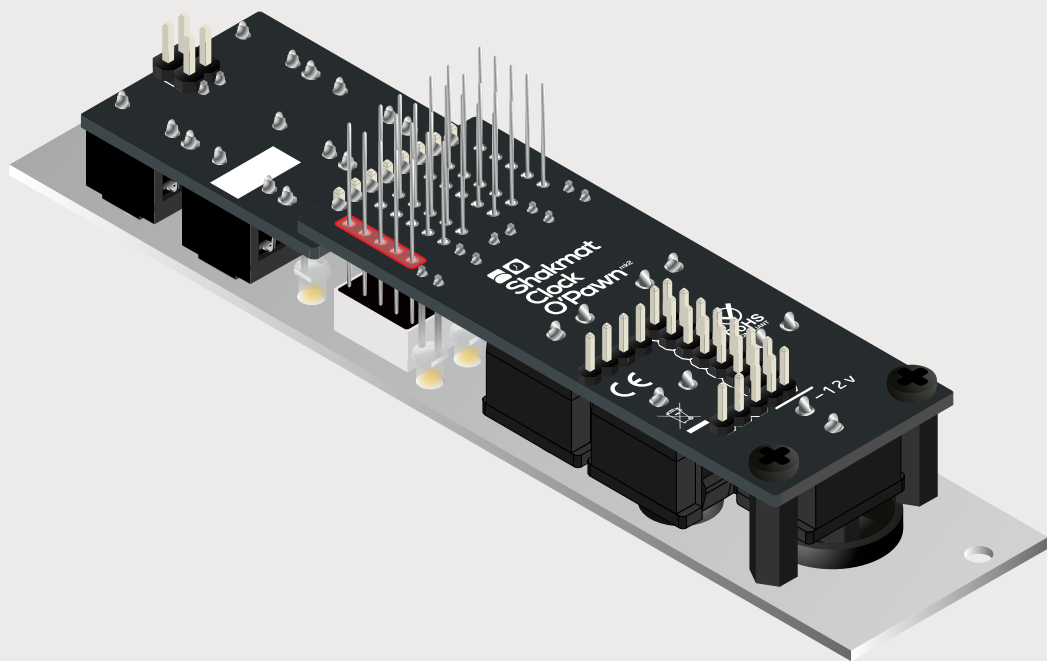


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# 28

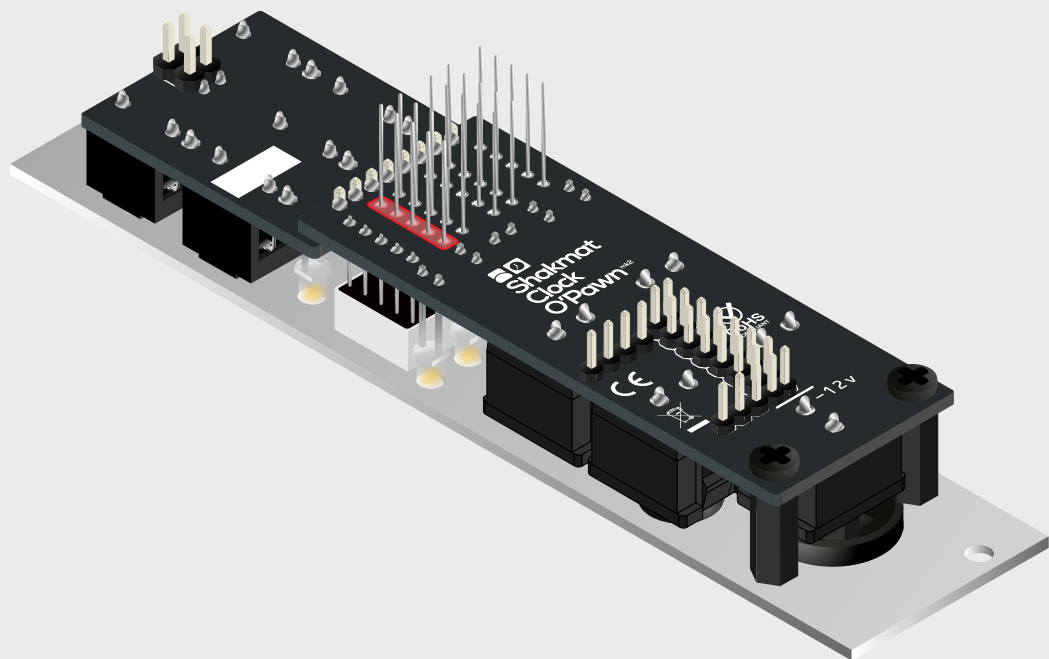
Solder the first column of display legs and cut off the excess.



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# 29

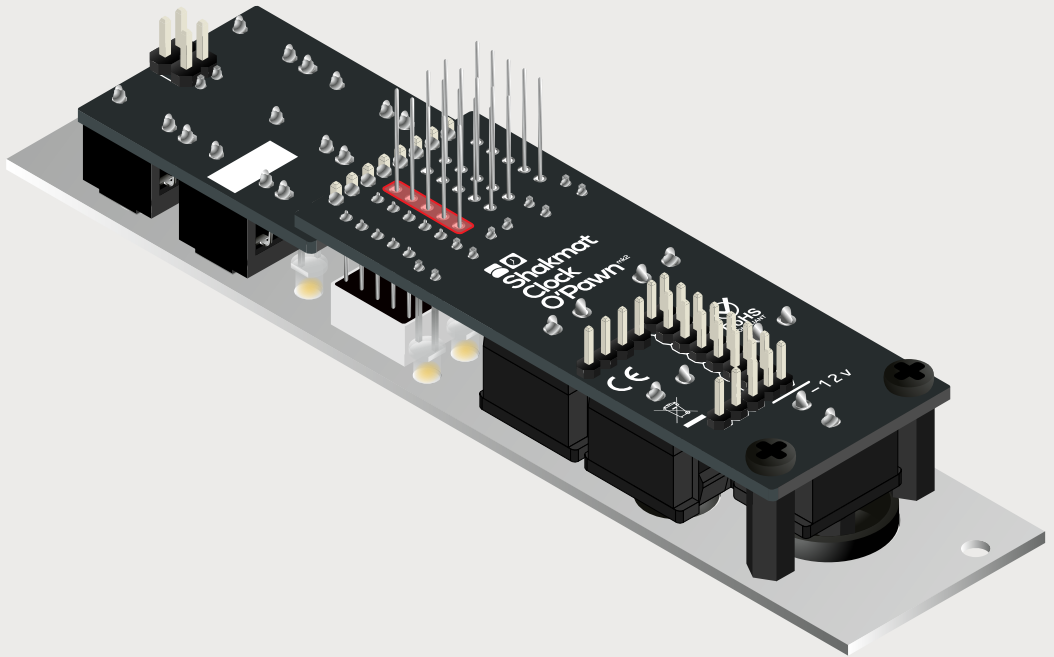
Solder the second column of display legs and cut off the excess.



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# 30

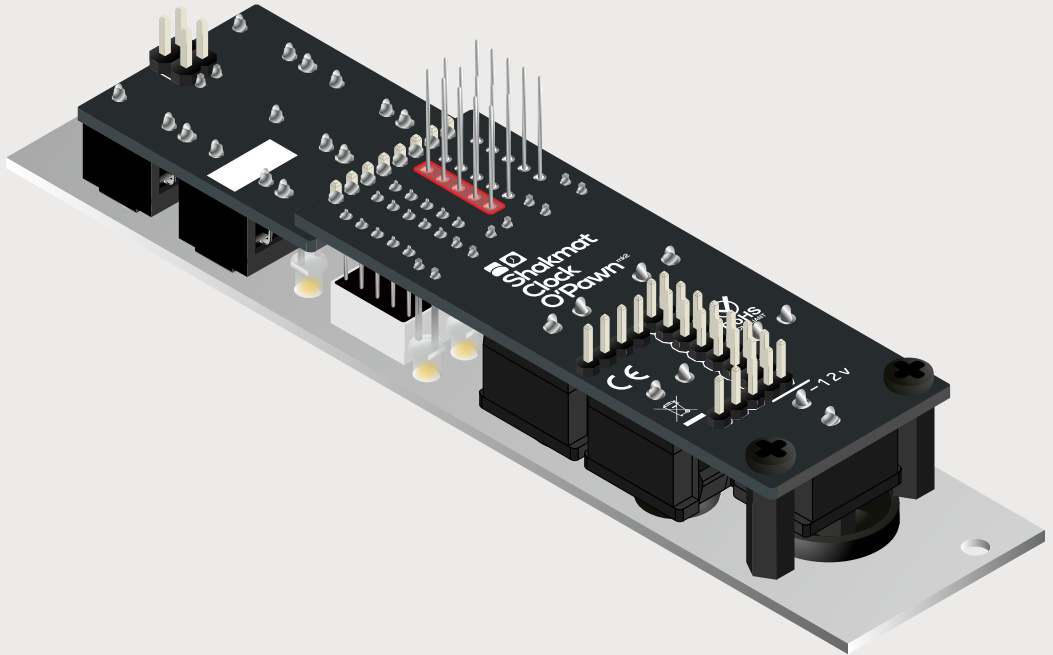
**Solder the third column of display legs and cut off the excess.**



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# 31

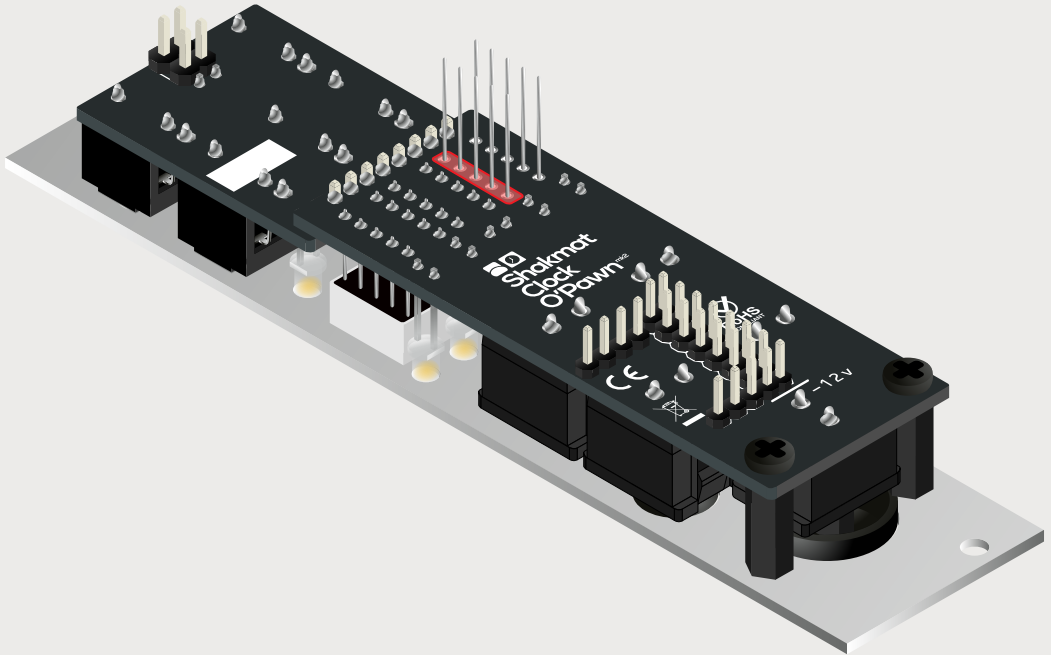
**Solder the fourth column of display legs and cut off the excess.**



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# 32

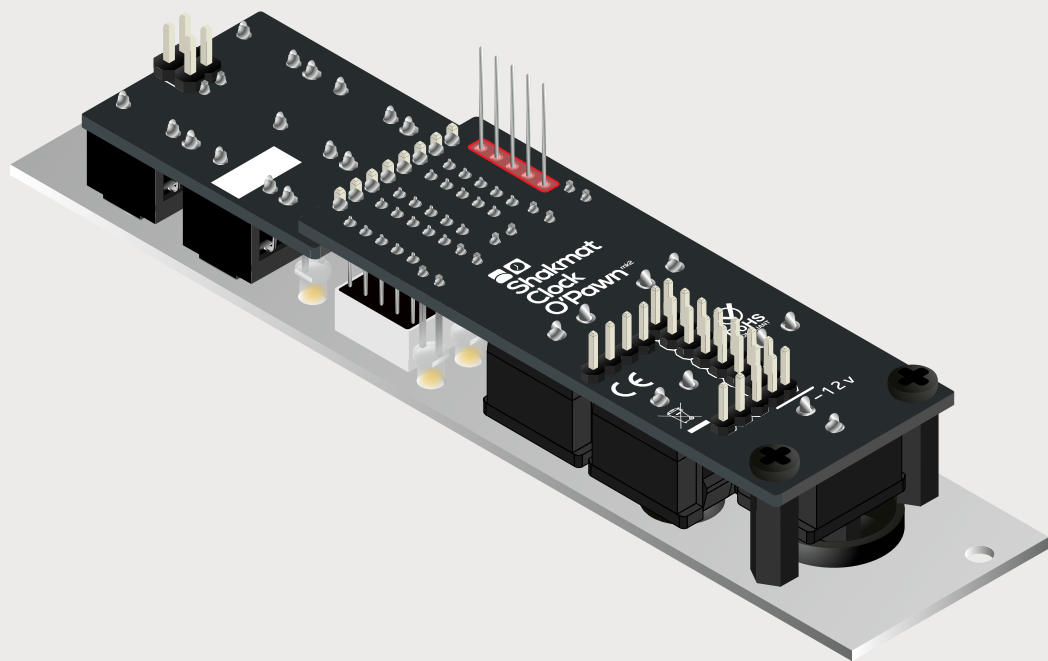
Solder the fifth column of display legs and cut off the excess.



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# 33

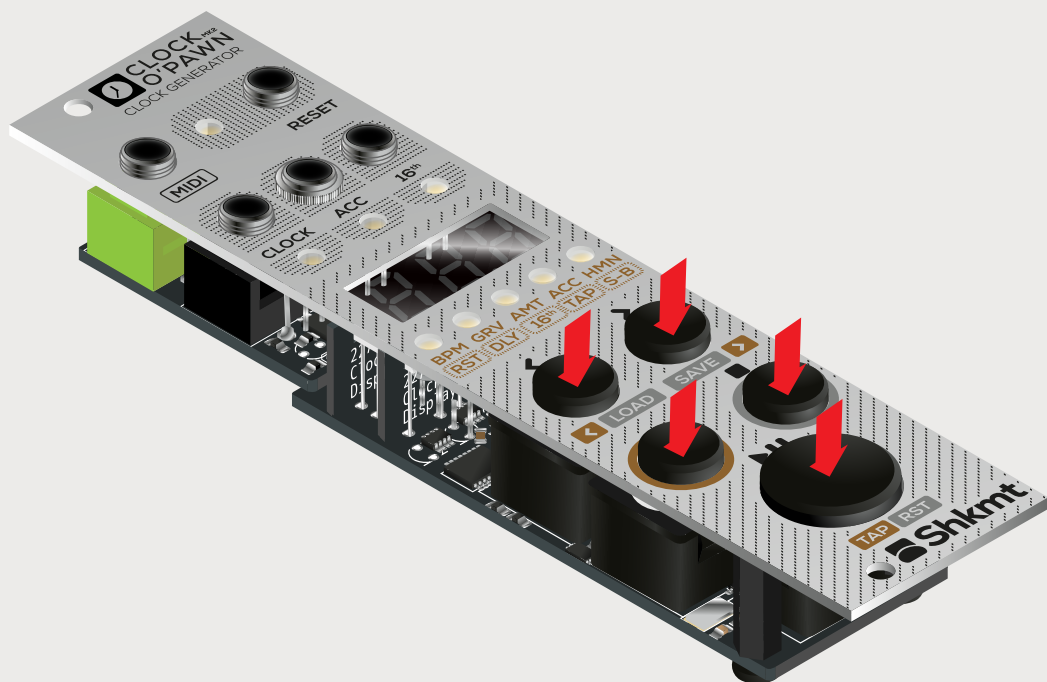
**Solder the last column of display legs  
and cut off the excess.**



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# 34

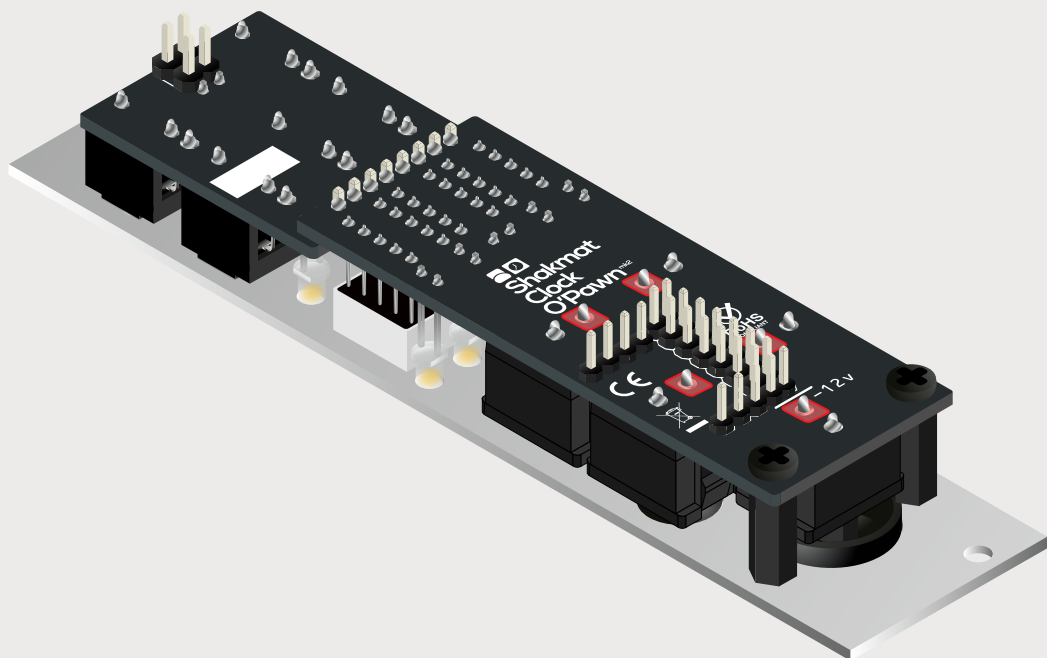
Check the operation of each button.  
If necessary, heat the previously soldered point  
and correct the alignment.



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# 35

If all buttons press freely,  
solder the remaining five points



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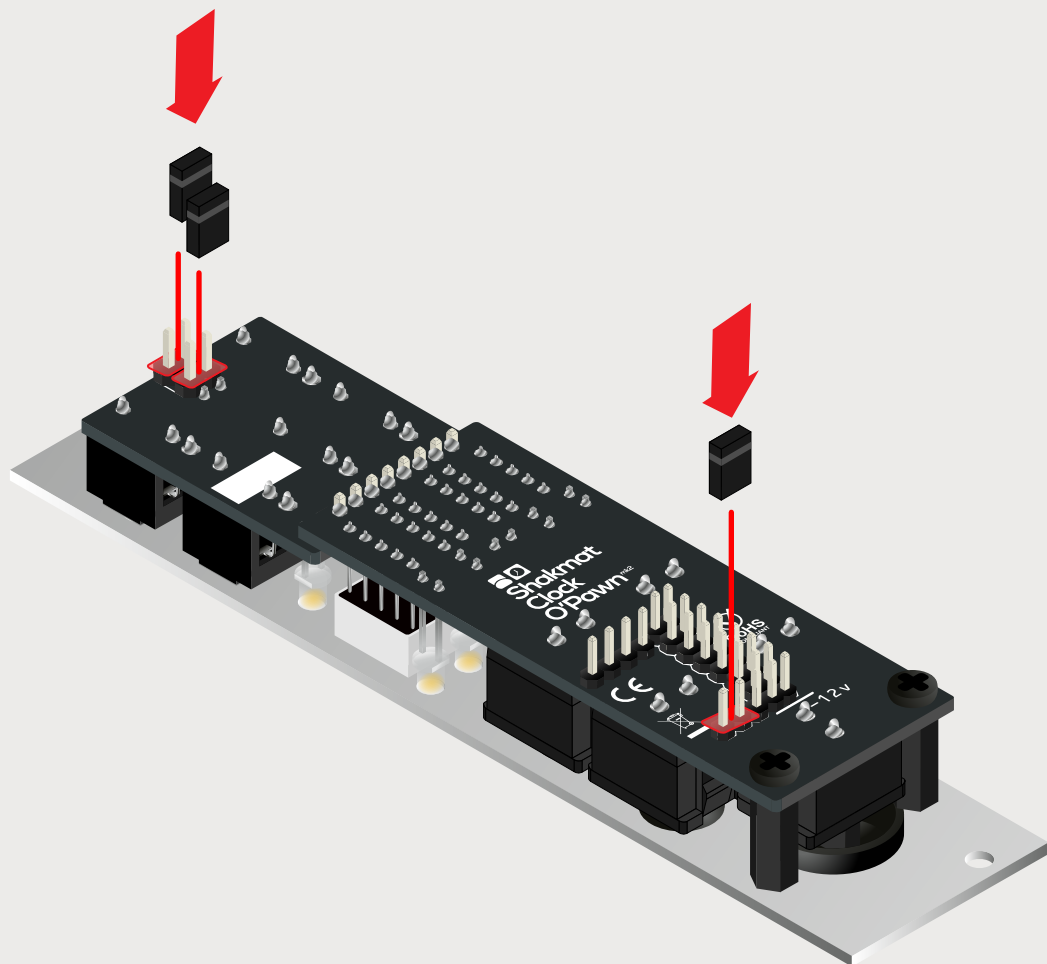


3x



36

Place the three jumpers on their respective header.



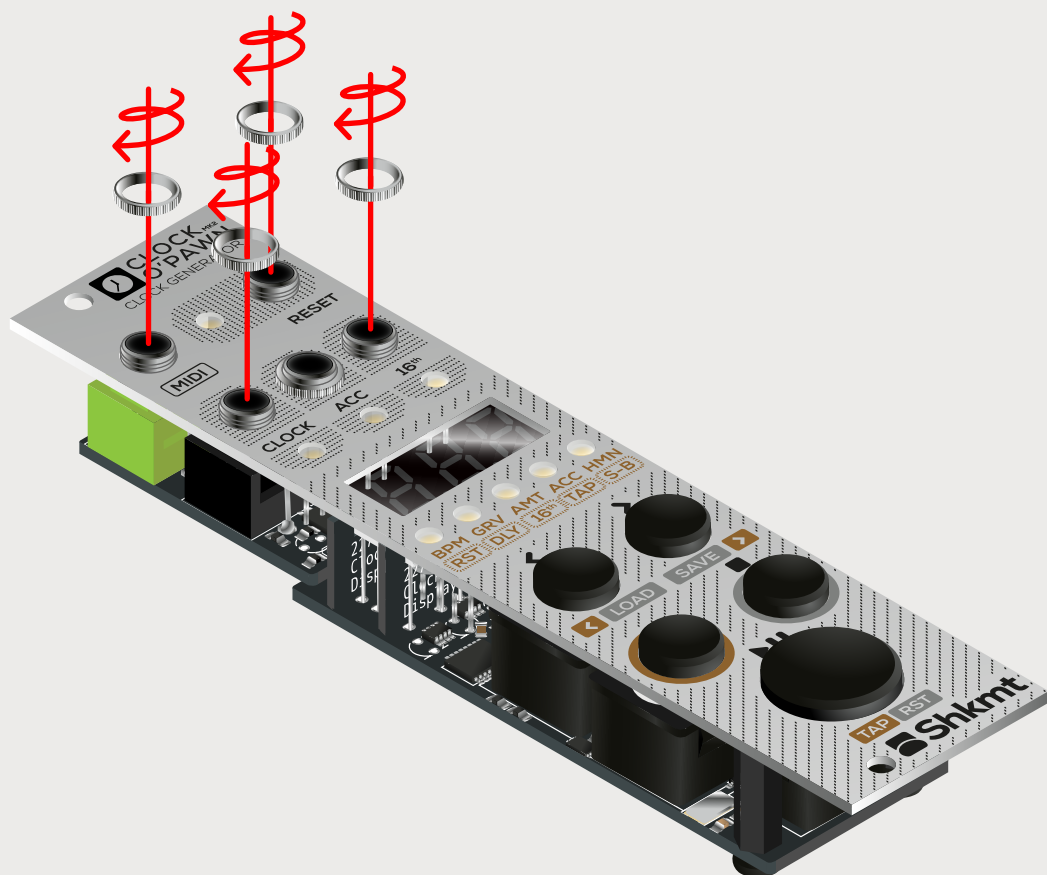
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4x



# 37

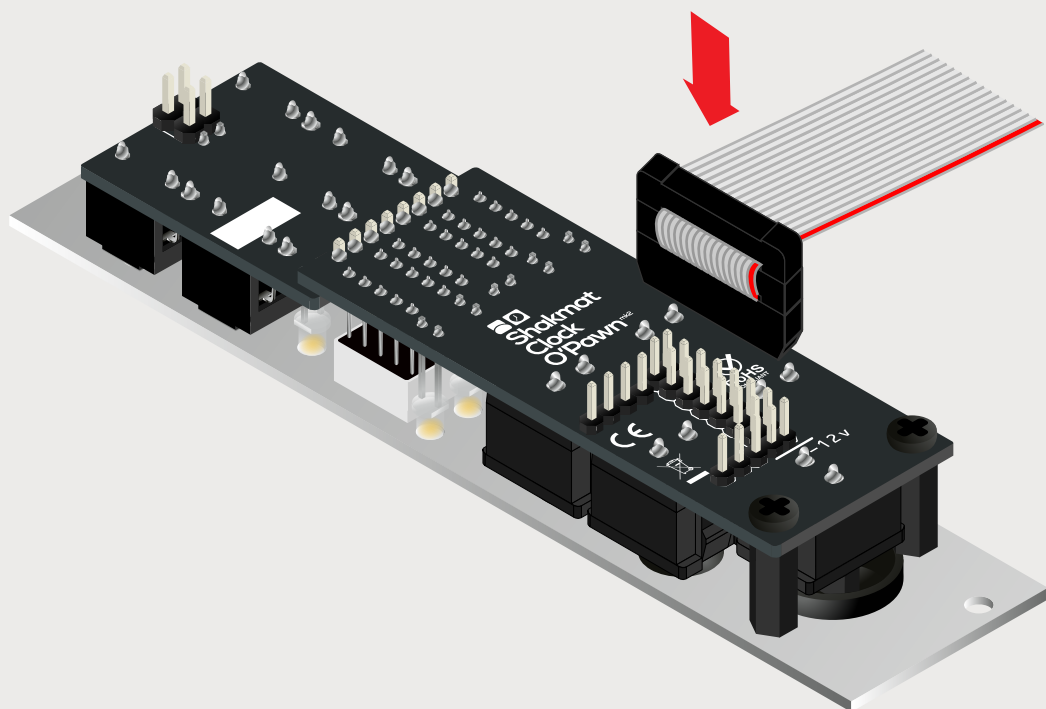
Place the four nuts on the jacks.



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# 38

Connect the power cable (red strip down) and turn on your system.



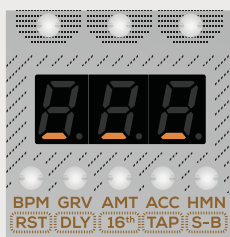
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# 39

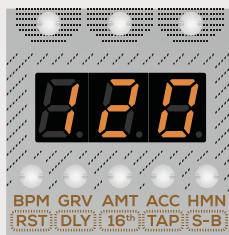
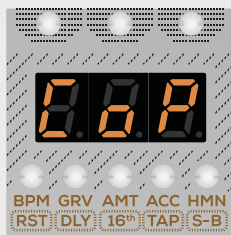
When first switched on, the module performs a reset. Press play to confirm.



Wait for the reset to complete.



Congratulations, you're done!



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