

- 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

- Building Guide
- Shakmat Clock O'Pawn mk2

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

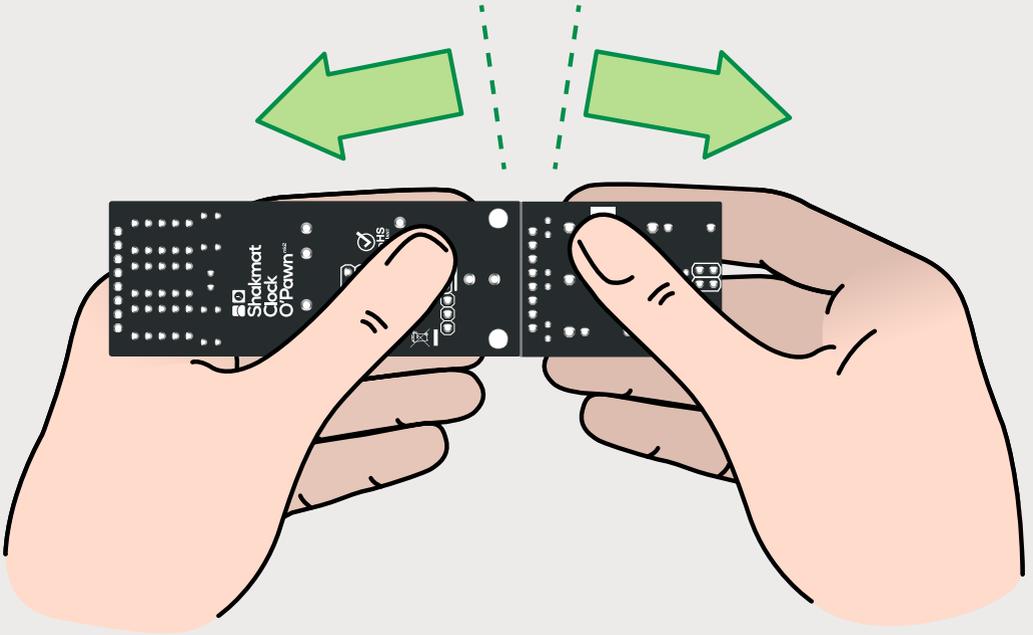
1x Top & bottom PCBs
1x Front panel

Loose parts

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

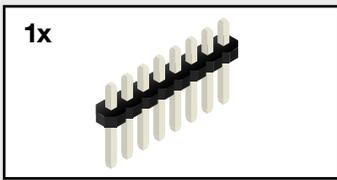
- Building Guide
- Shakmat Clock O'Pawn mk2

01



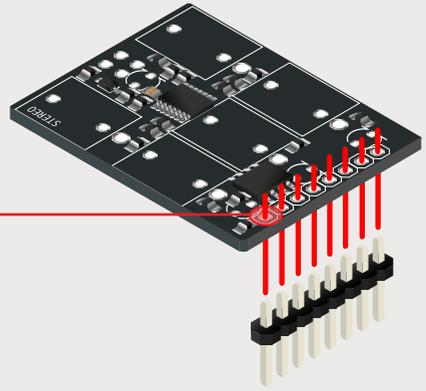
**Separate the two PCBs
by applying pressure to
the side without components.**

- Building Guide
- Shakmat Clock O'Pawn mk2

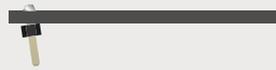
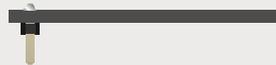


02

Solder one point

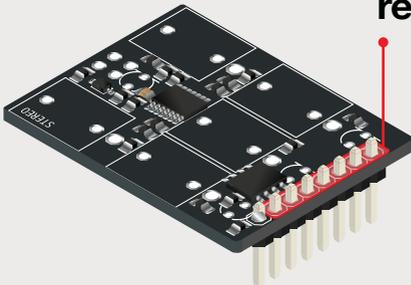


Check perpendicularity!



03

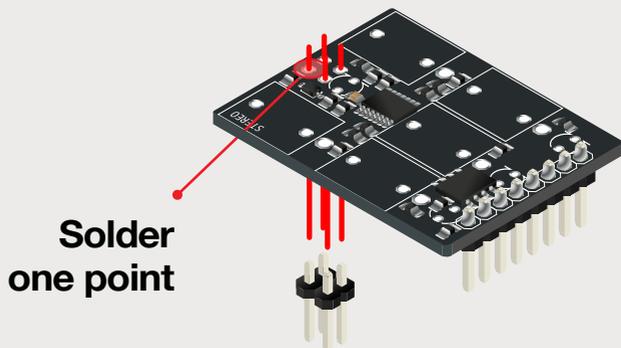
Solder remaining points



- Building Guide
- Shakmat Clock O'Pawn mk2

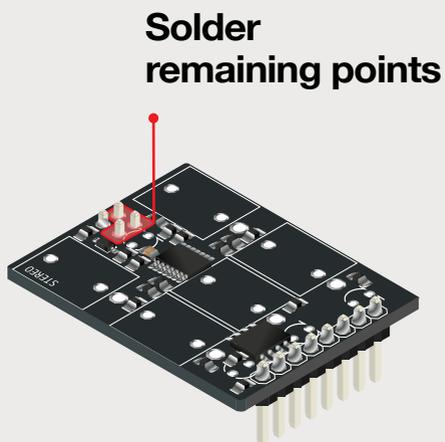


04



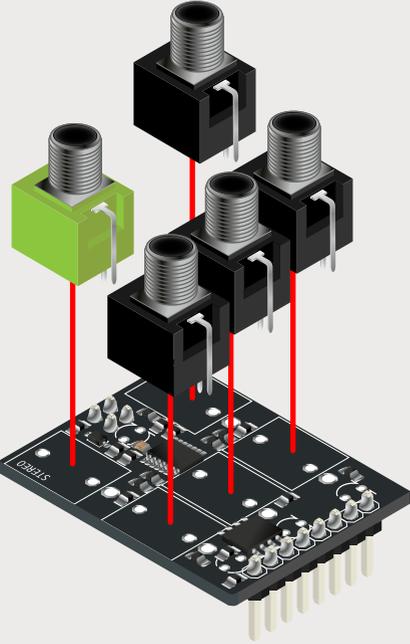
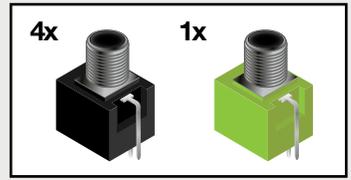
Check perpendicularity!

05

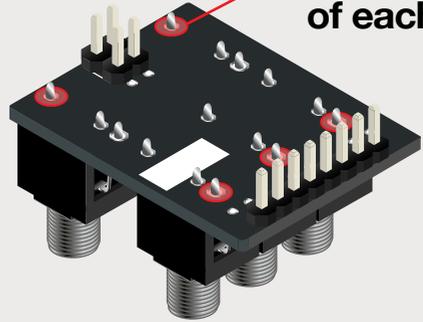


- Building Guide
- Shakmat Clock O'Pawn mk2

06

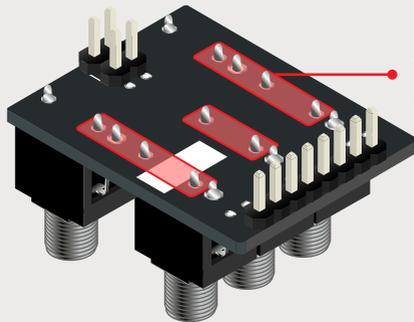


Solder one point of each



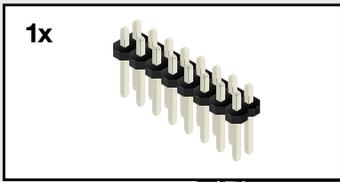
Check perpendicularity!

07

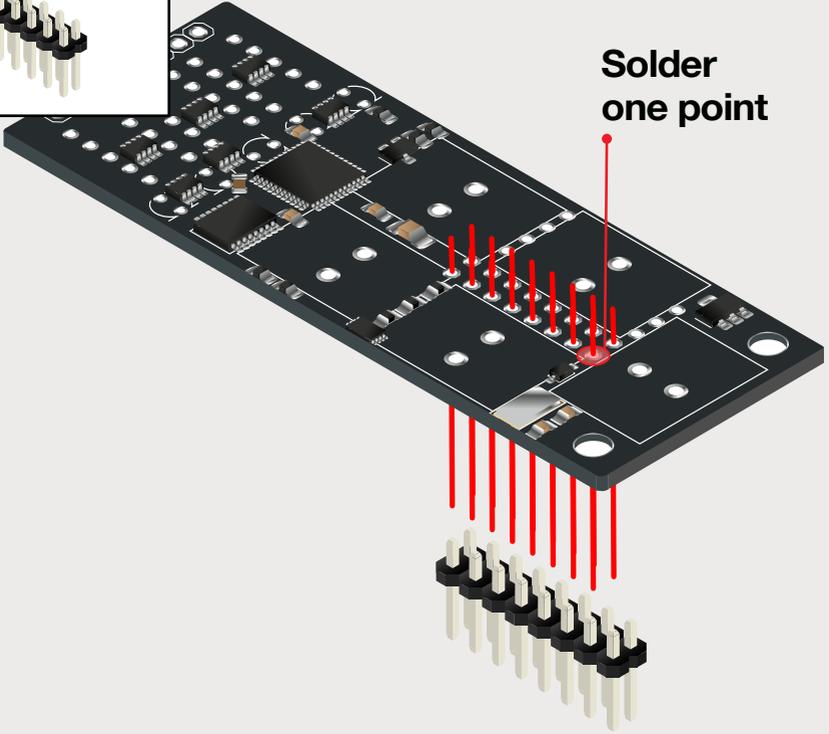


Solder remaining points

- Building Guide
- Shakmat Clock O'Pawn mk2

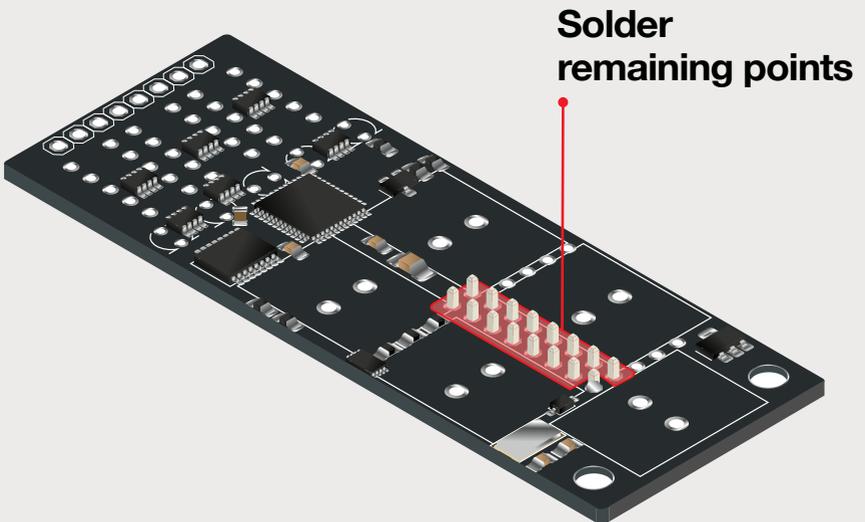


08



Check perpendicularity!

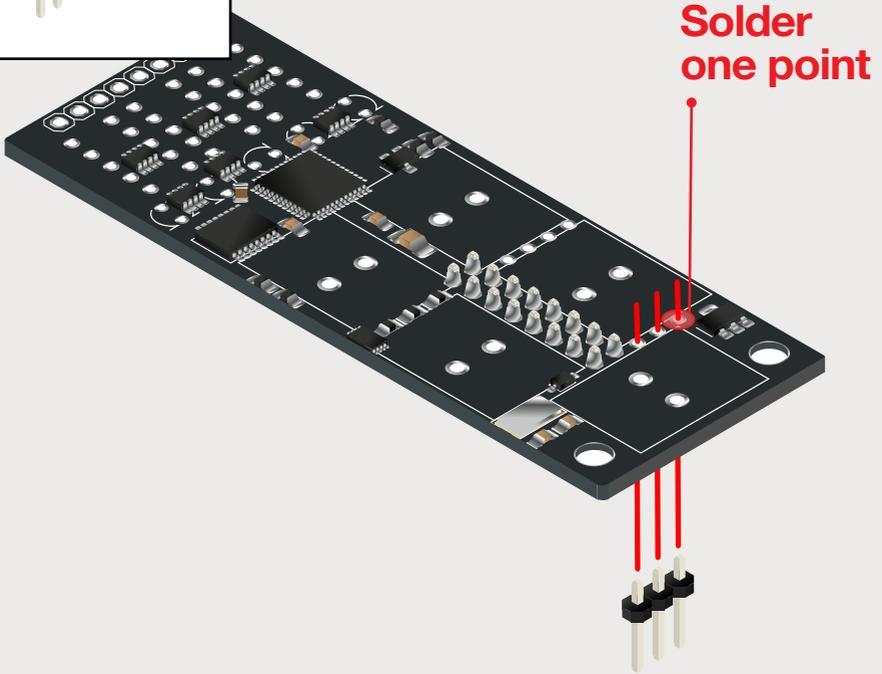
09



- Building Guide
- Shakmat Clock O'Pawn mk2

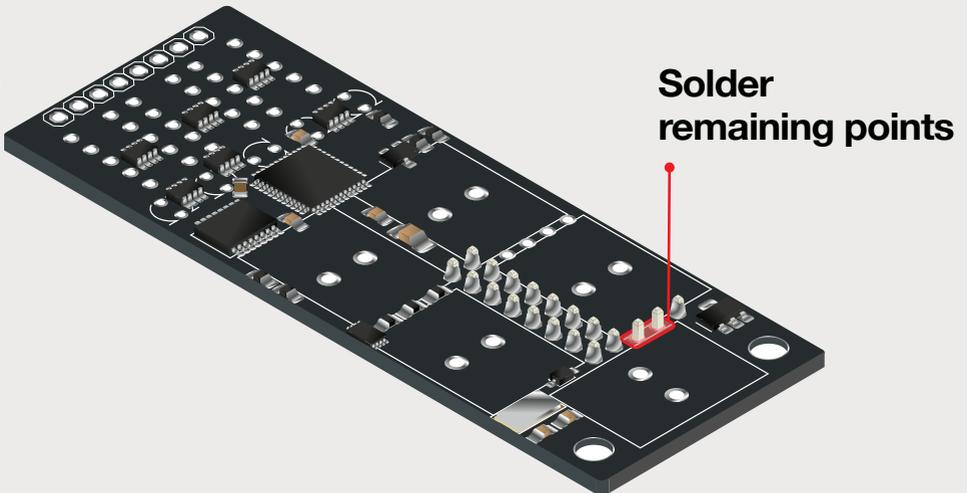


10



Check perpendicularity!

11

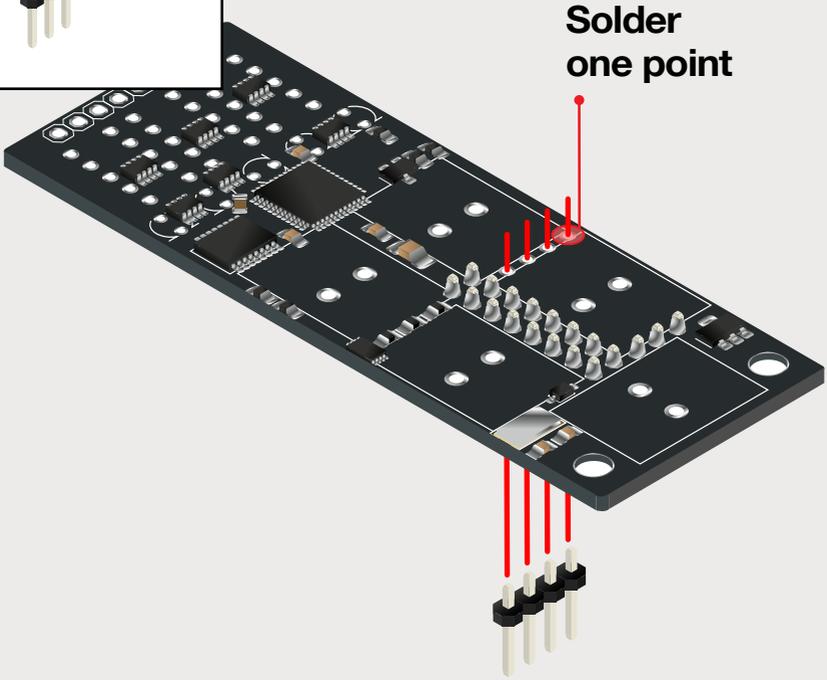


- Building Guide
- Shakmat Clock O'Pawn mk2

1x



12

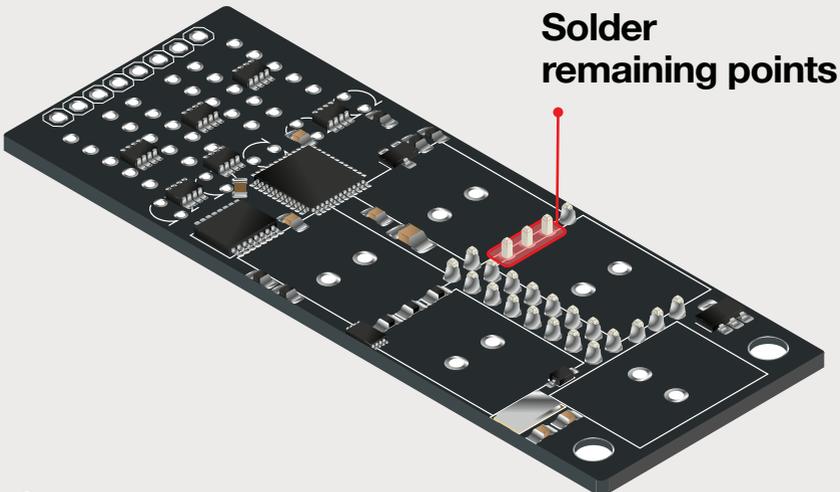


Solder
one point



Check perpendicularity!

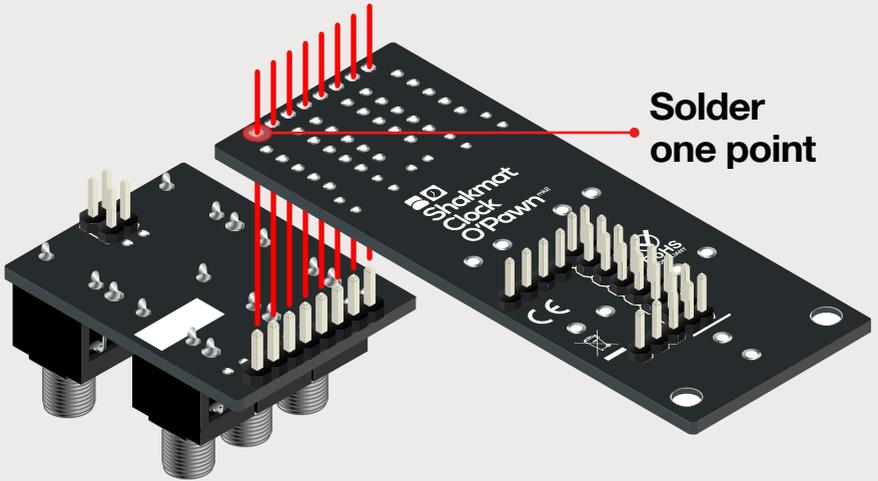
13



Solder
remaining points

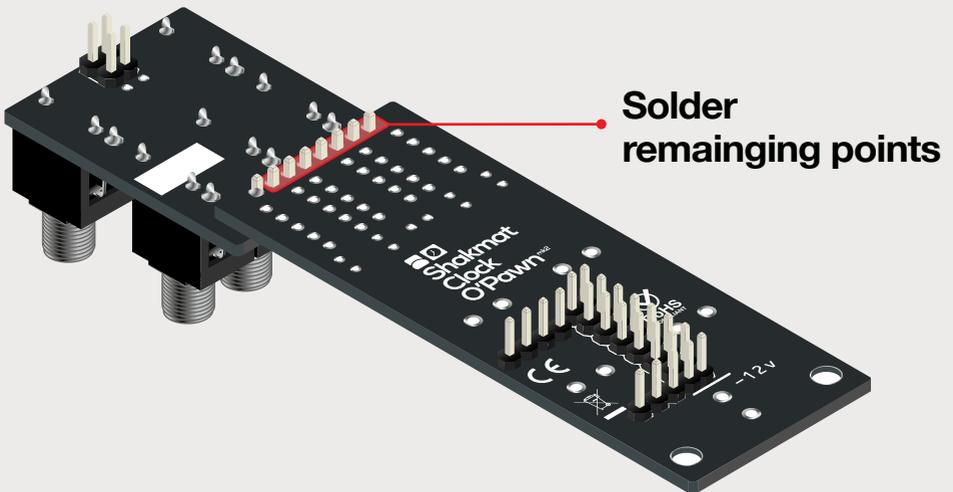
- Building Guide
- Shakmat Clock O'Pawn mk2

14



Check PCBs parallelism!

15

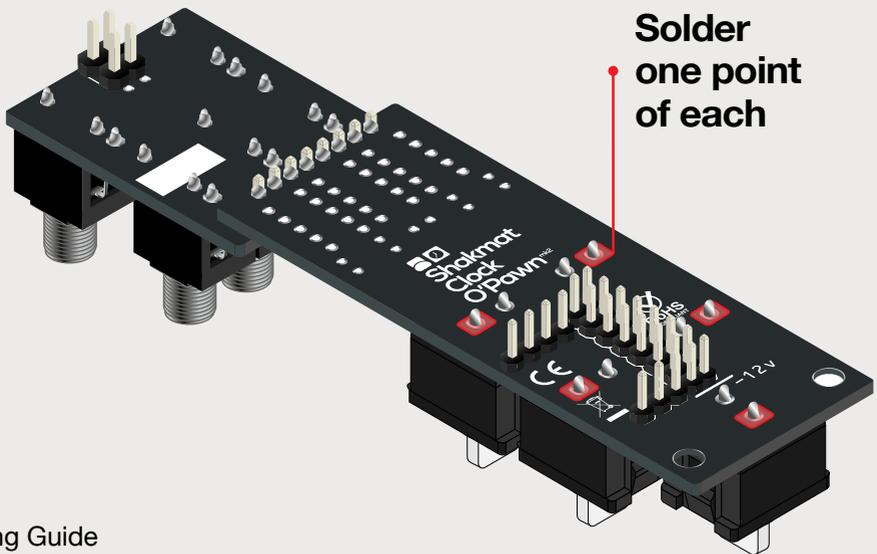
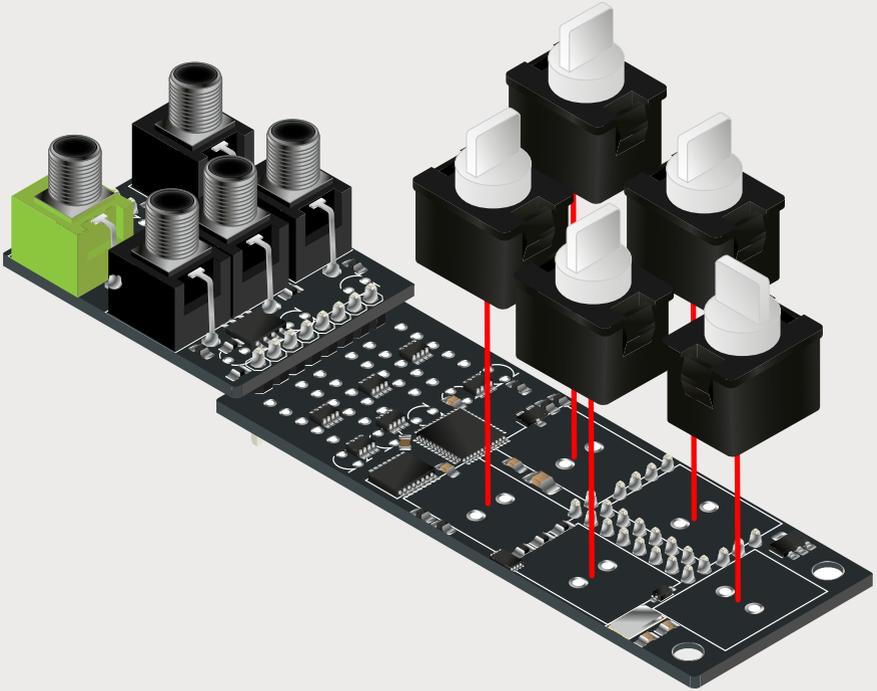


- Building Guide
- Shakmat Clock O'Pawn mk2

5x



16

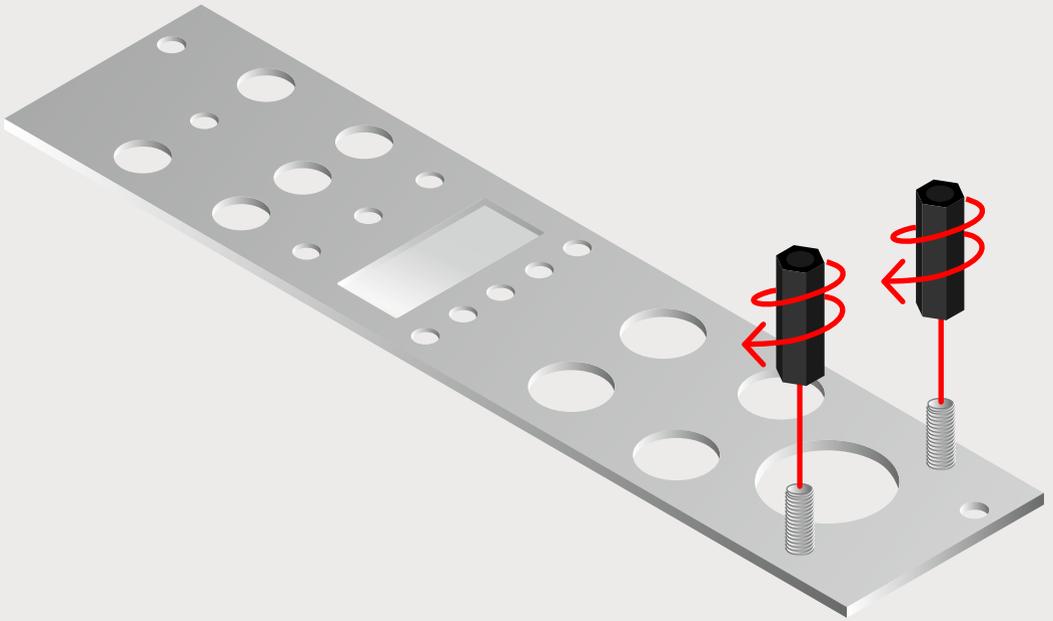


- Building Guide
- Shakmat Clock O'Pawn mk2

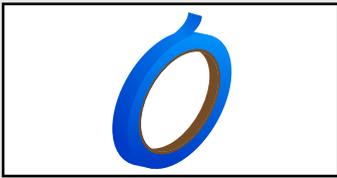
2x



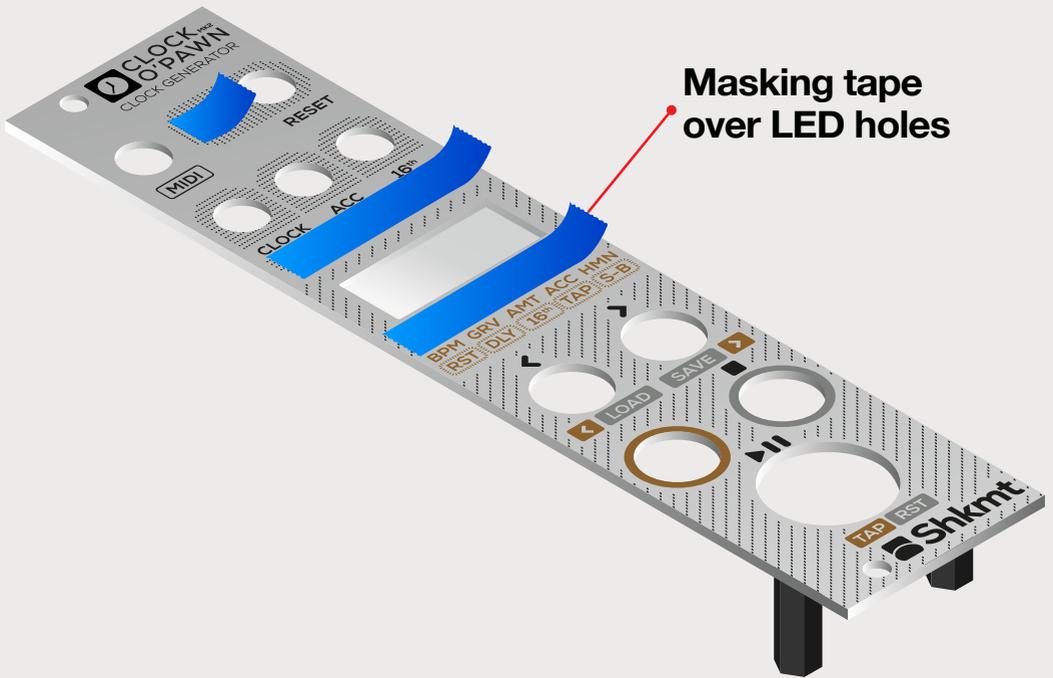
17



- Building Guide
- Shakmat Clock O'Pawn mk2



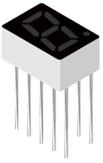
18



**Masking tape
over LED holes**

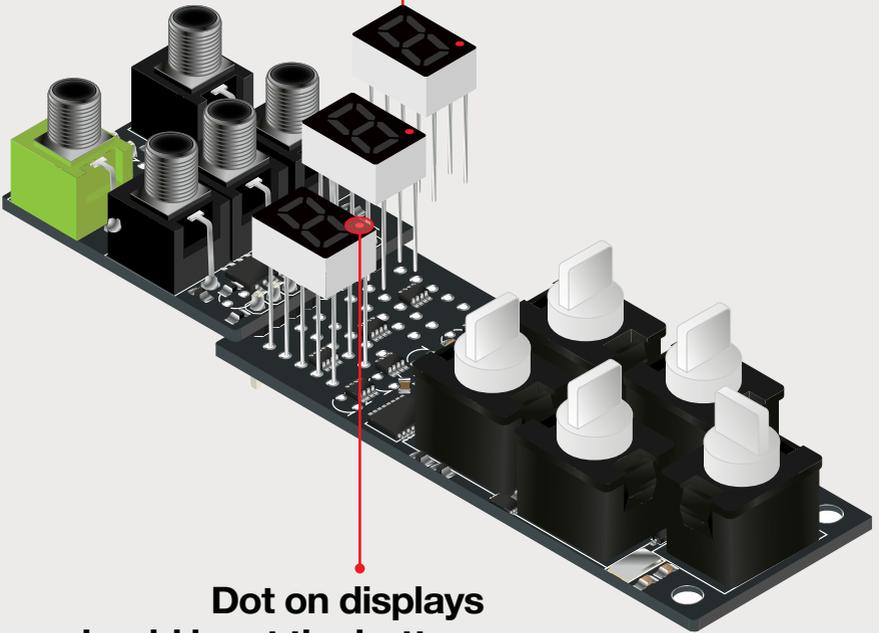
- Building Guide
- Shkmat Clock O'Pawn mk2

3x



19

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



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

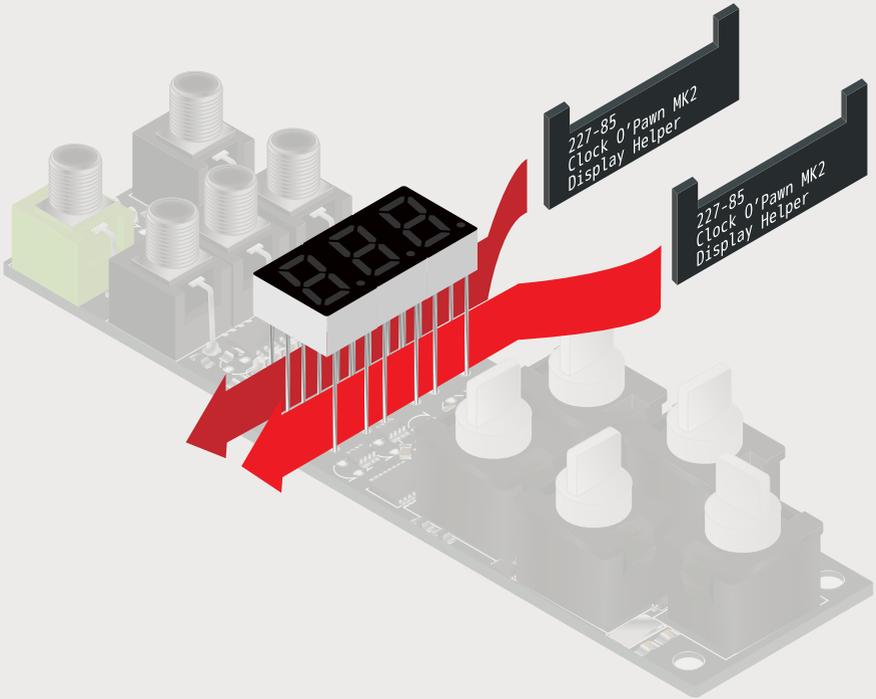
- Building Guide
- Shakmat Clock O'Pawn mk2

2x



20

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

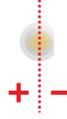


- Building Guide
- Shakmat Clock O'Pawn mk2

4x



=



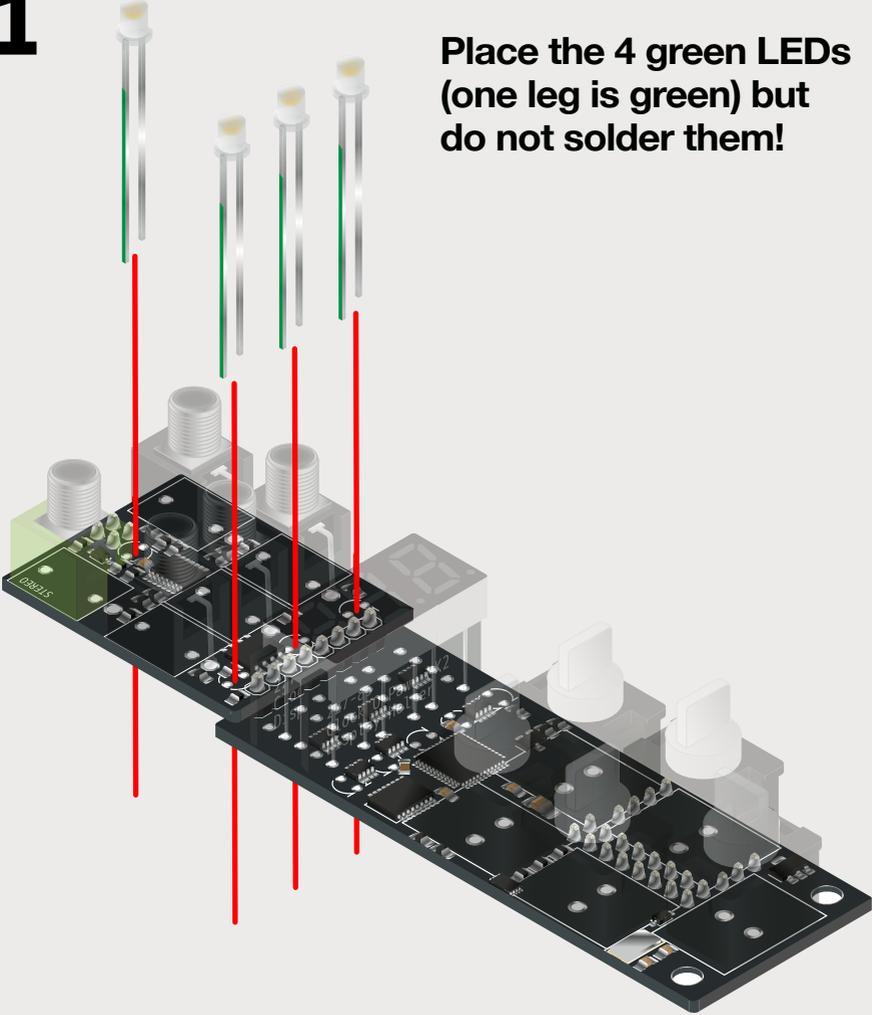
=



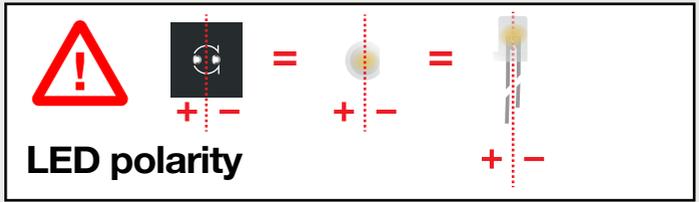
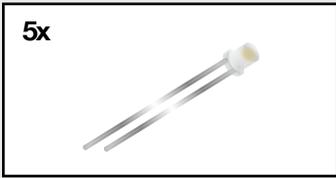
LED polarity

21

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

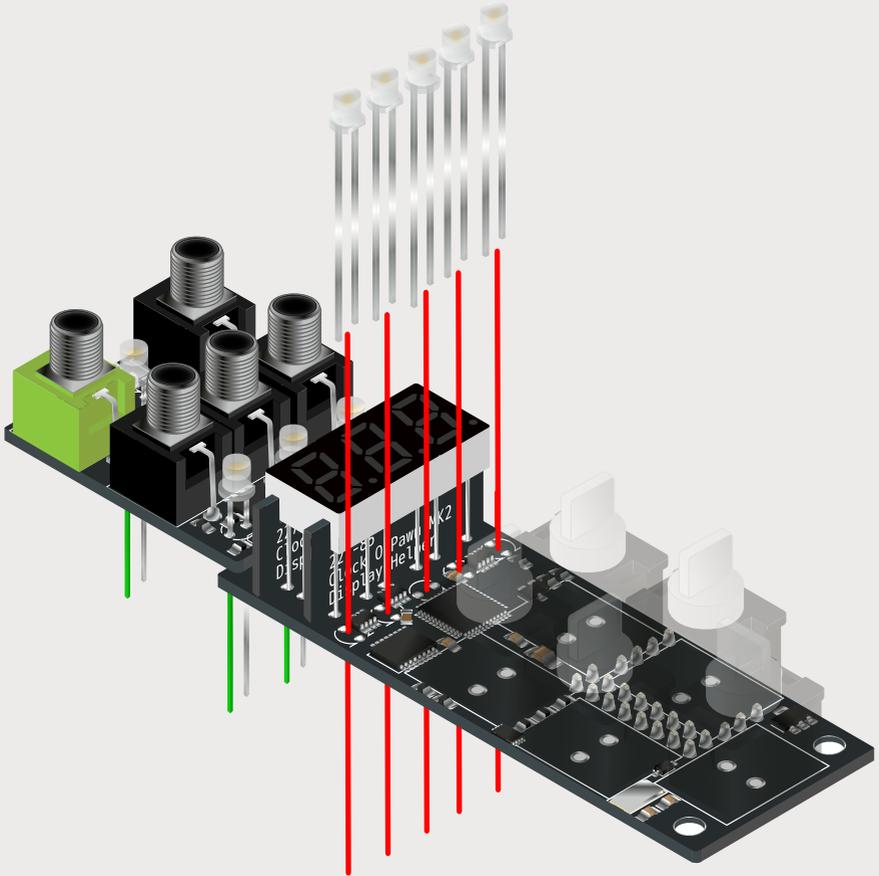


- Building Guide
- Shaktat Clock O'Pawn mk2



22

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



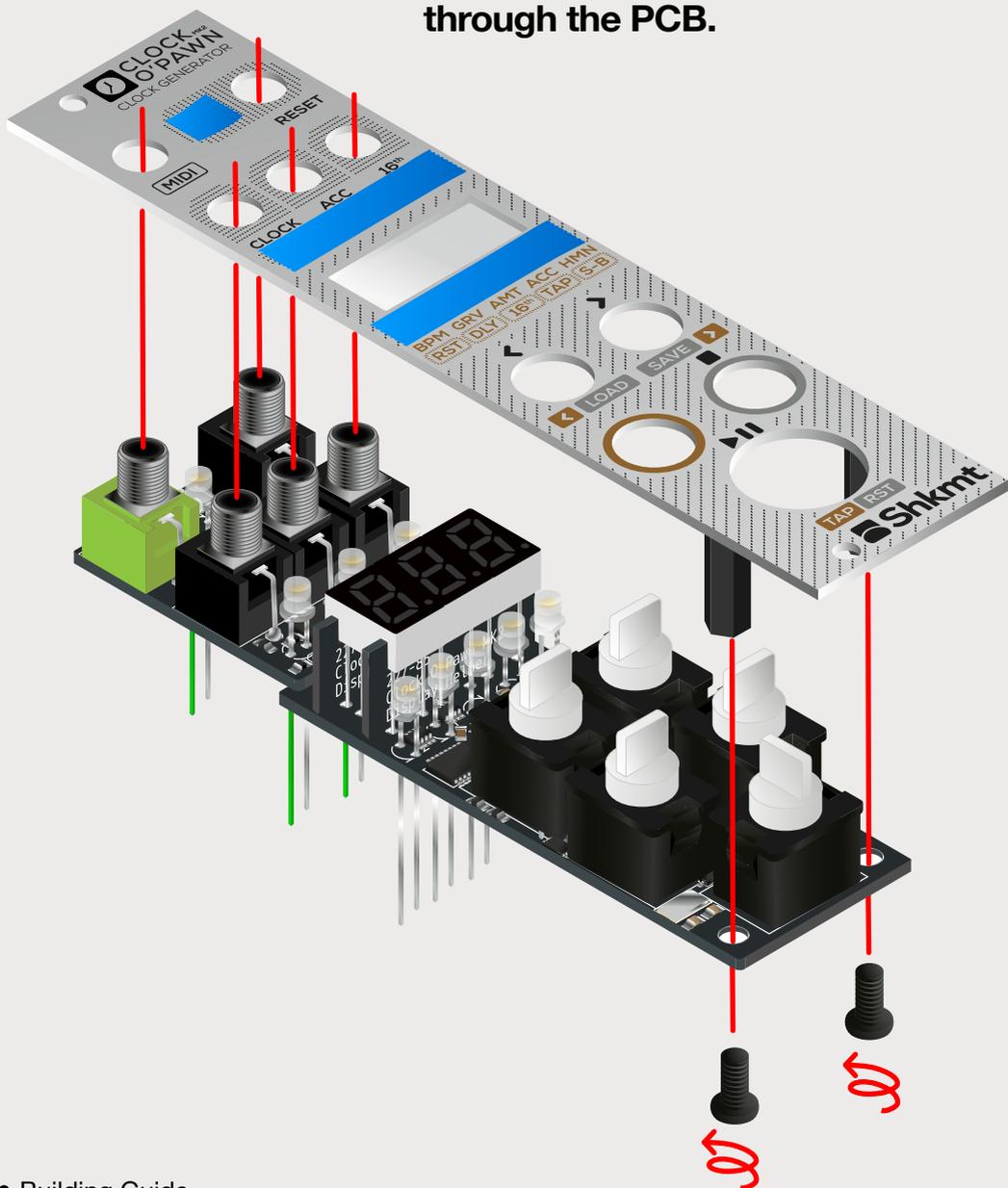
- Building Guide
- Shkmat Clock O'Pawn mk2

2x

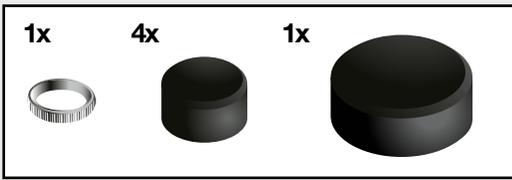


23

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

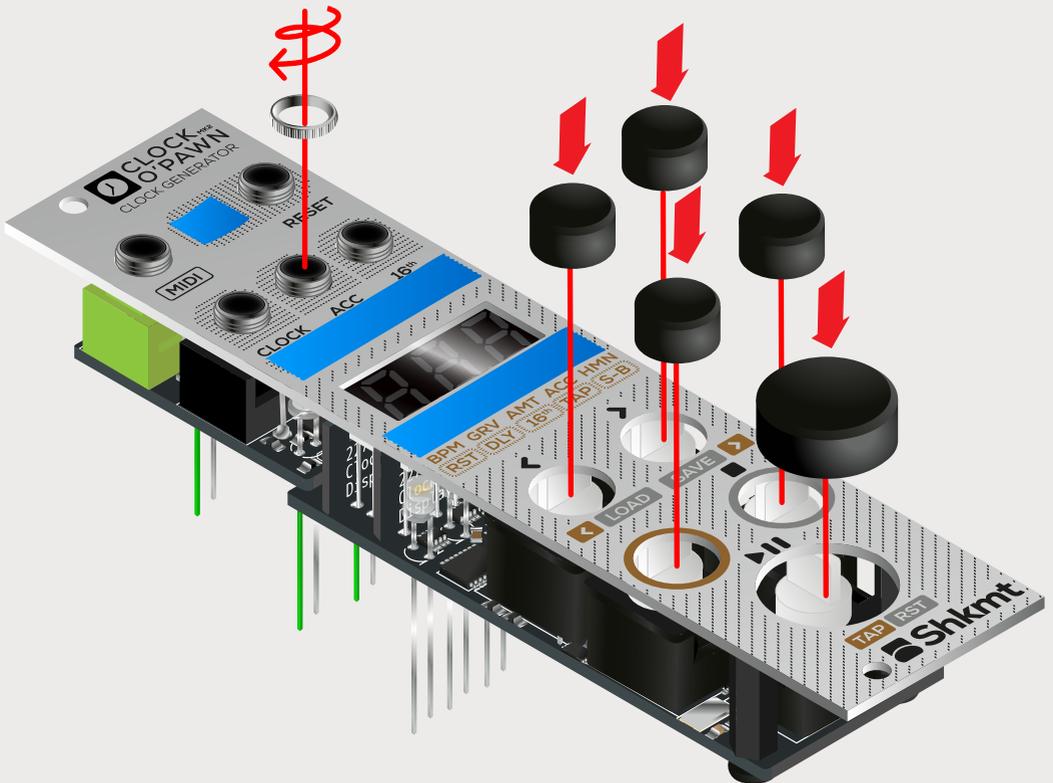


- Building Guide
- Shakmat Clock O'Pawn mk2



24

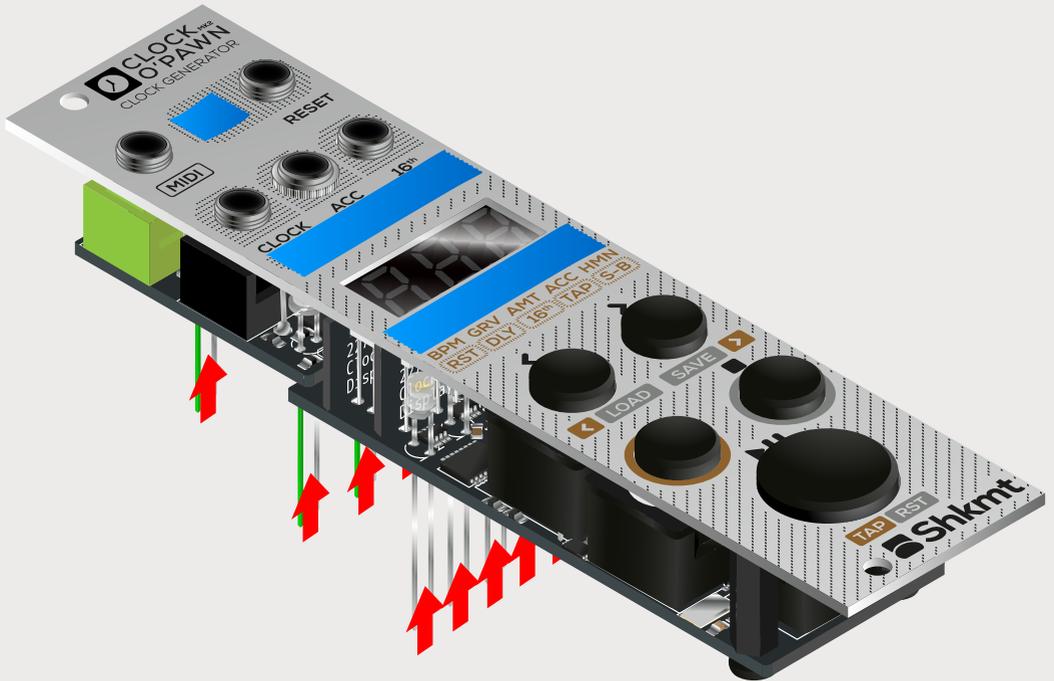
Screw a nut onto the ACC jack
and place the caps on the push buttons



- Building Guide
- Shakmat Clock O’Pawn mk2

25

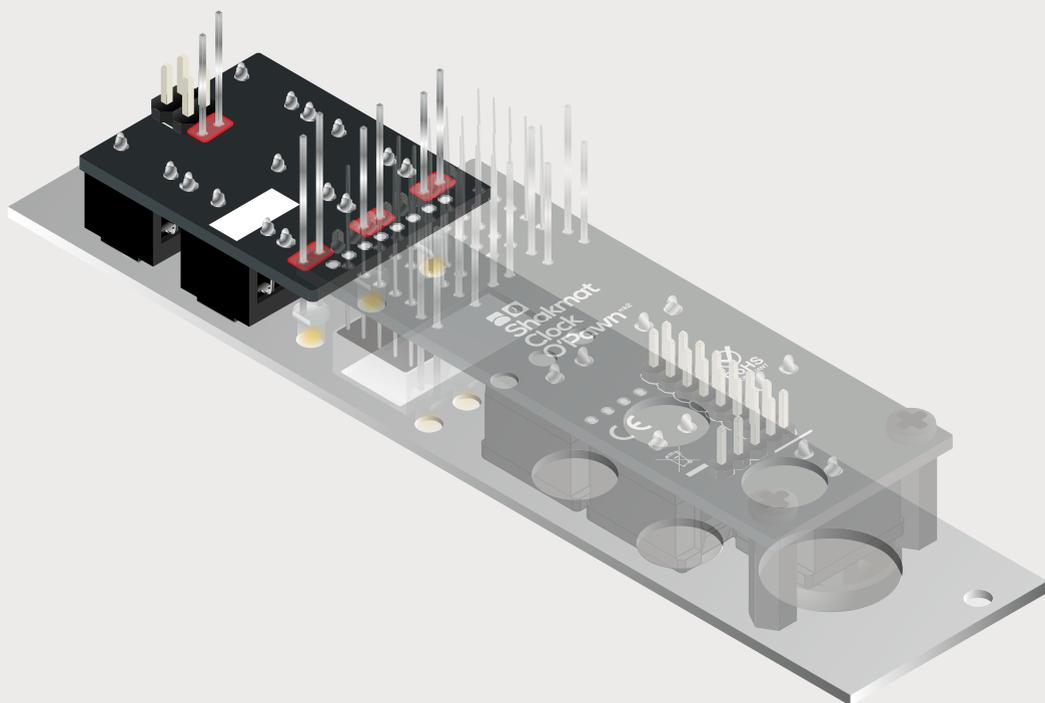
Push each LED through the front panel until they stick to the masking tape.



- Building Guide
- Shkmat Clock O'Pawn mk2

26

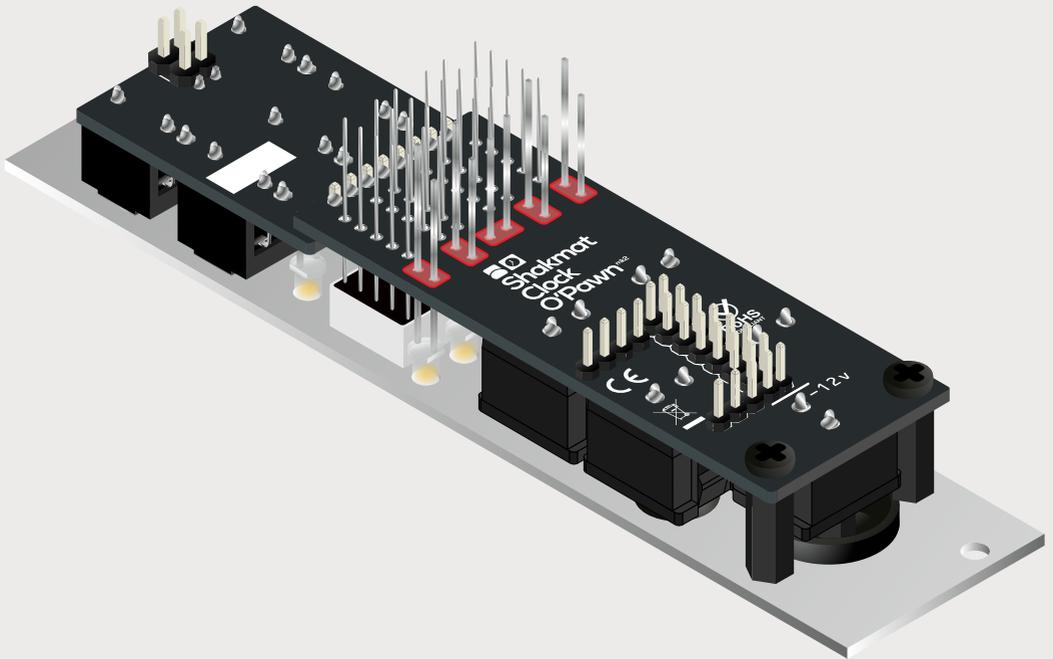
Solder the 4 green LEDs and cut off the excess leg.



- Building Guide
- Shakmat Clock O'Pawn mk2

27

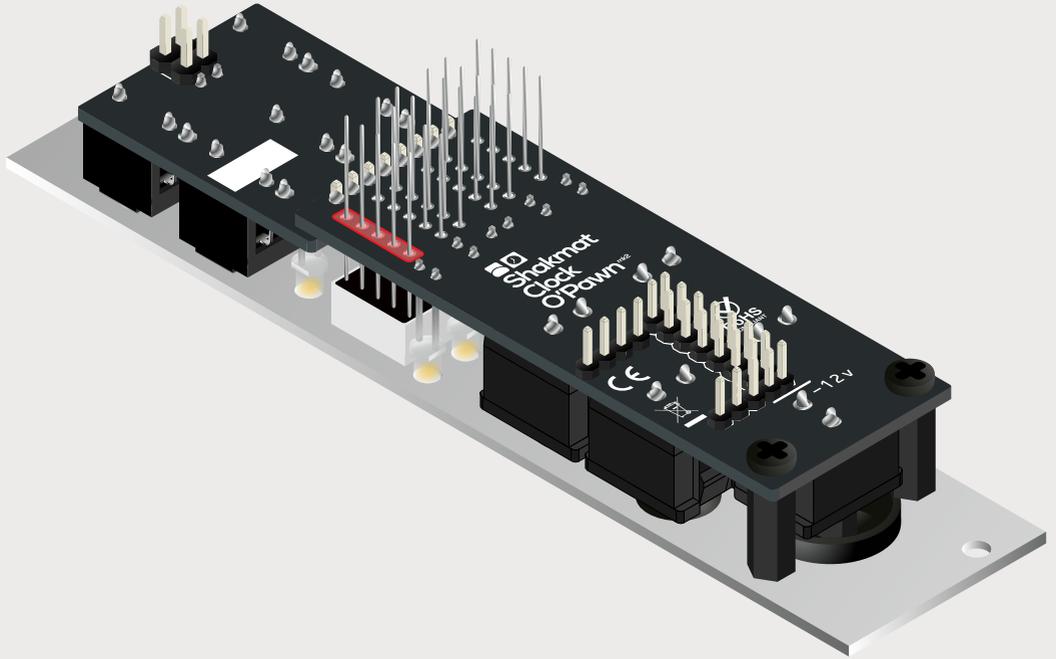
Solder the 5 amber LEDs and cut off the excess leg.



- Building Guide
- Shakmat Clock O'Pawn mk2

28

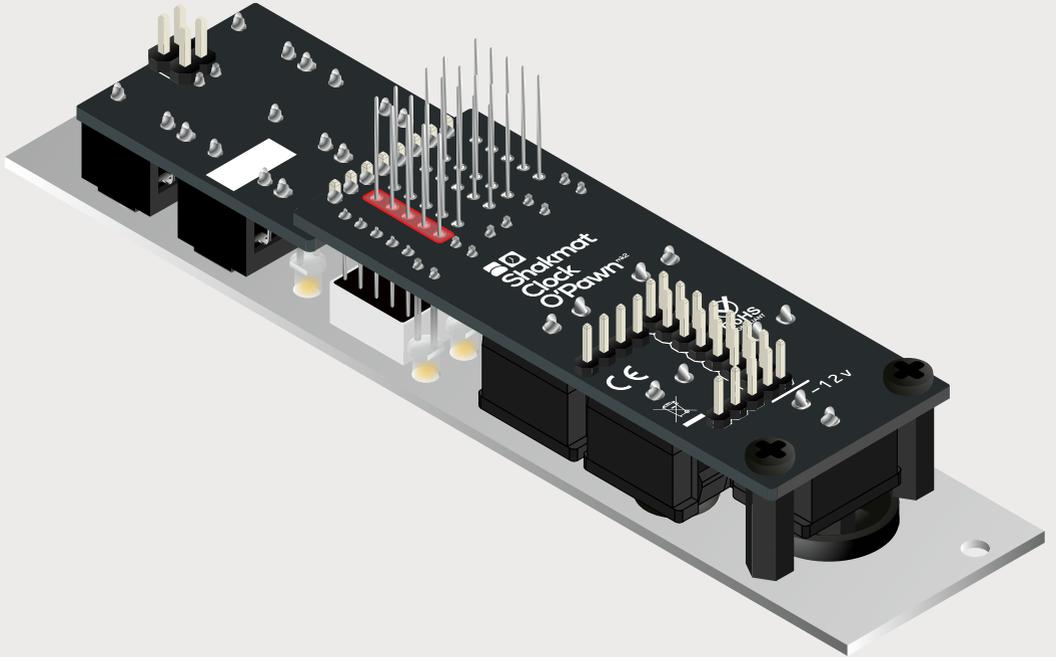
Solder the first column of display legs and cut off the excess.



- Building Guide
- Shkmat Clock O'Pawn mk2

29

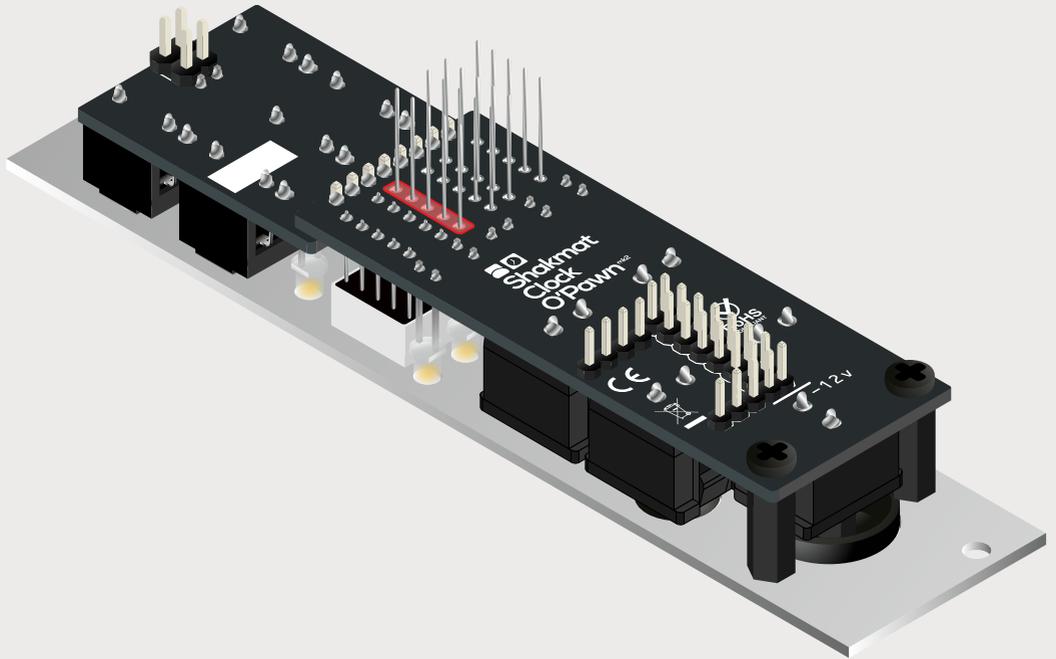
Solder the second column of display legs and cut off the excess.



- Building Guide
- Shakmat Clock O'Pawn mk2

30

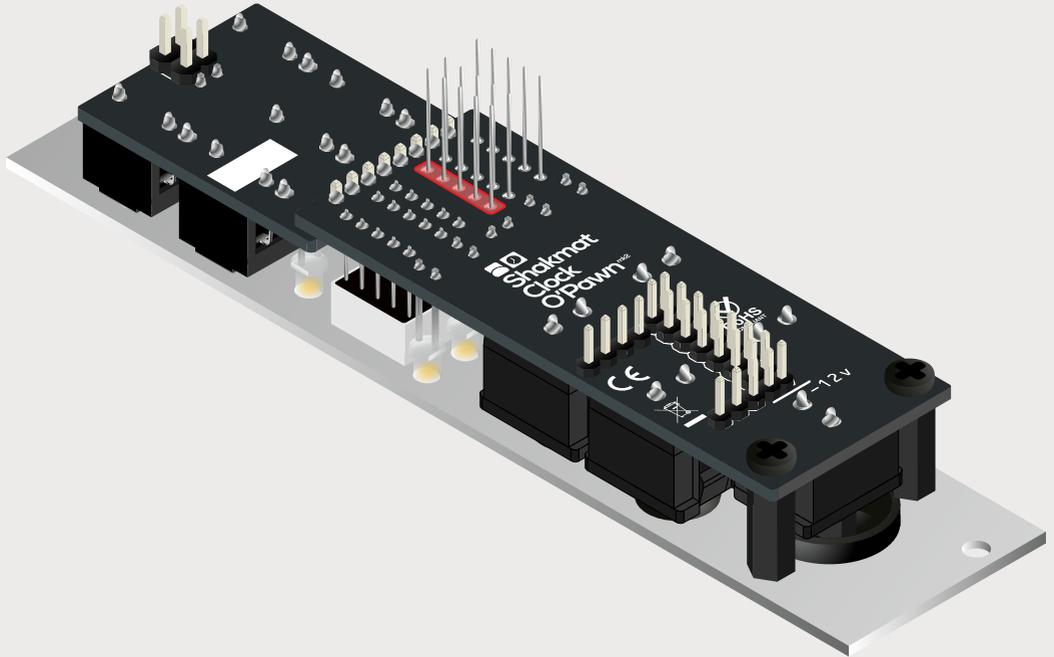
Solder the third column of display legs and cut off the excess.



- Building Guide
- Shakmat Clock O'Pawn mk2

31

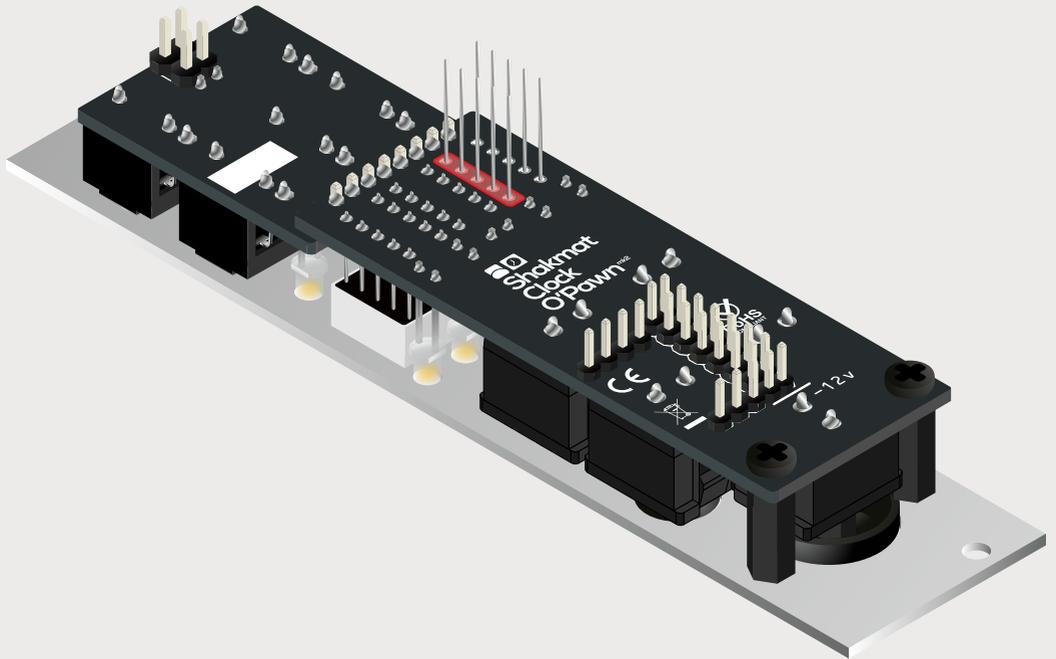
Solder the fourth column of display legs and cut off the excess.



- Building Guide
- Shakmat Clock O'Pawn mk2

32

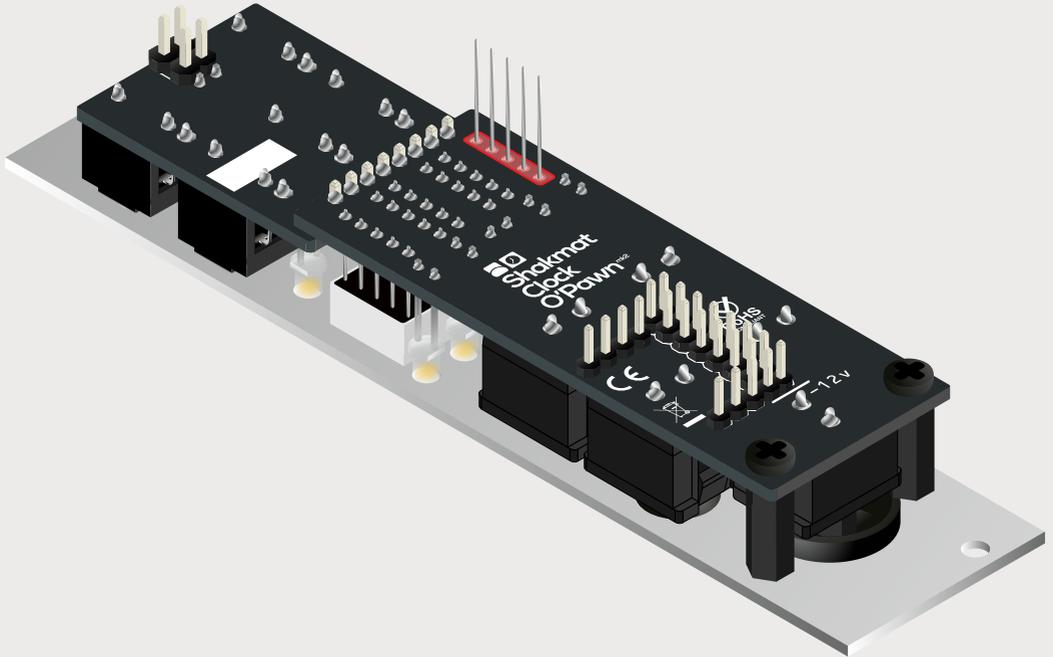
Solder the fifth column of display legs and cut off the excess.



- Building Guide
- Shakmat Clock O'Pawn mk2

33

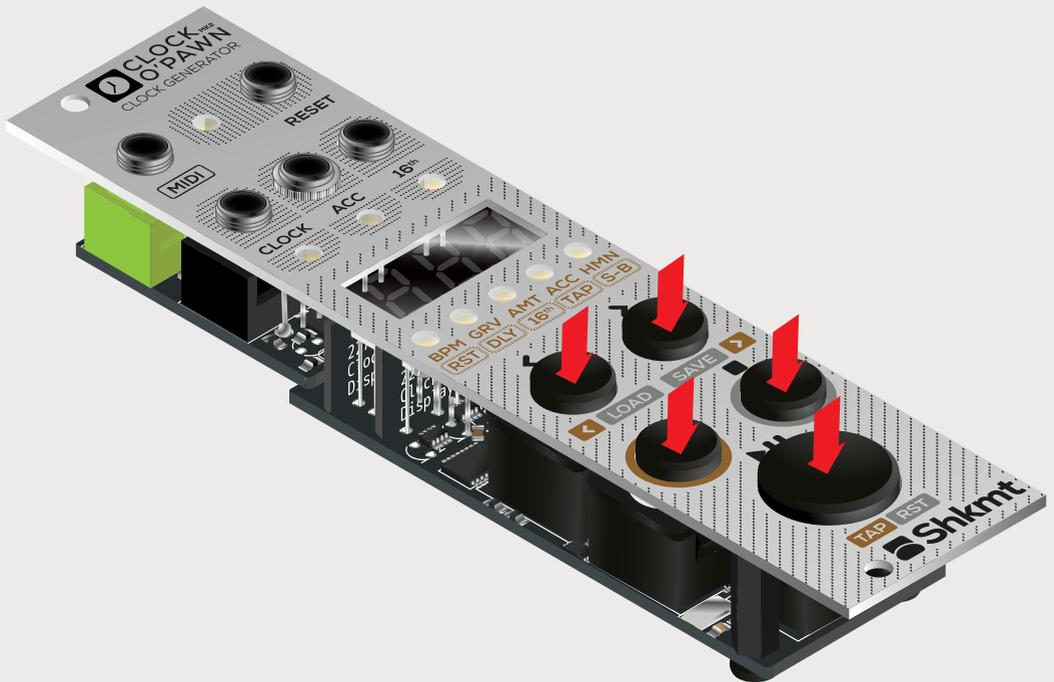
Solder the last column of display legs and cut off the excess.



- Building Guide
- Shakmat Clock O'Pawn mk2

34

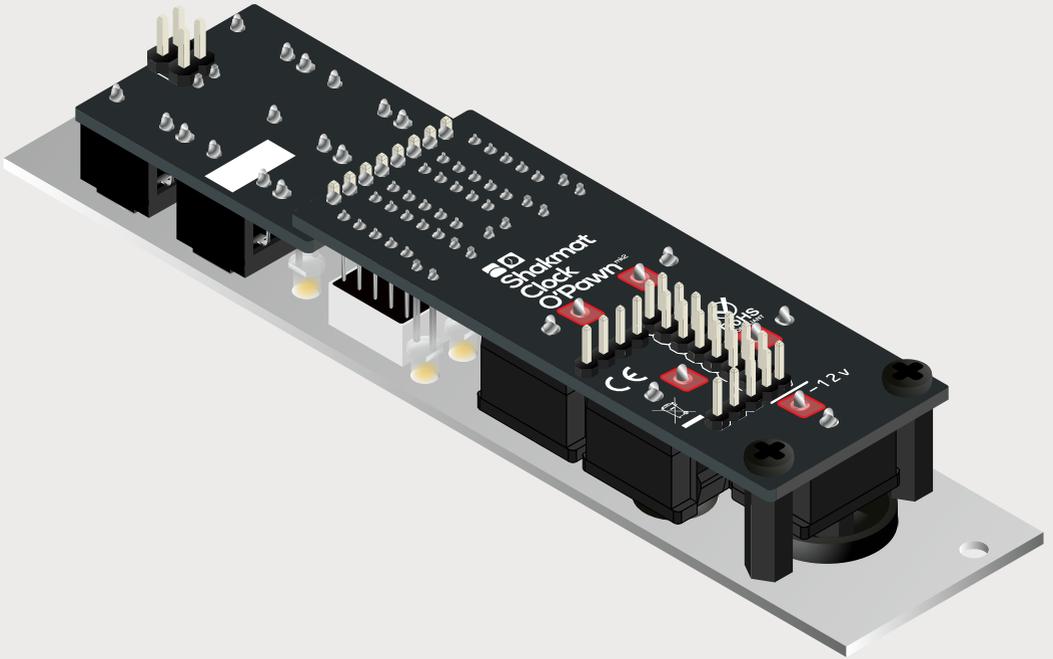
Check the operation of each button.
If necessary, heat the previously soldered point
and correct the alignment.



- Building Guide
- Shakmat Clock O'Pawn mk2

35

If all buttons press freely,
solder the remaining five points



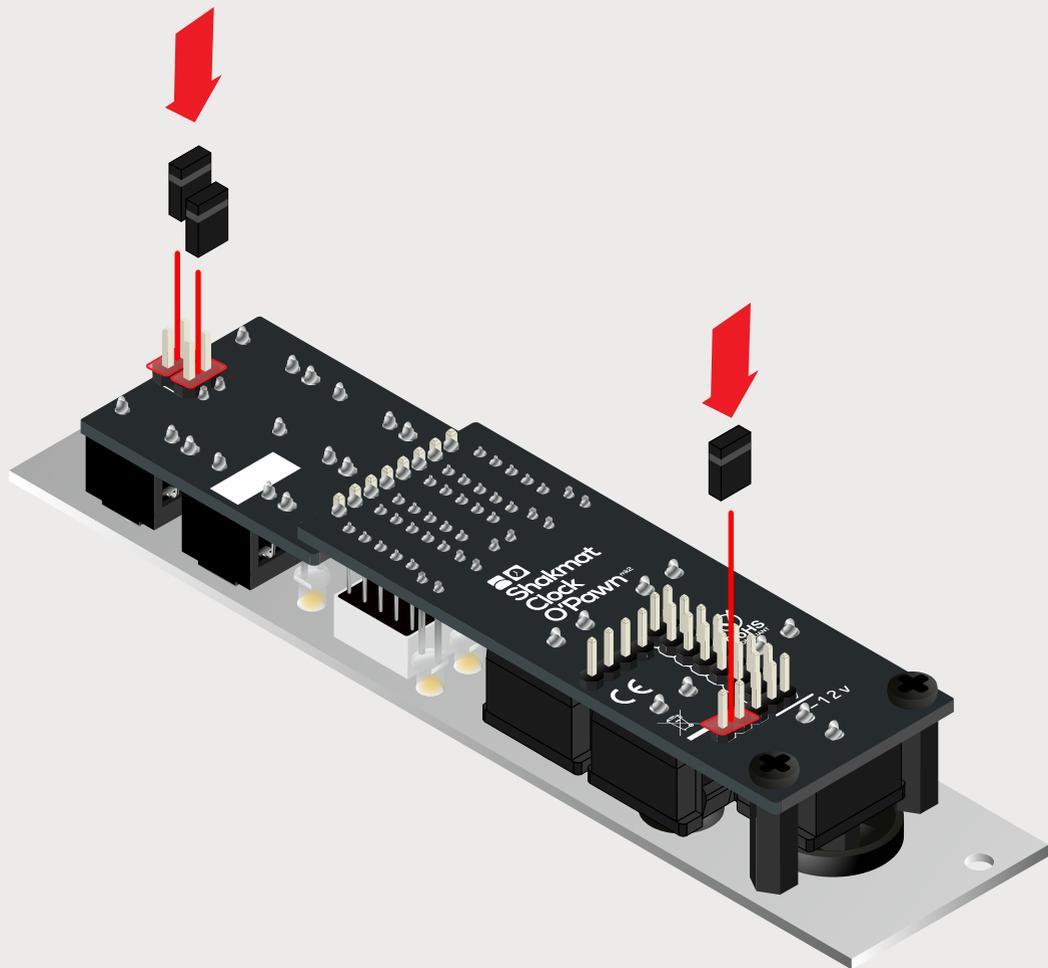
- Building Guide
- Shkmat Clock O'Pawn mk2

3x



36

Place the three jumpers on their respective header.



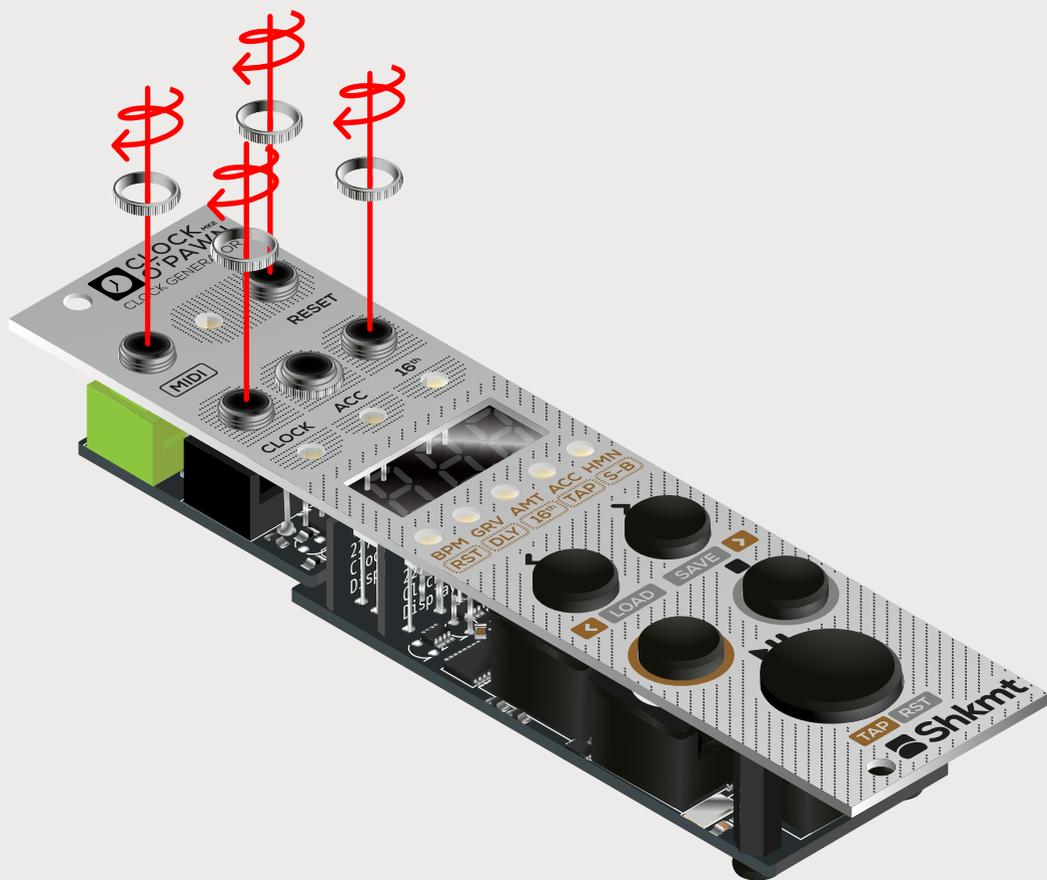
- Building Guide
- Shakmat Clock O'Pawn mk2

4x



37

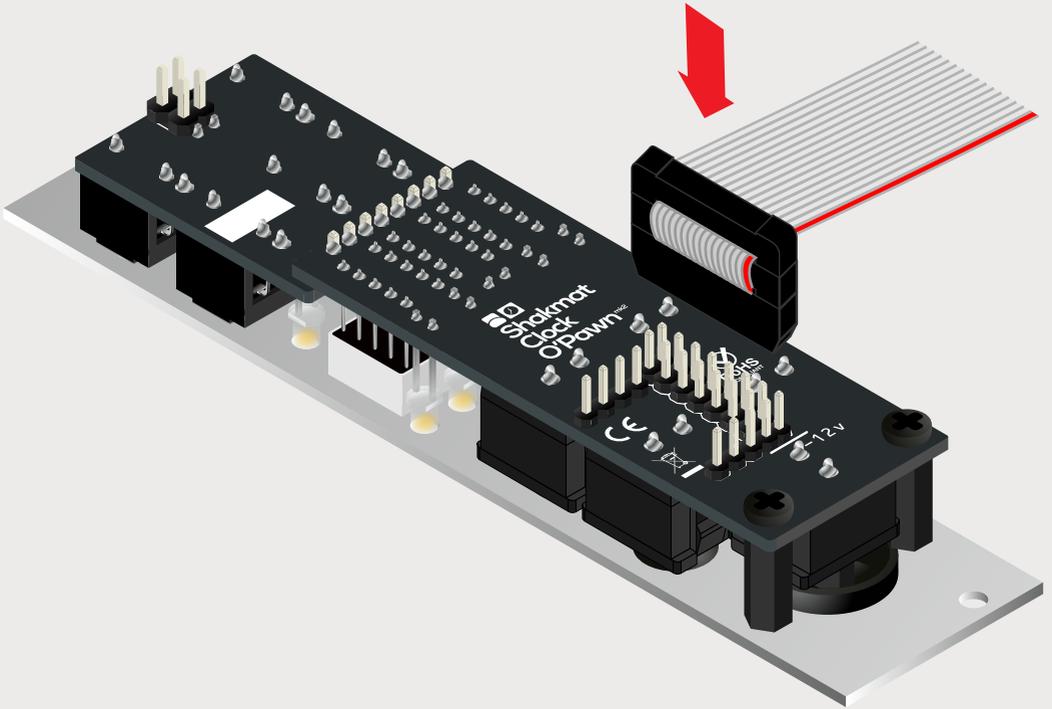
Place the four nuts on the jacks.



- Building Guide
- Shkmat Clock O'Pawn mk2

38

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



- Building Guide
- Shakmat Clock O'Pawn mk2

39

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



Wait for the reset to complete.



Congratulations, you're done!



- Building Guide
- Shakmat Clock O'Pawn mk2

