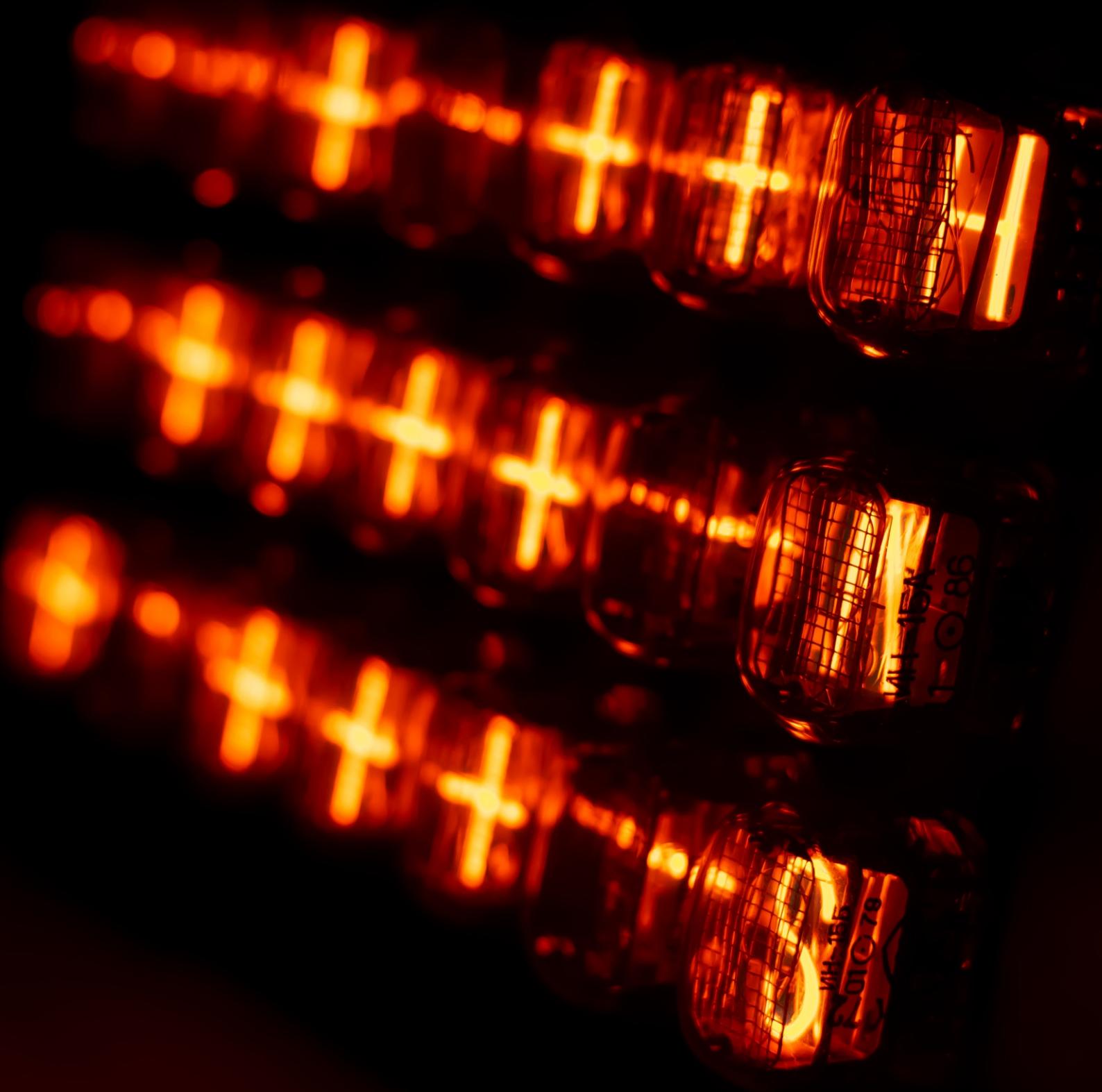


# BIG BINARY NIXIE CLOCK

# ASSEMBLY INSTRUCTION



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# BIG BINARY NIXIE CLOCK

## COMPONENTS

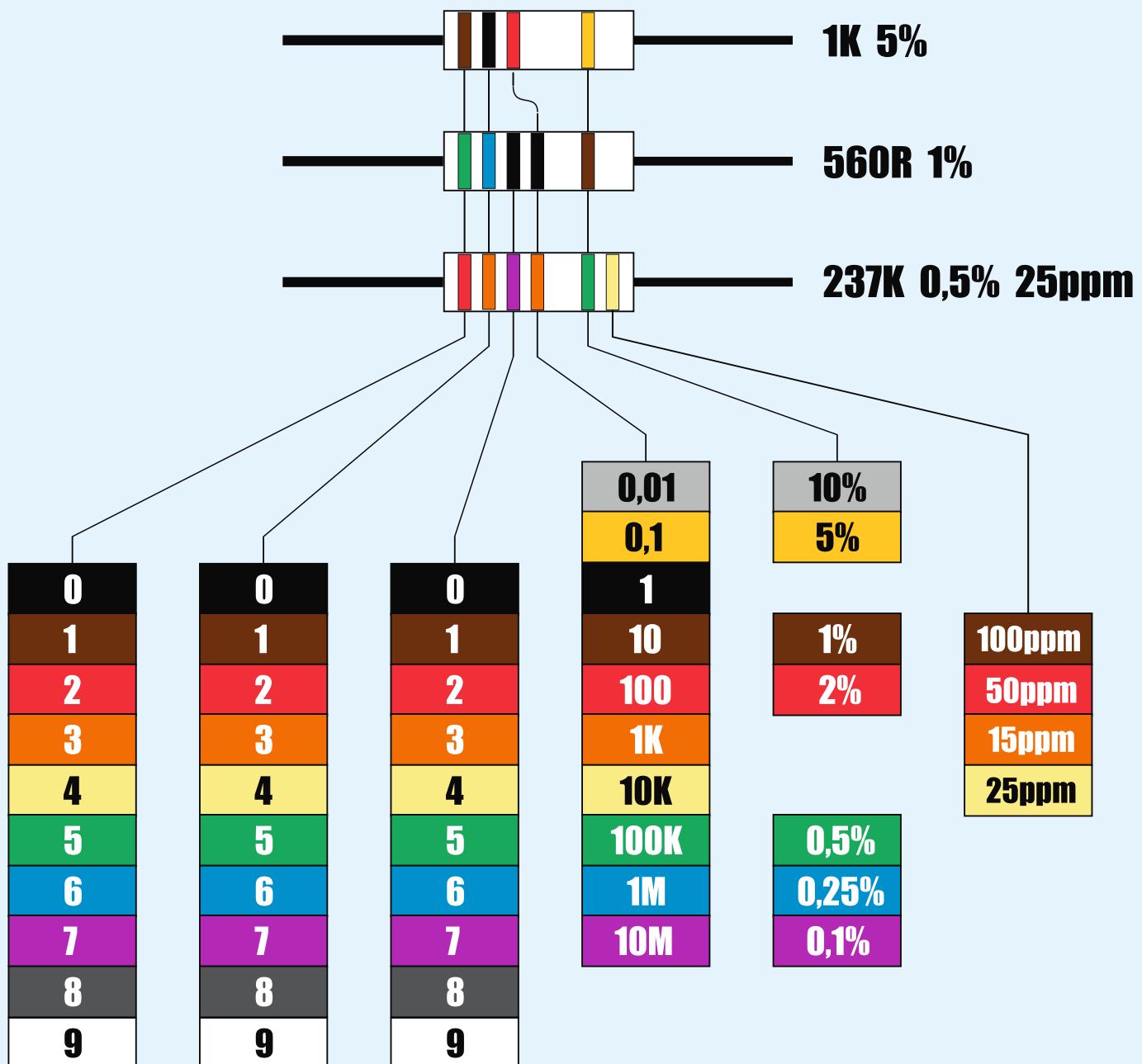
- R1...R21 - 15K...20K
- R22 - 10K
- C1, C4, C6, C7 - 100nF, >16V
- C2, C3, C5 - 220uF; >16V
- U1 - L7805; 5V
- U2 - LD1117AV33; 3.3V
  
- PH1, PH3 - PIN HEADER 1 x 3; FEMALE
- PH2, PH4 - PIN HEADER 1 x 4; FEMALE
- PH5, PH8 - PIN HEADER 1 x 8; MALE
- PH6 - PIN HEADER 1 x 10; MALE
- PH7 - PIN HEADER 1 x 6; MALE
- PH9 - PIN HEADER 1 x 3; ANGLE; MALE
- JUMPER
- PH10 - PIN HEADER 1 x 5; MALE
- PH11...PH18 - PIN HEADER 1 x 14; FEMALE
- VIN1, VIN2 - POWER CONNECTOR
- CON1 - SENSOR CONNECTOR
- SPACER - 30mm x 6; F-F
- SCREW - M3 x 8; 6mm
- SCREW - M3 x 6; 20mm
- SCREW NUT- M3 x 2
- PIN SOCKET x 126
- NIXIE CLOCK PCB
- ENCLOSURE
  
- DS3231 RTC MODULE
- NPS1, NPS2 - 2 x NIXIE POWER SUPPLY MODULE
- ND1, ND2 - 2 x NIXIE DRIVER MODULE



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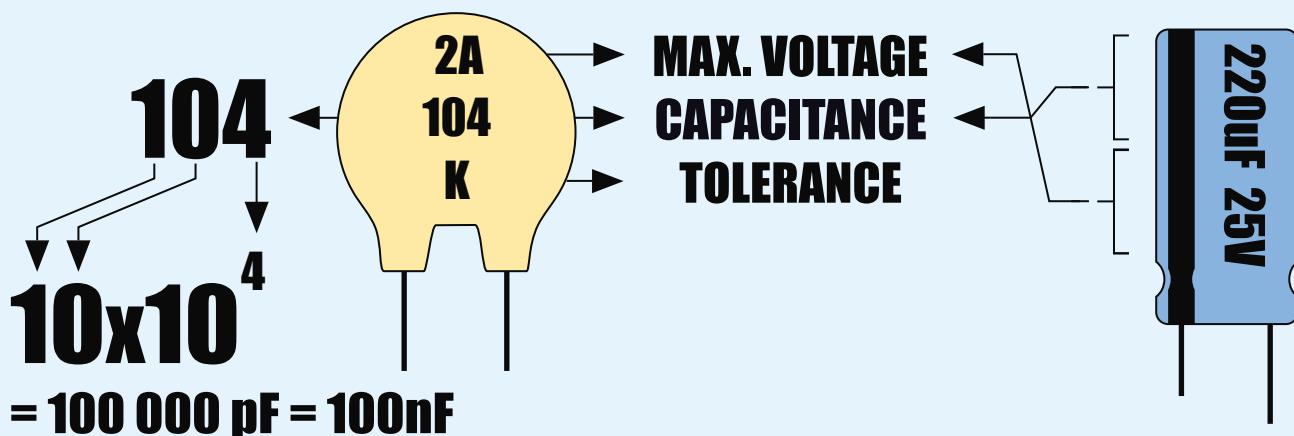
# RESISTORS MARKING



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# BIG BINARY NIXIE CLOCK

# CAPACITORS MARKING

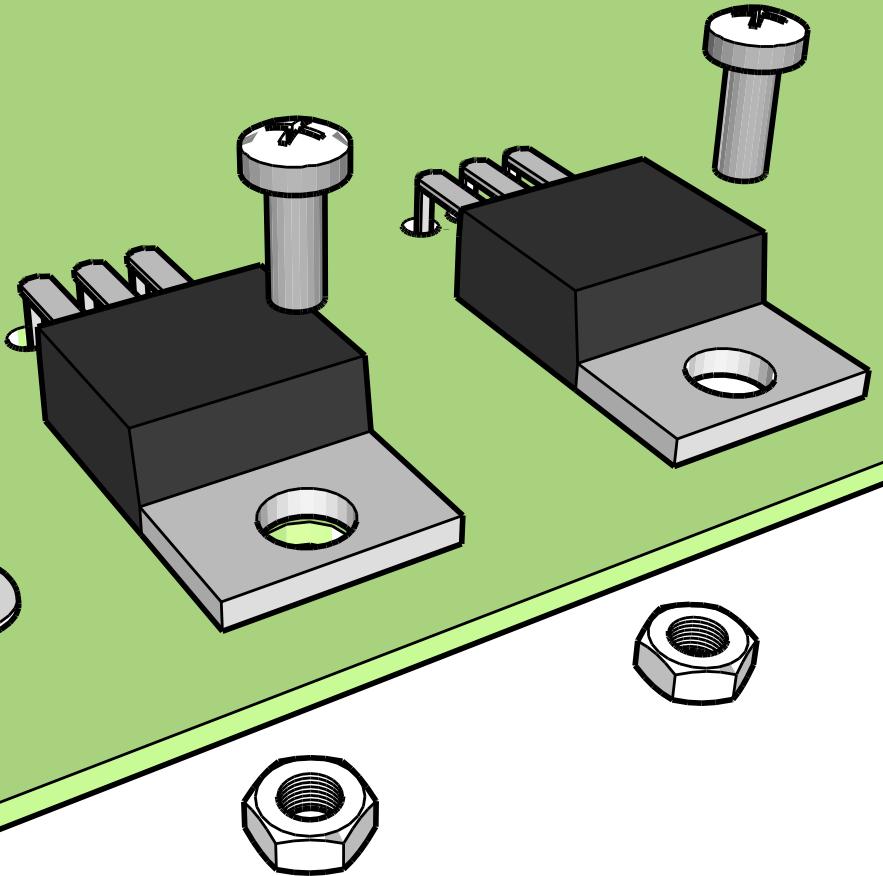


MAX. OPERATING VOLTAGE	
<b>1H</b>	<b>50V</b>
<b>2A</b>	<b>100V</b>
<b>2T</b>	<b>150V</b>
<b>2D</b>	<b>200V</b>
<b>2E</b>	<b>250V</b>
<b>2G</b>	<b>400V</b>
<b>2J</b>	<b>630V</b>

TOLERANCE	
<b>B</b>	<b>0,1pF</b>
<b>C</b>	<b>0,25pF</b>
<b>D</b>	<b>0,5pF</b>
<b>F</b>	<b>1%</b>
<b>G</b>	<b>2%</b>
<b>H</b>	<b>3%</b>
<b>J</b>	<b>5%</b>
<b>K</b>	<b>10%</b>
<b>M</b>	<b>20%</b>
<b>Z</b>	<b>+80%, -20%</b>

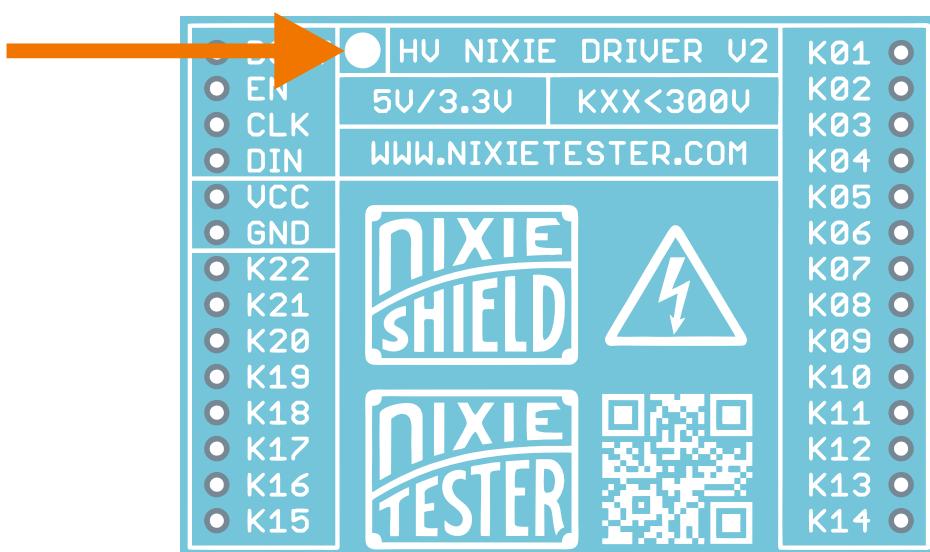
U1, U2

PCB



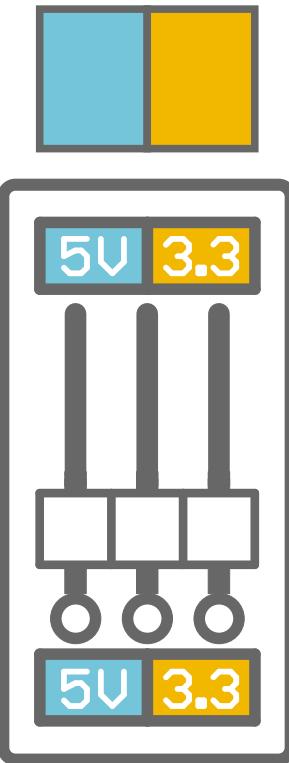
ND1, ND3 OR ND2, ND4

MARKINGS ON THE PCB  
ARE VERY IMPORTANT



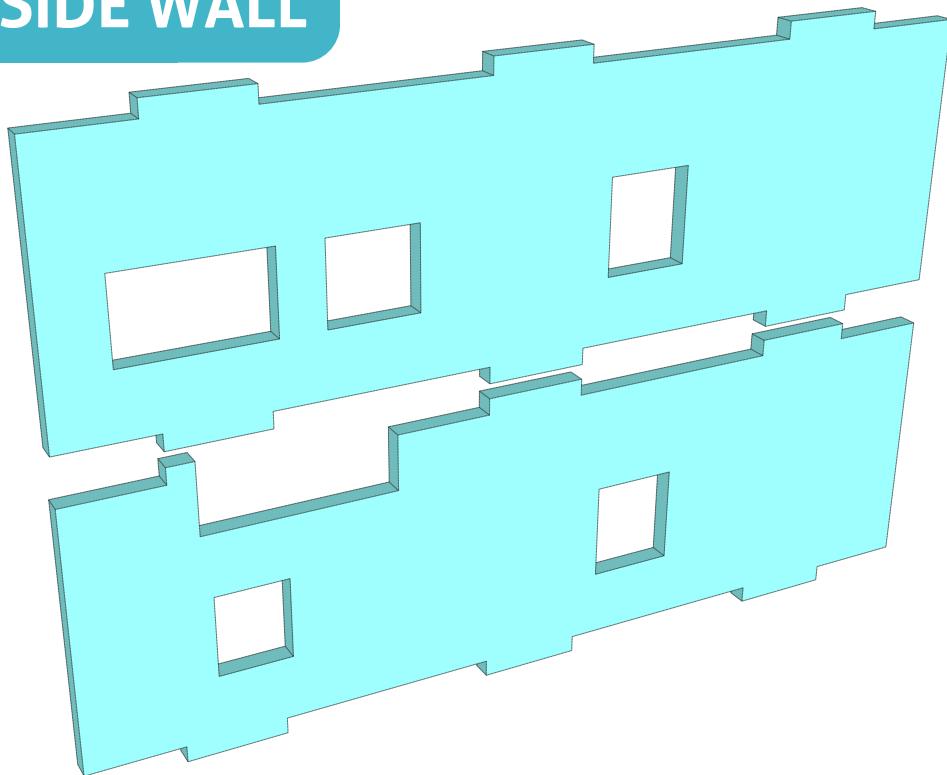
IF YOU CHOOSE IN-12A/B NIXIE TUBES YOU MUST INSERT ND MODULES  
ONLY TO THE CORRESPONDING SLOTS "01"  
IF YOU CHOOSE IN-15A NIXIE TUBES YOU MUST INSERT ND MODULES  
ONLY TO THE CORRESPONDING SLOTS "-+"

PH9



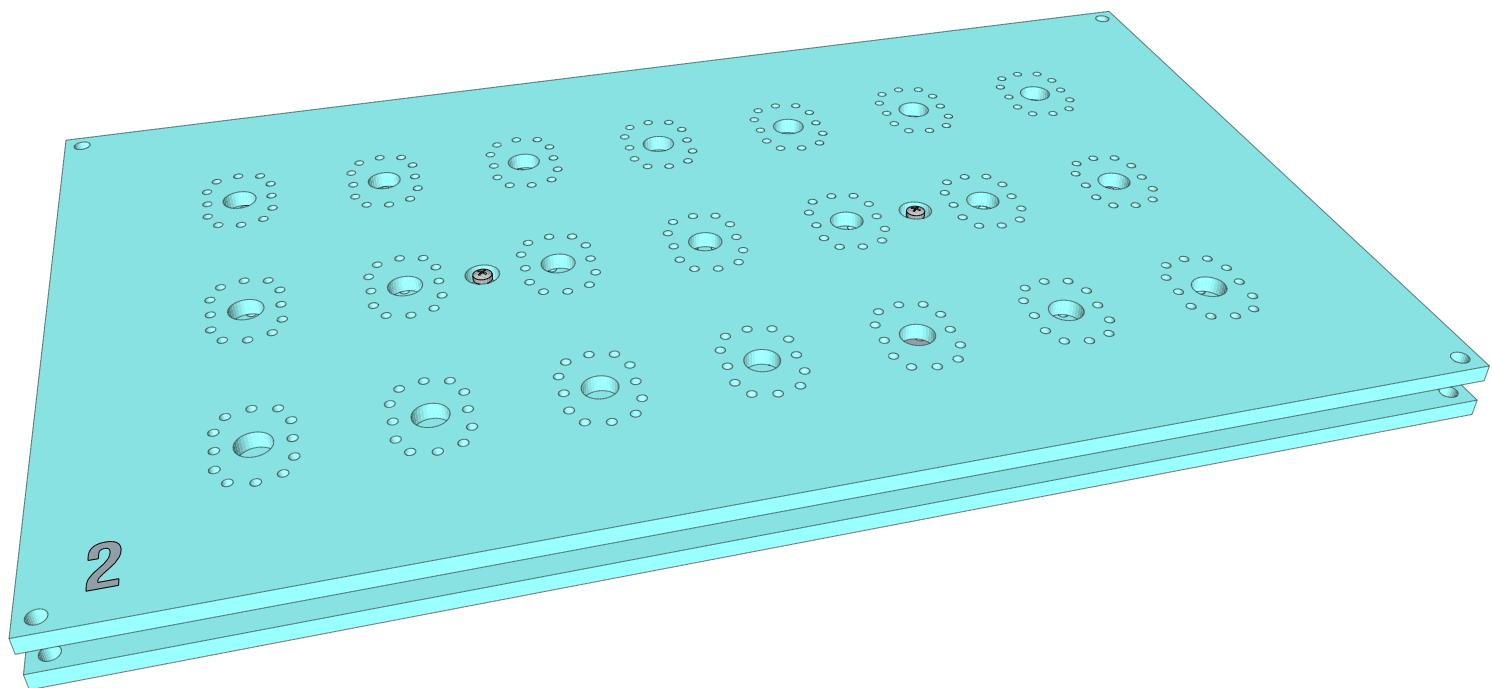
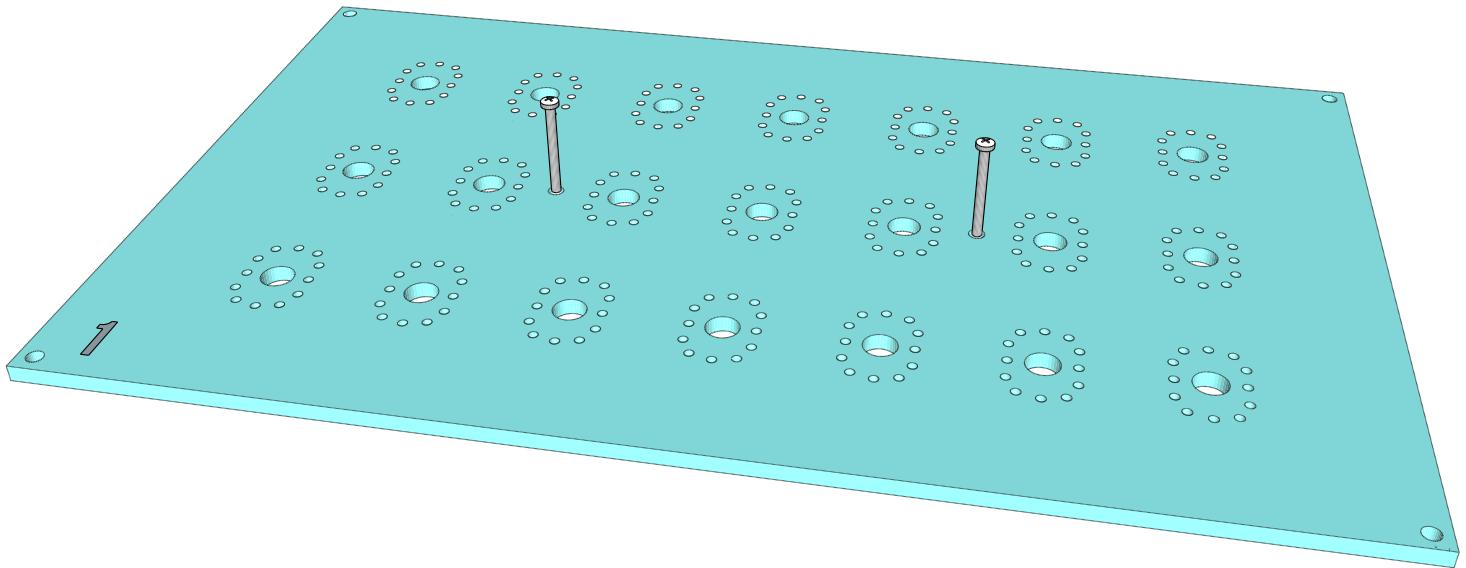
**NOTE** YOU MUST SET OPERATING VOLTAGE OF YOUR ARDUINO BOARD  
FIRST CHECK ARDUINO DATASHEET E.G. UNO - 5V, NANO 33 IOT - 3.3V

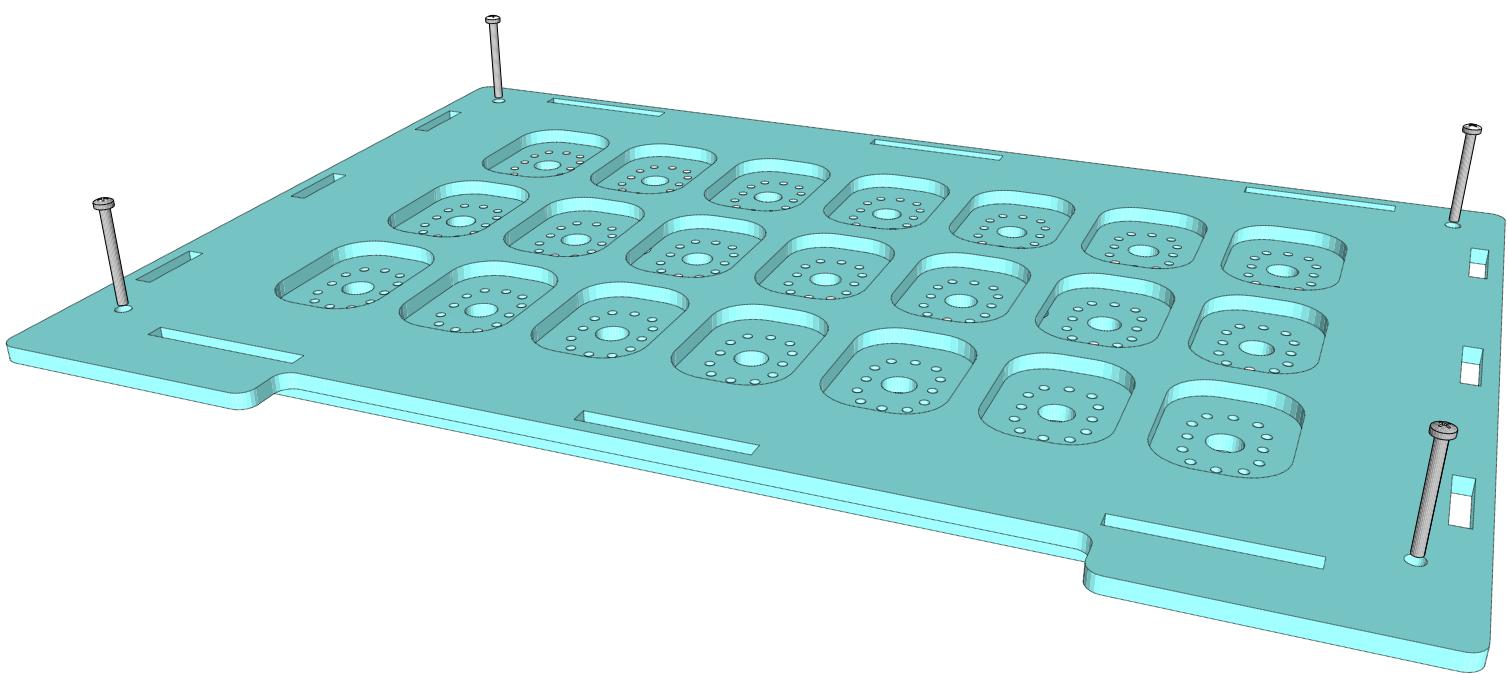
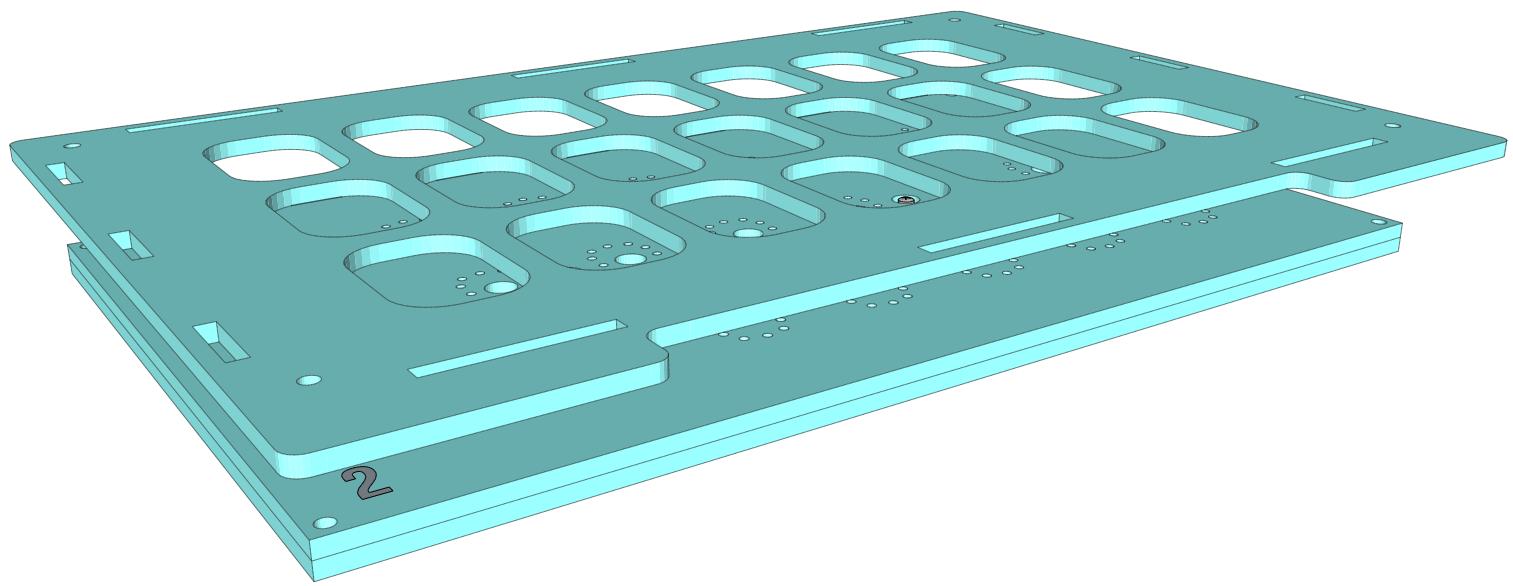
## HOUSING SIDE WALL

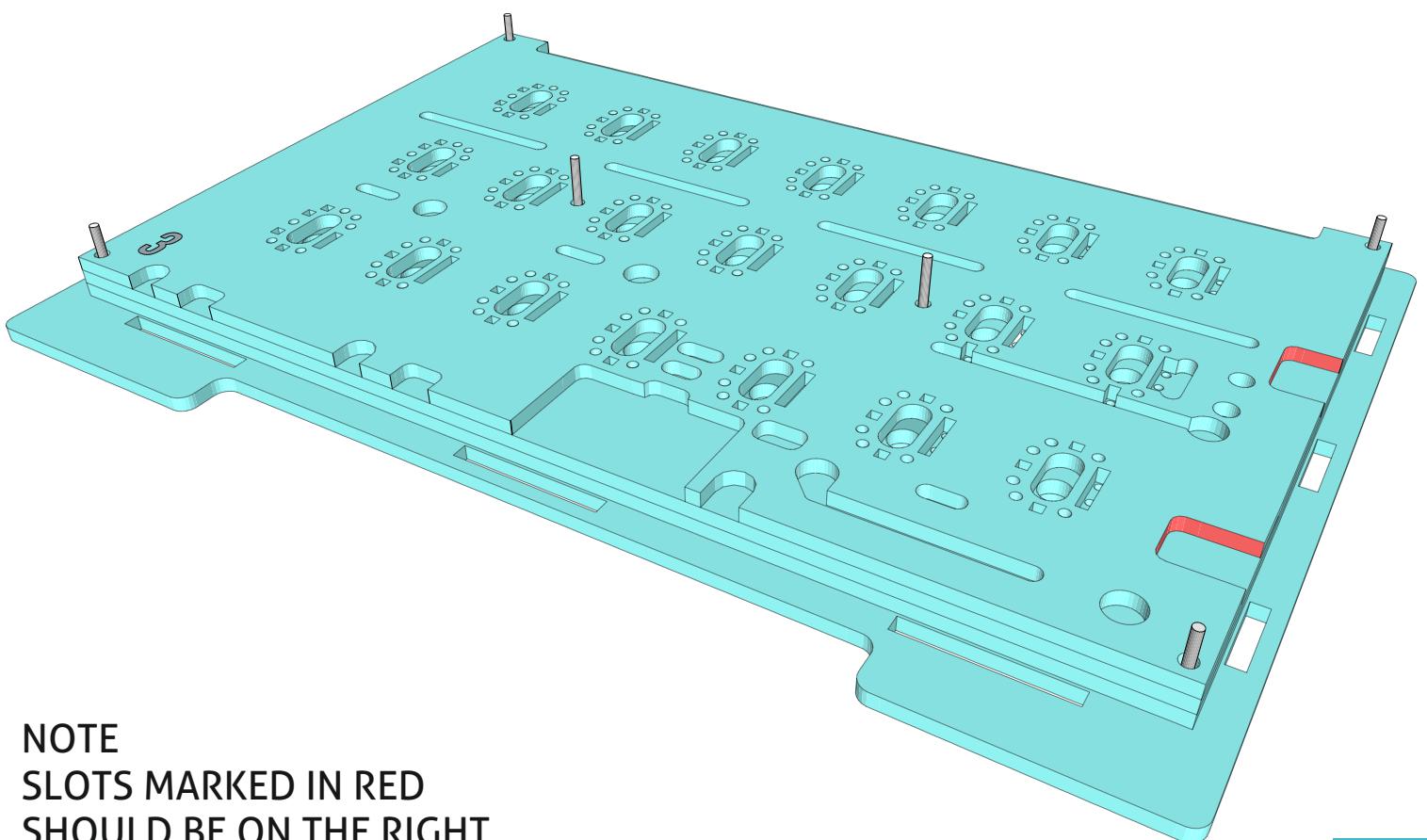
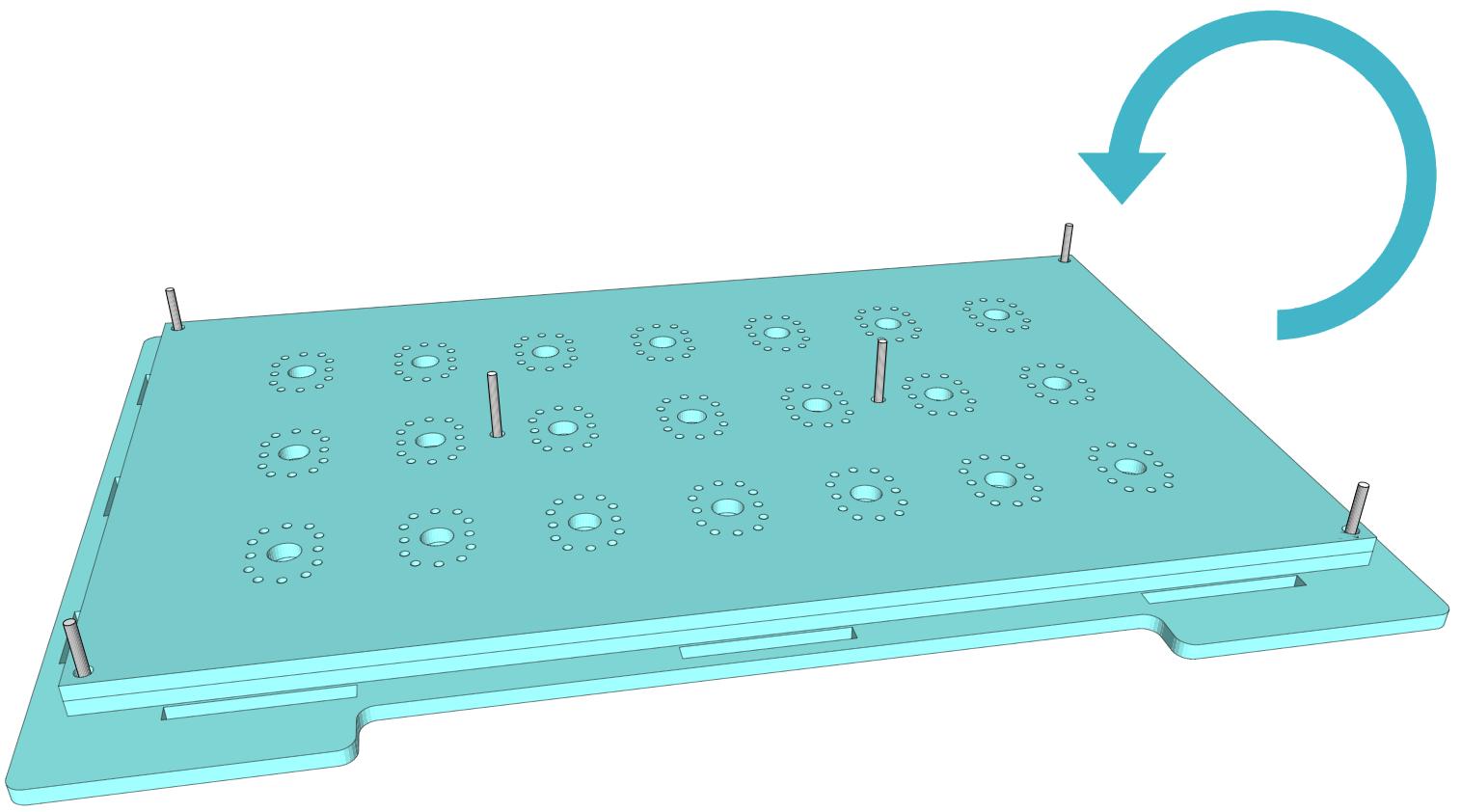


**NOTE** CHOOSE SIDE WALL FOR YOUR HOUSING  
ARDUINO UNO FORM FACTOR OR ADAPTER FOR MICRO/NANO

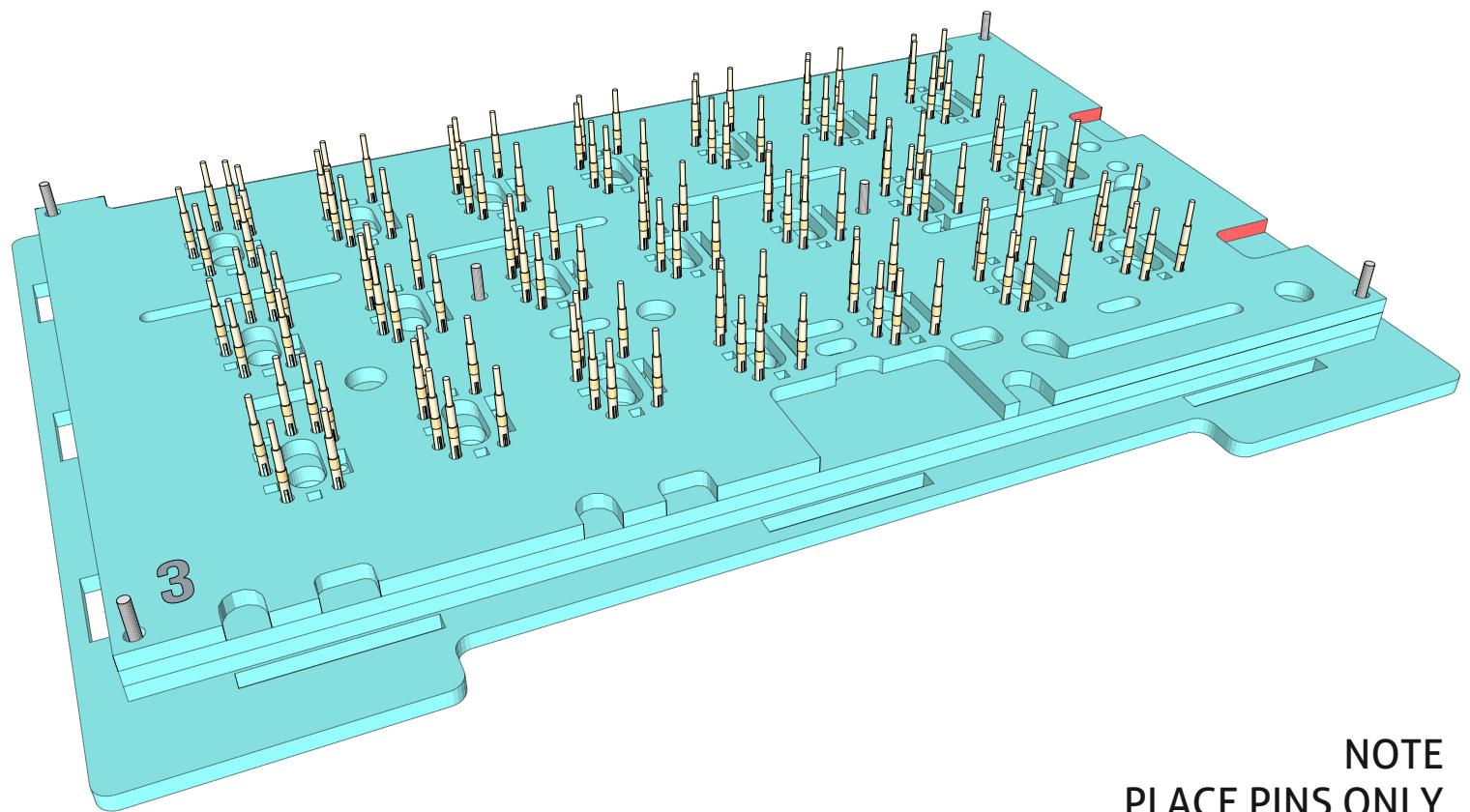
# TUBES SOCKETS



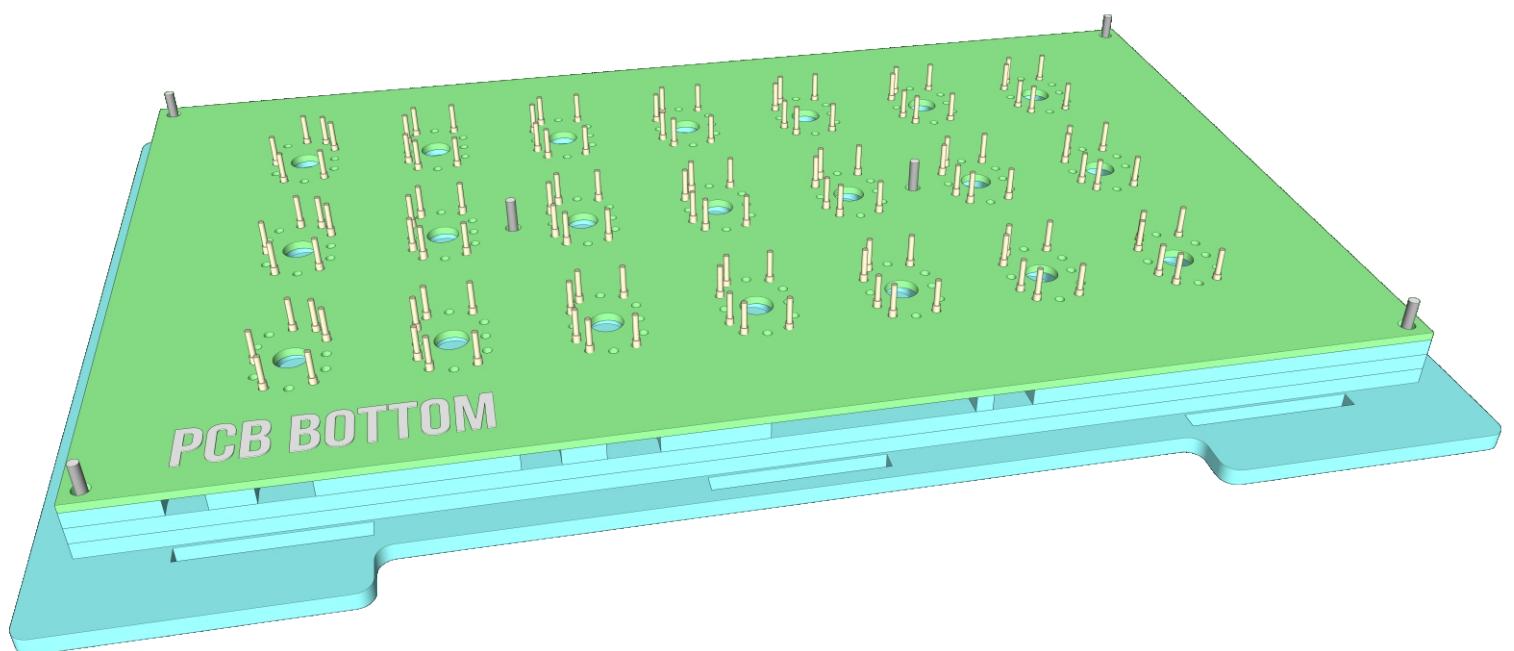


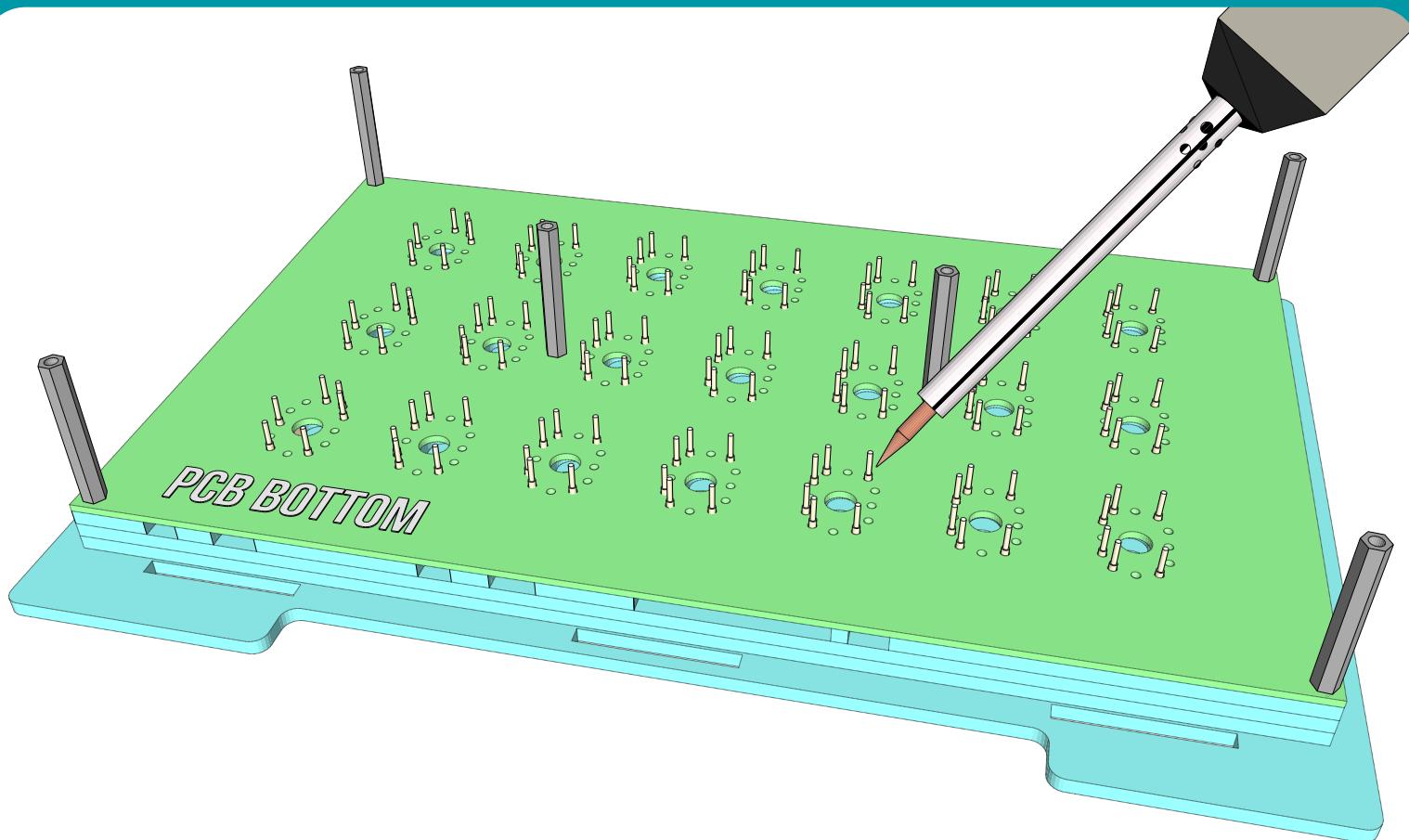
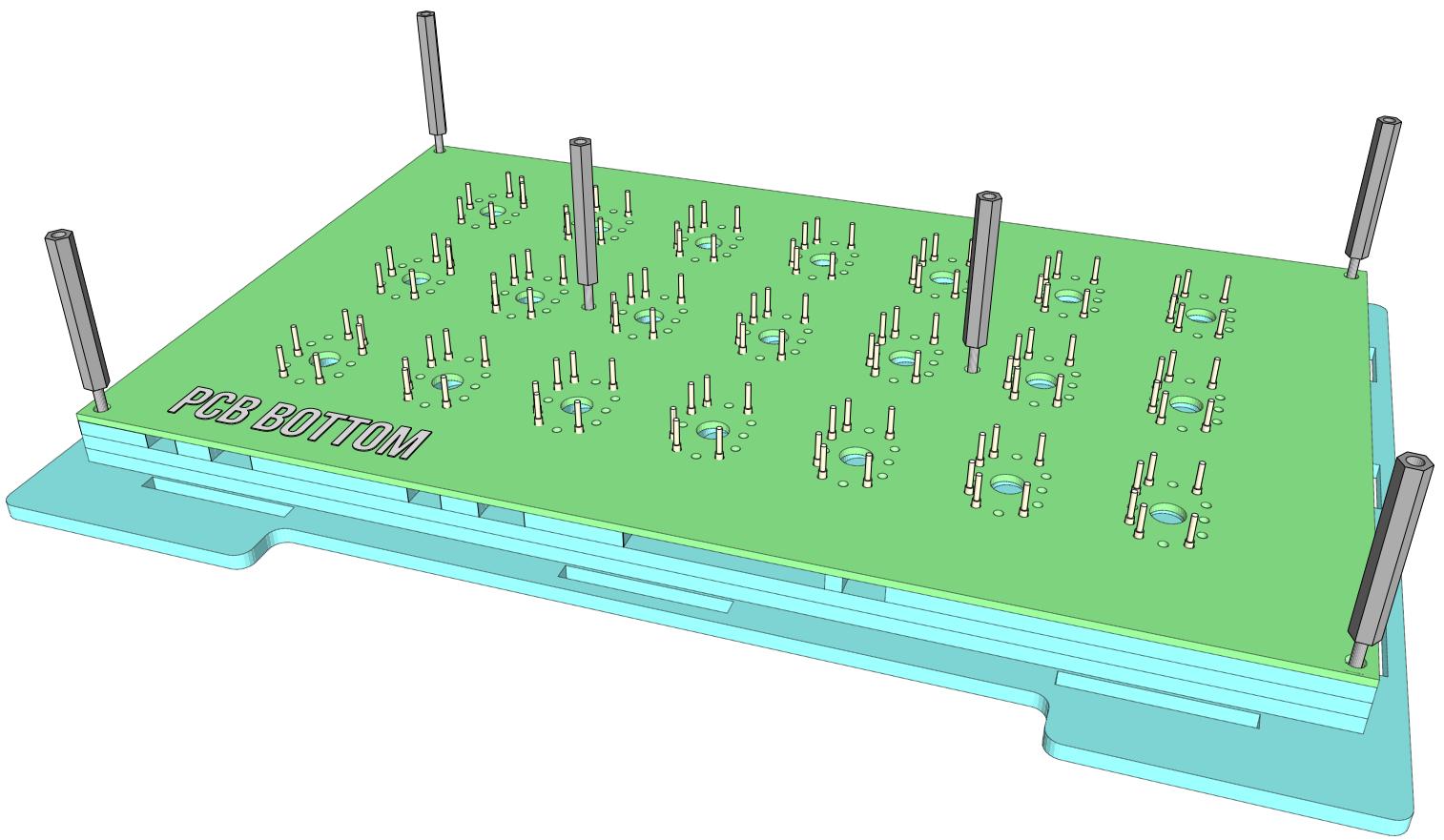


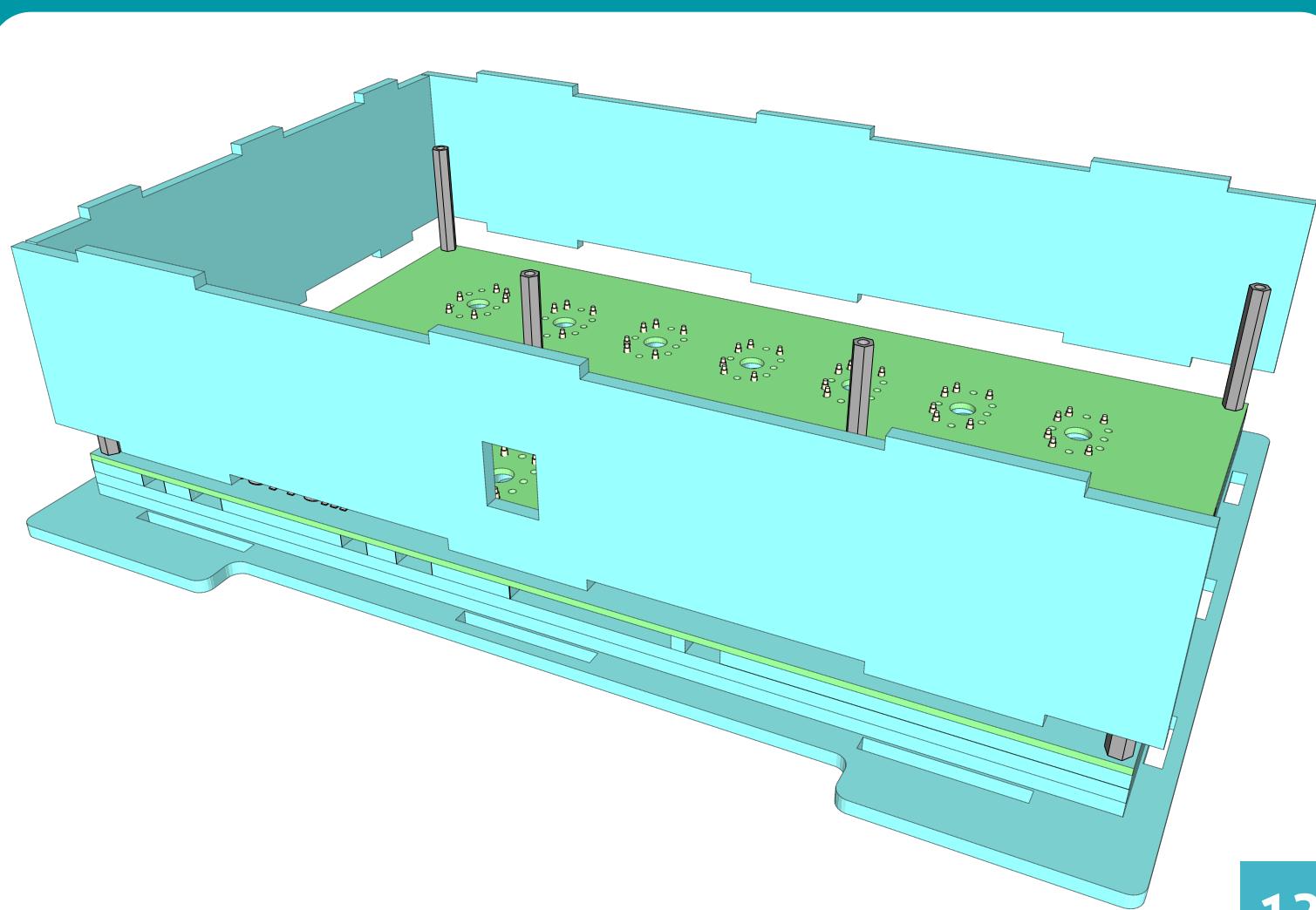
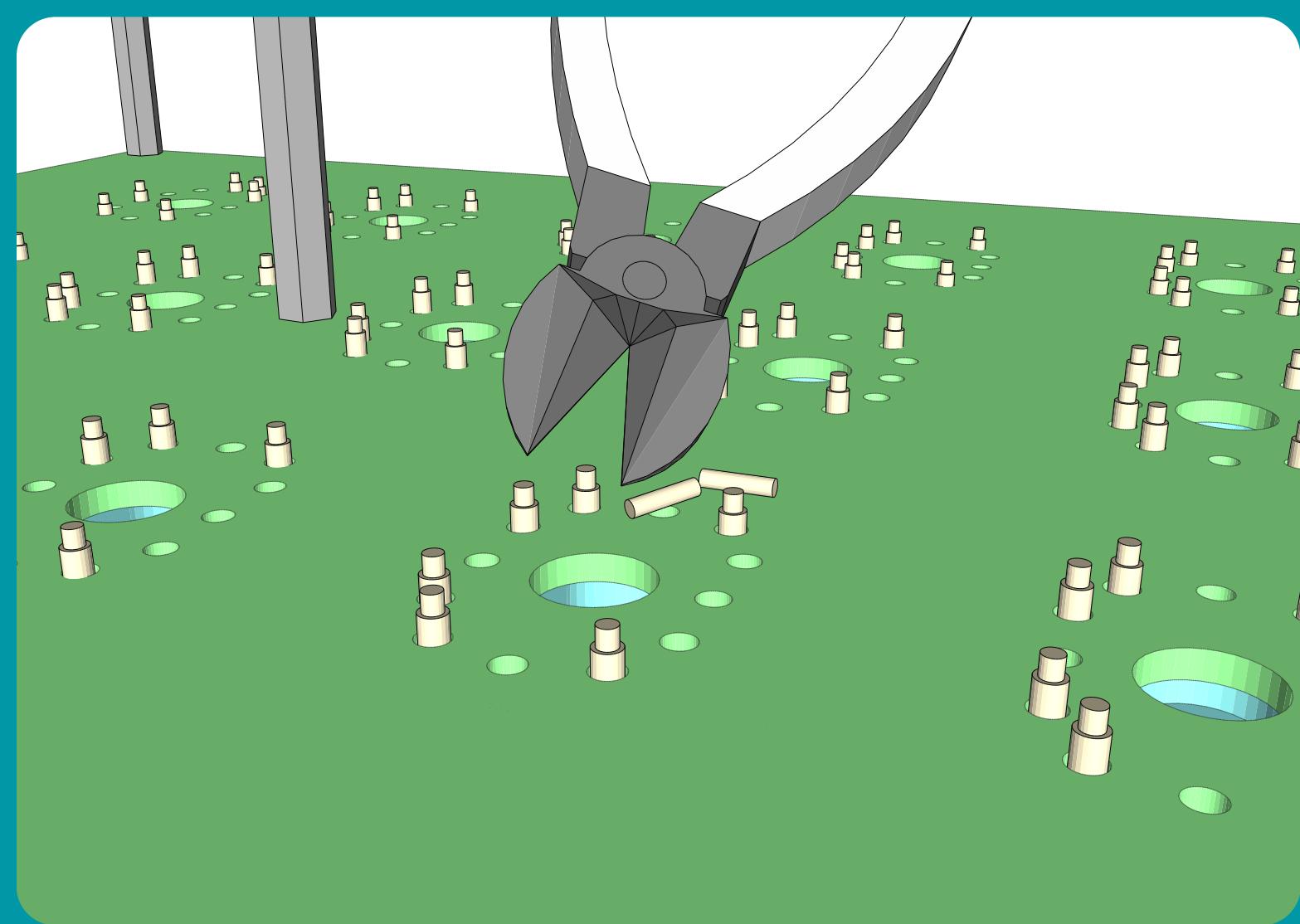
**NOTE**  
**SLOTS MARKED IN RED**  
**SHOULD BE ON THE RIGHT**

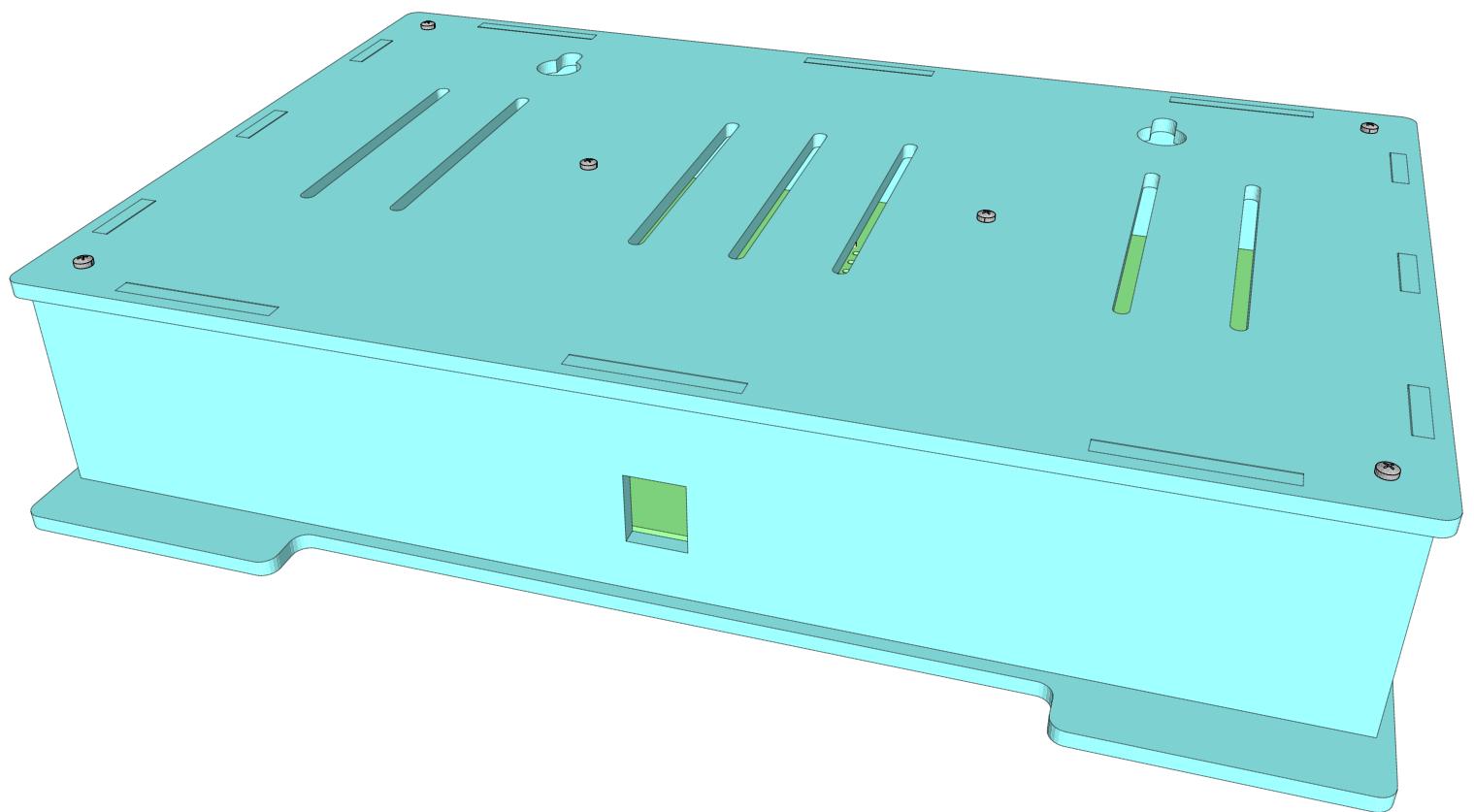
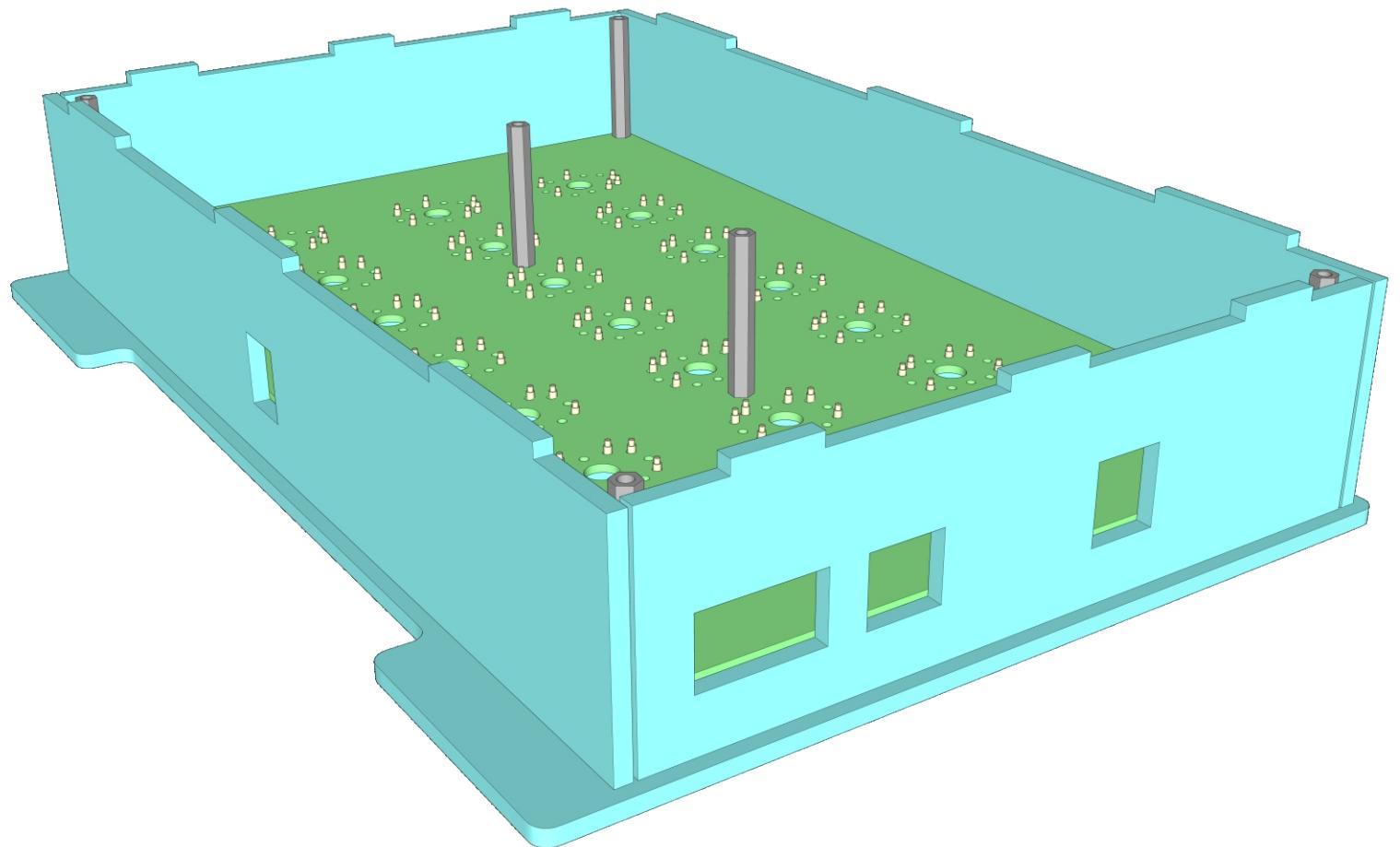


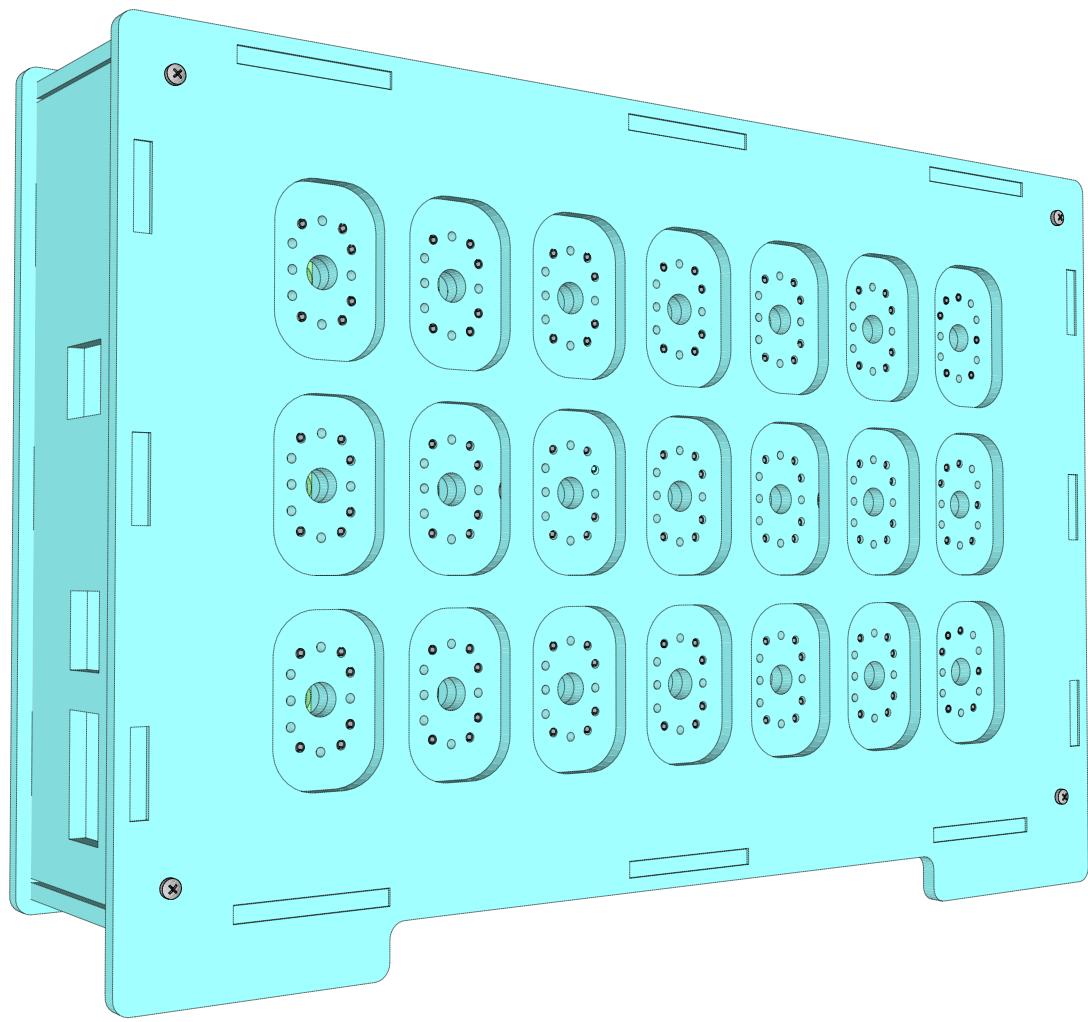
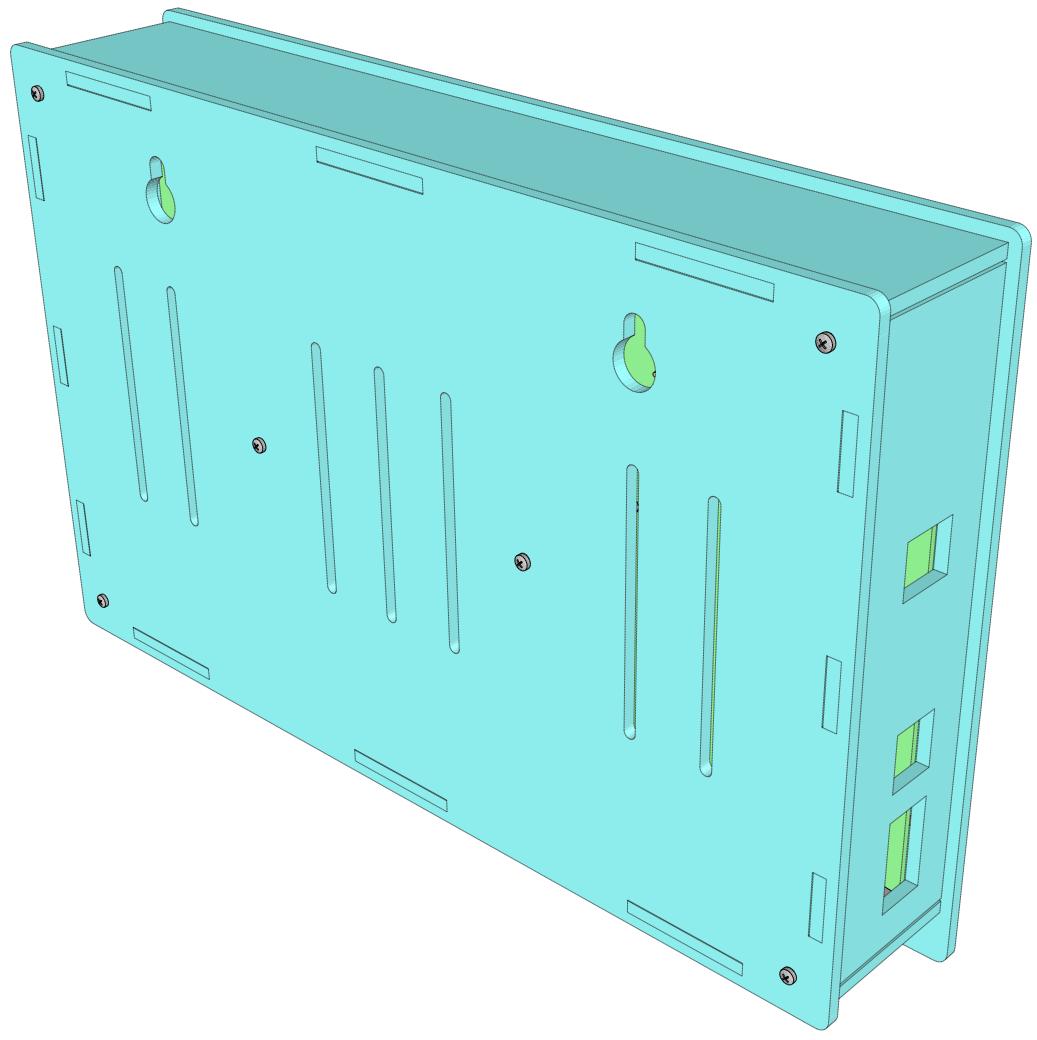
NOTE  
PLACE PINS ONLY  
IN THE ROUND HOLES





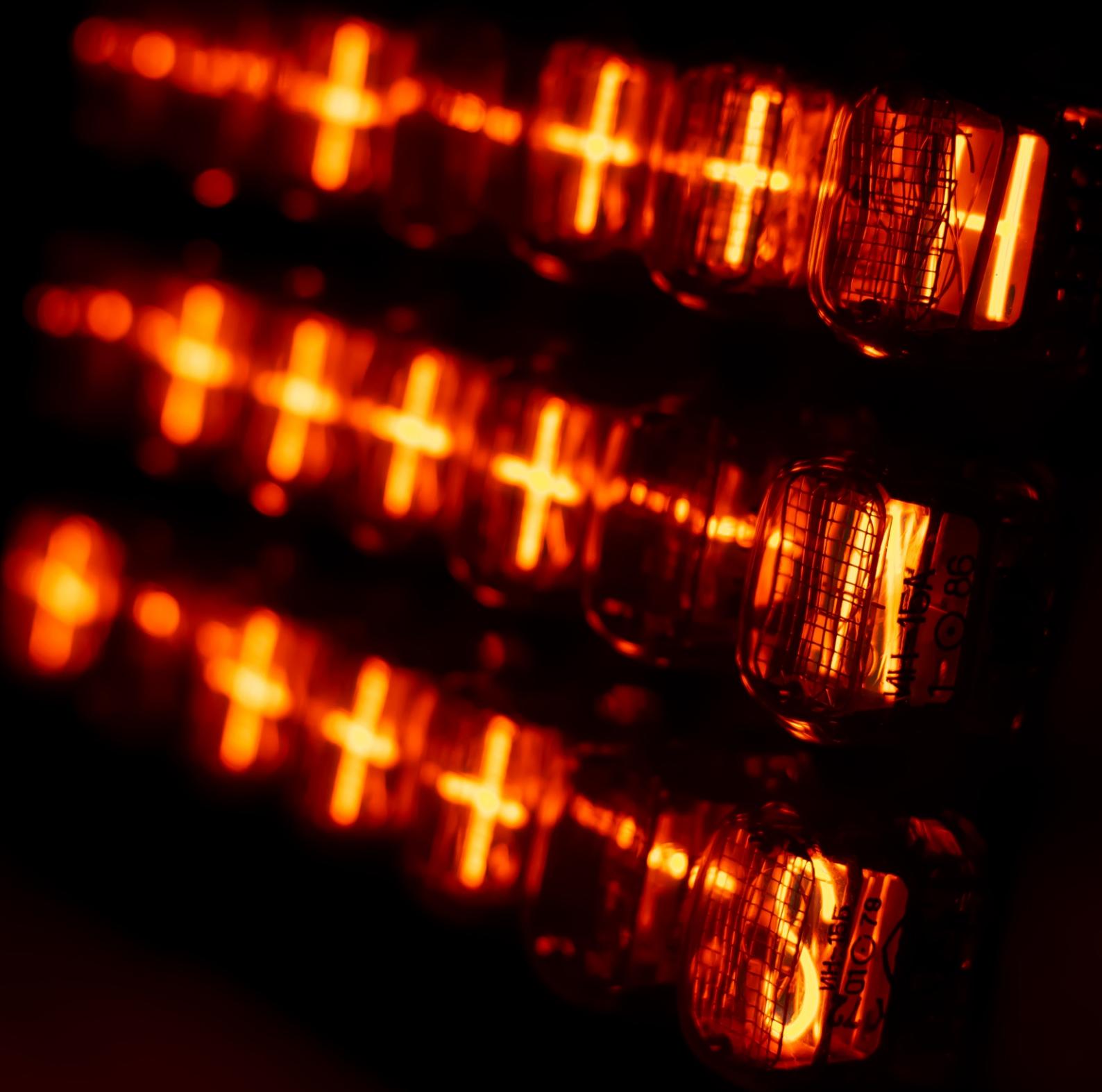






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