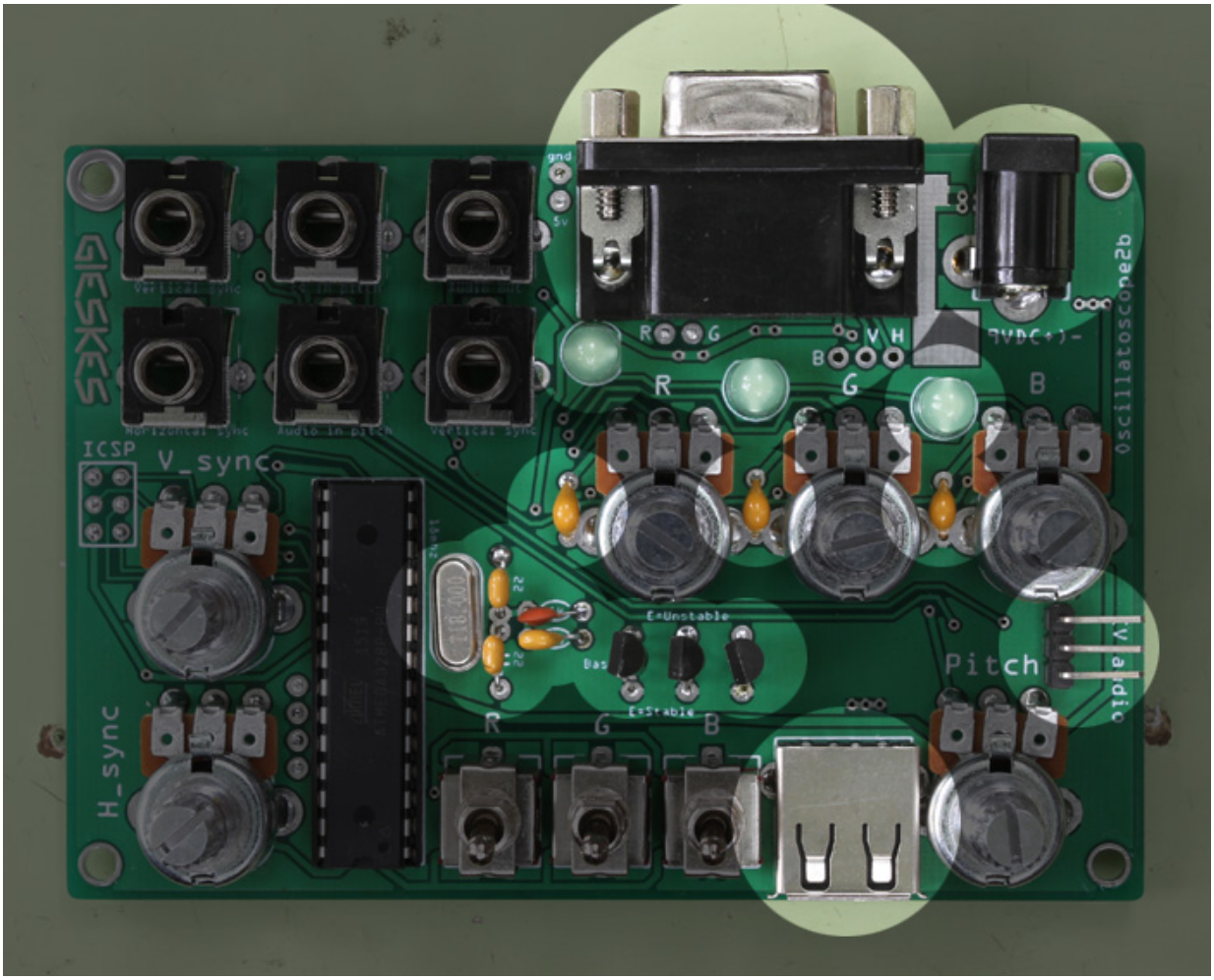
Oscillatoscope2b Assembling Instructions:

All SMT components are already soldered onto the PCB.

The order of soldering is important!! You can follow the order as described below.

STEP 1:



(indication of components that should be mounted first)

1. capacitors:
C4 = 471 (1pcs)
C3 = 222 (1pcs)
22 = 220 (2pcs)
102 = 102 (3pcs)
PTC = a fuse (it is located between the power jack and the B pot input, it has no polarity)

2. transistors (2n3904):
the orientation they are mounted on the image is the best way, if you put them the other way around, the image is more stable, but looks less nice. with this orientation you get more horizontal glitches.

3. leds:
the LED's are short leg into round hole, they also have a flat side that is marked on the PCB's silkscreen (they don't light up much, but thats not what they are there for).

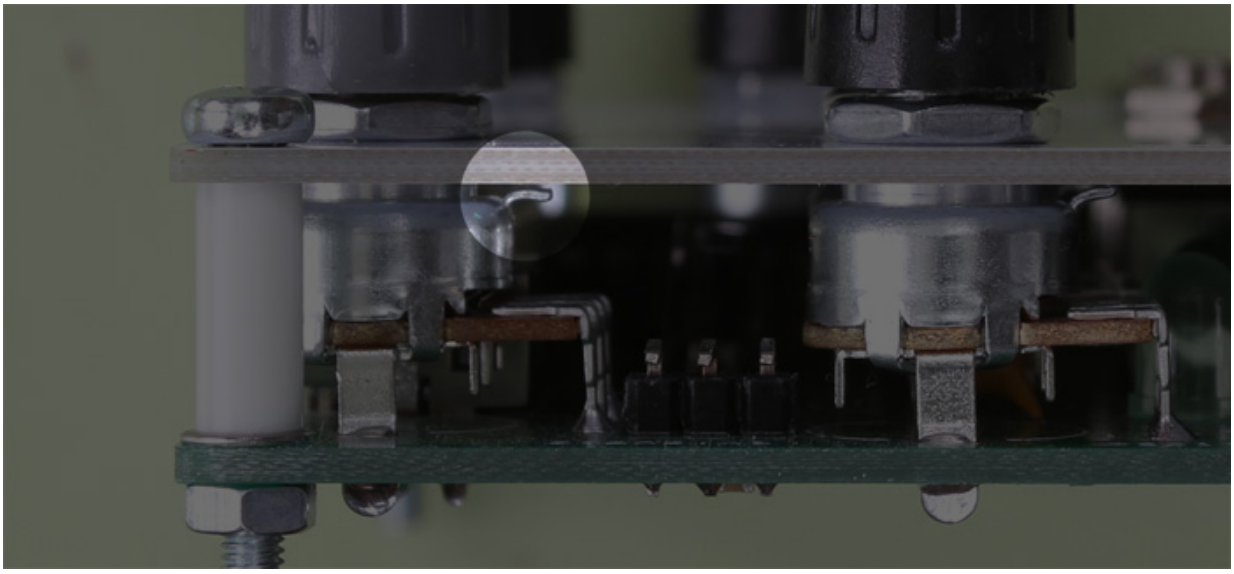
4. 18mhz crystal, 3 pin side header, VGA connector, USB connector, Power conector, 28 pins IC socket.

5. Put the atmega328 IC into the socket.

STEP2:

1. Cut of the switch pins of the jack sockets (try to put them into the socket to find out what pin it is)

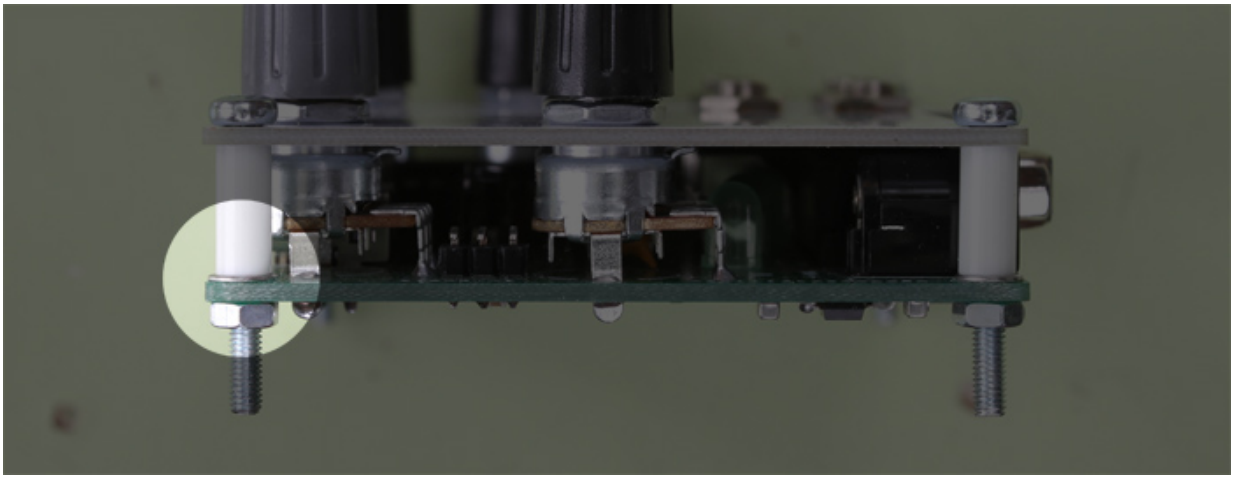
2. Cut of or bend the small flap on the potentiometer so they don't touch the top panel.



(flap of pot, you can bend it or cut it)

3. Put in the pots, jacks, toggle switches (don't solder them)

4. Put on the top panel.



(metal washer as extra spacer, because the ones i found are slightly to short without them)

5. Mount the top panel with the bolts and the spacers and the washers.

6. Now mount the potentiometers with there nuts (make sure the small flap is cut of, if it isn't it will BREAK your potentiometer).

7. Mount the jack sockets with there nut.

8. Makes sure the top panel is nice aligned flat with the PCB, and the pots are horizontal.

9. now you can solder the pots and jacks.

10. push the toggle switches towards the PCB with your finger while soldering.

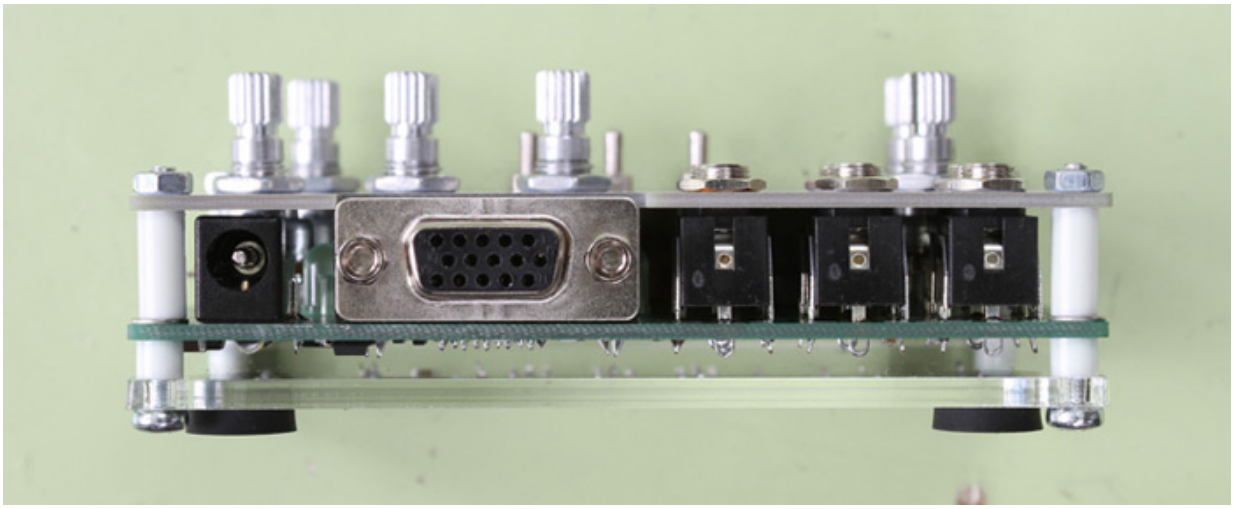
11. measure with a multimeter, of there is a short circuit.

12. look i all the SMT components are connected to the pads (if not fix them. ii already checked a bit but you can check again).

13. Now connect the VGA signal to a monitor plug in the power and see if it all works.

14. If it all works, you can now put the knobs on the pots, clean the flux off of the PCB and mount the bottom panel. The bolts are maybe to long so you can flip them around, and mount the nuts on the top side.

15. put the round black bumps on the bottom side



DONE!