

Wooden case by BLEEP

This is the instruction to assemble the BLEEP wooden case for the RE-303. Files are available and can be used for laser cutting wood. This is a low cost case for easy assembling that requires no special parts. Standard buttons, screws and nuts are used that are easily available everywhere.

File 1: RE-303_case_4mm-CADET.dwg – this is for 4mm material (MDF, plywood, acrylic etc)
or file RE-303_case_4mm-ALPHA.dwg

File 2: RE-303_case_2mm-CADET.dwg – this is for 2mm material (MDF, plywood acrylic etc)
or file RE-303_case_2mm-ALPHA.dwg

Also needed for this case:

M3x8 screws – 2pcs

M3x16 screws - 4pcs

M3x50 screws – 2pcs

M3 nuts, standard hexagonal – 8pcs

Tactile switch caps Omron 9,5mm, B32-1610 or equivalent. Available at Mouser. 24pcs.

303 knobs for pots are used but you can use what knobs you want. Holes for pots are 15mm and 21mm.

Tools required:

Wooden glue

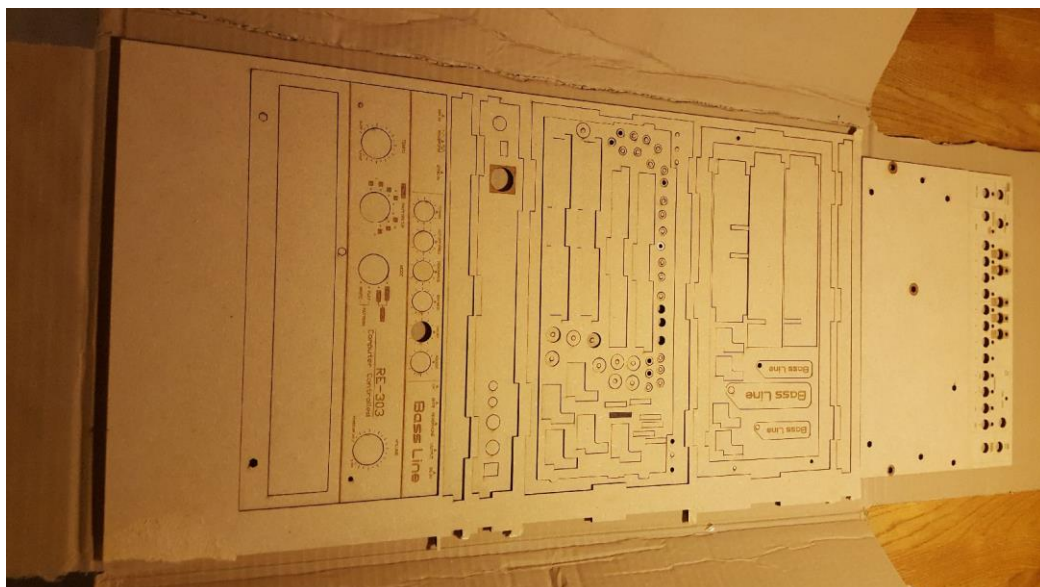
Clamps for holding the case together when glue is drying

Drill

Cutting

Check with your selected laser cutting workshop that they can use DWG-files and to make sure they read all lines correctly. Some lines are for cutting and some are for engraving. Snijlab is very good and what I have used. If DXF files are required you need to convert the file with AutoCad or other software.

When receiving the material from laser cutting it will probably look something like this.

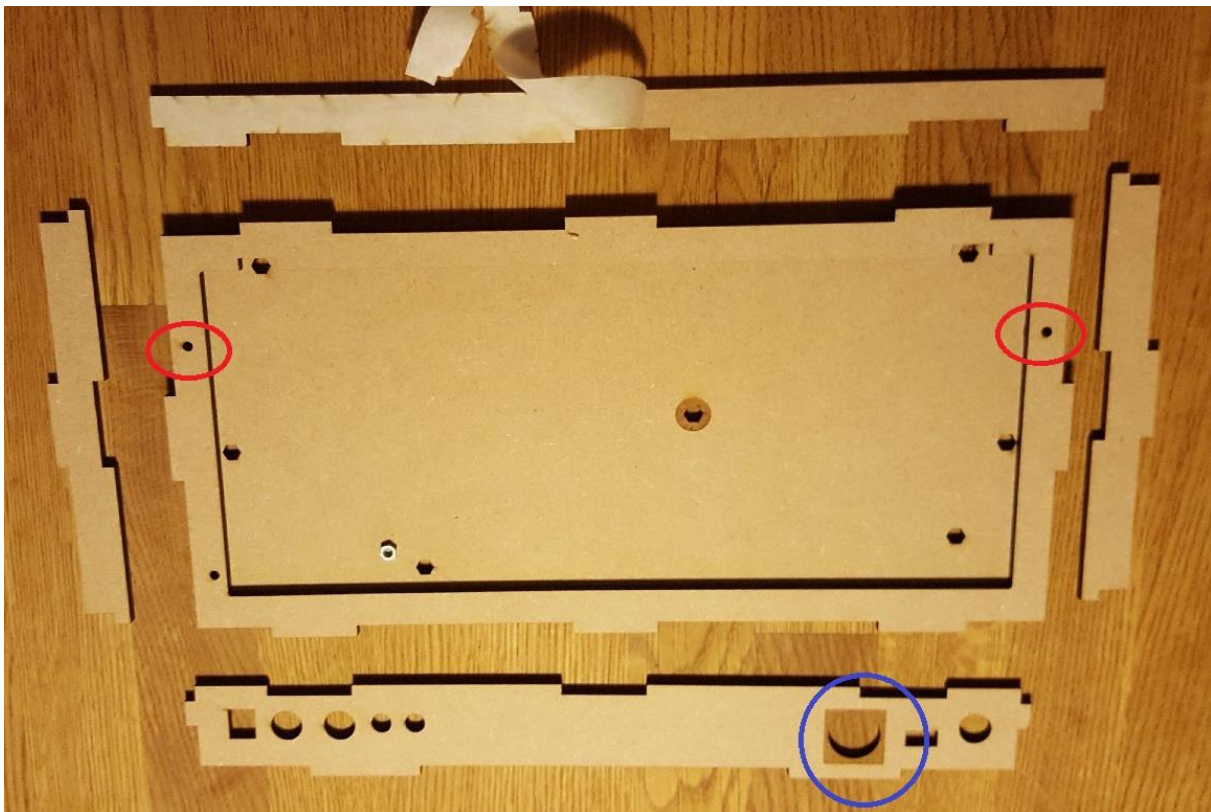


All bits in picture above are cut from MDF.

If there is tape or paper on the material, remove that. It is only used for holding the pieces together. Some parts are fragile so be careful! Don't worry, when glued together it will be rugged.

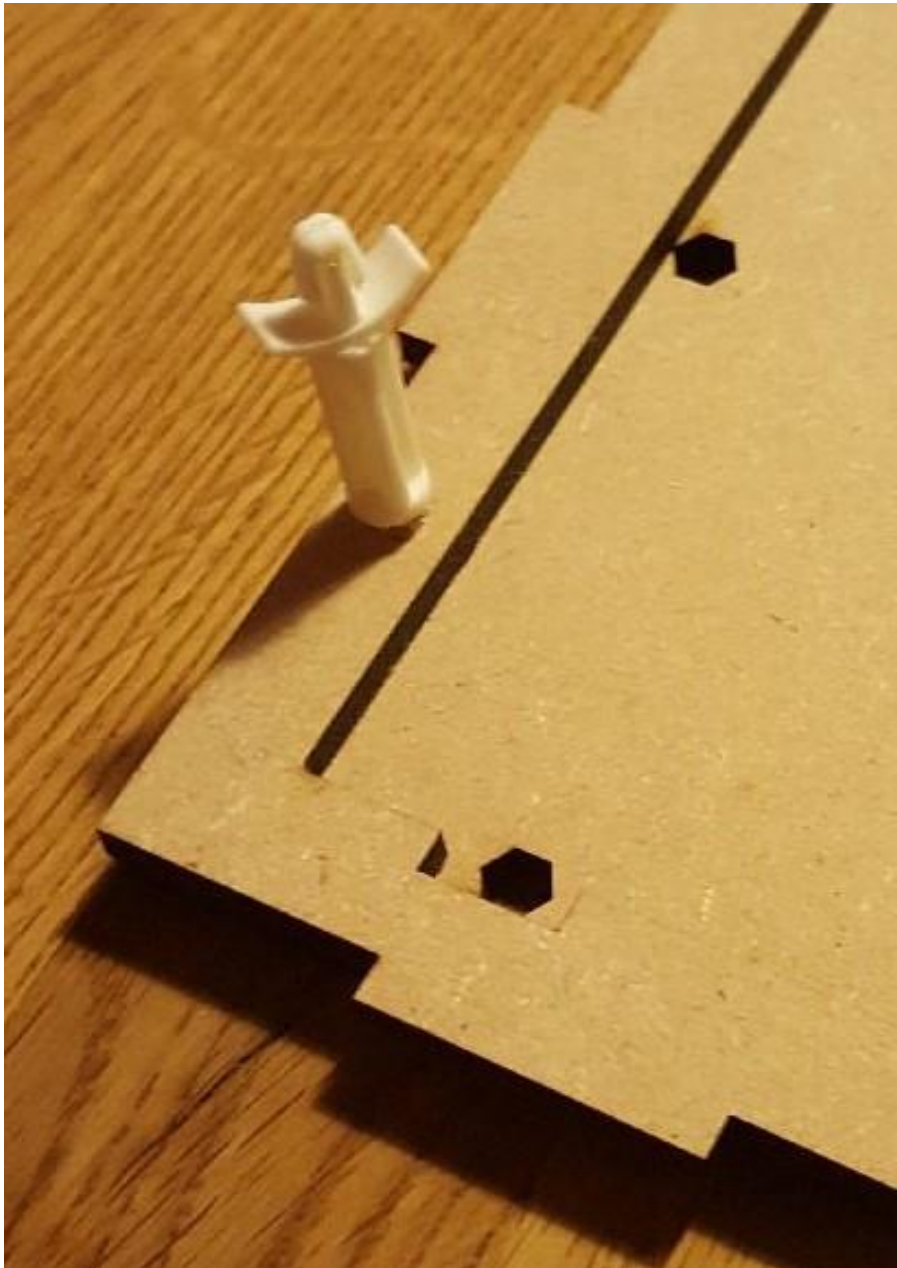
Preparations

Before glueing some small things need to be taken care of. If you want to use the standard standoffs for the PCB:s some holes need to be drilled before you start glueing. This is because the case was first designed for using custom standoffs and have everything bolted to the lower case. The holes are just for making room for the standoffs protruding the PCB:s.



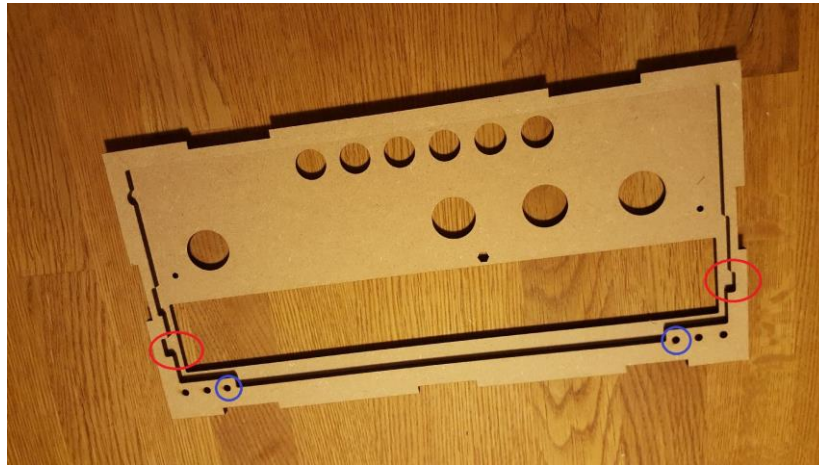
This is the bottom part of the case. Enlarge the holes marked in red above, make sure your standoffs clear the holes.

The blue marking shows the hole for the sync jack. Depending on what jack you use you might have to manipulate this hole to fit your jack. The engraved square is on the inside of the case and is the exact size of my DIN jack. If the jack protrudes from the PCB towards the backside you can either make the hole larger so that it protrudes into the hole or just sand/file it down to make space for the protruding part.



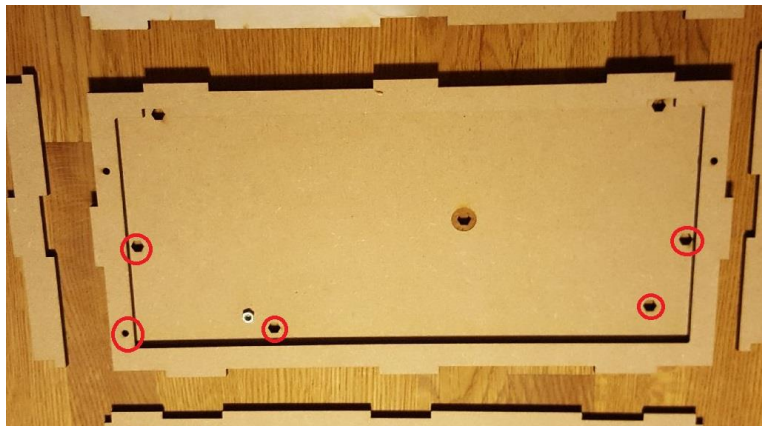
PCB spacer clearance check!

Now the same has to be done to the top part of the case. Put the two top parts as pictured below. Where the red parts are the standoffs will protrude. Mark the location of the standoffs by laying the switchboard on top and align with the holes marked in blue. Drill through but be careful, not much material left.



Check with the standoff that you have enough clearance.

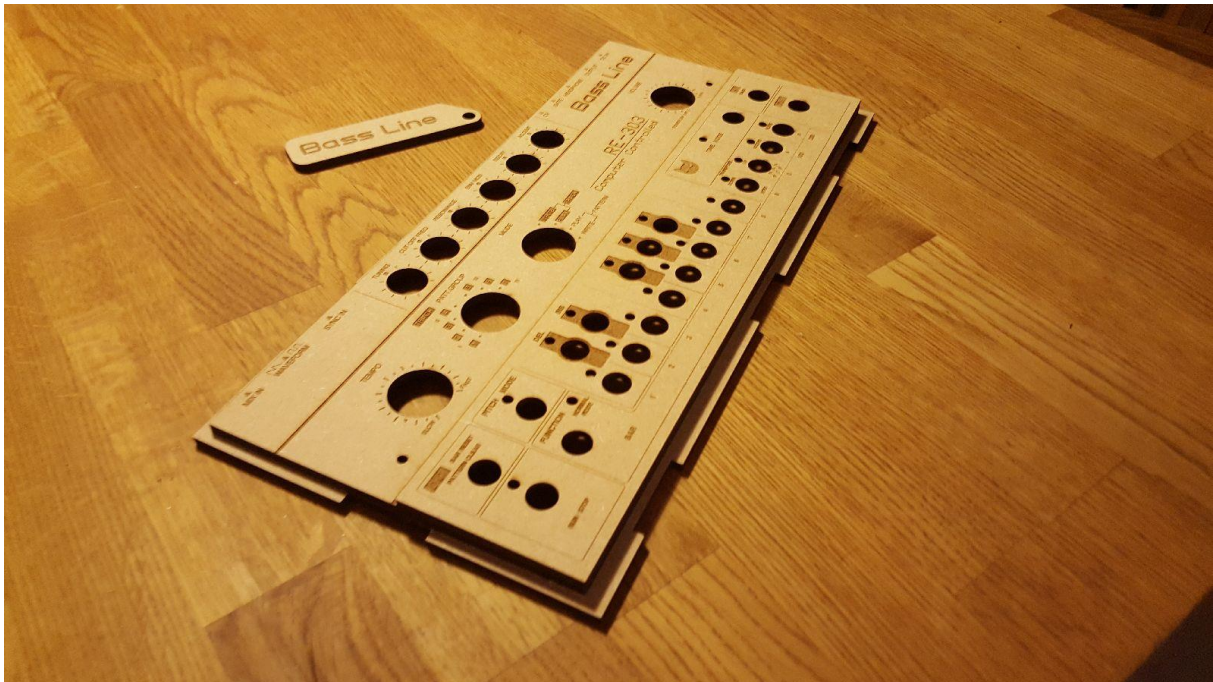
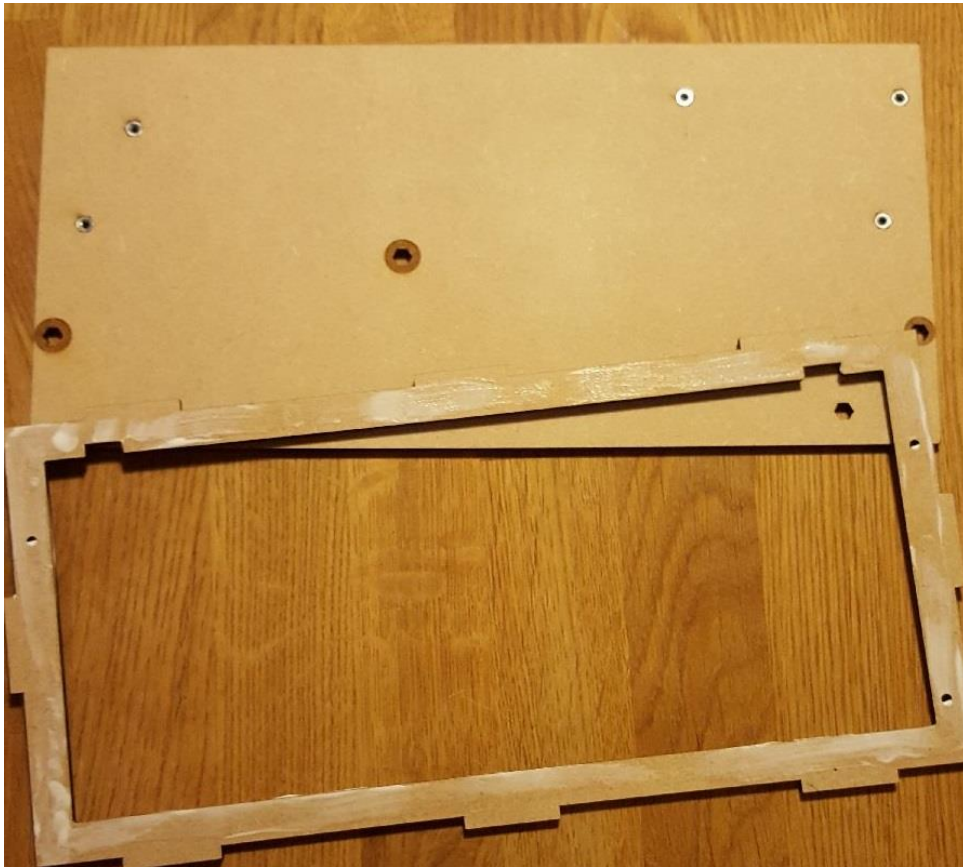
Fit the nuts. If you are going to use the standard standoffs press standard M3 nuts in the marked holes below. Use a small hammer to fit them flush with the surface.



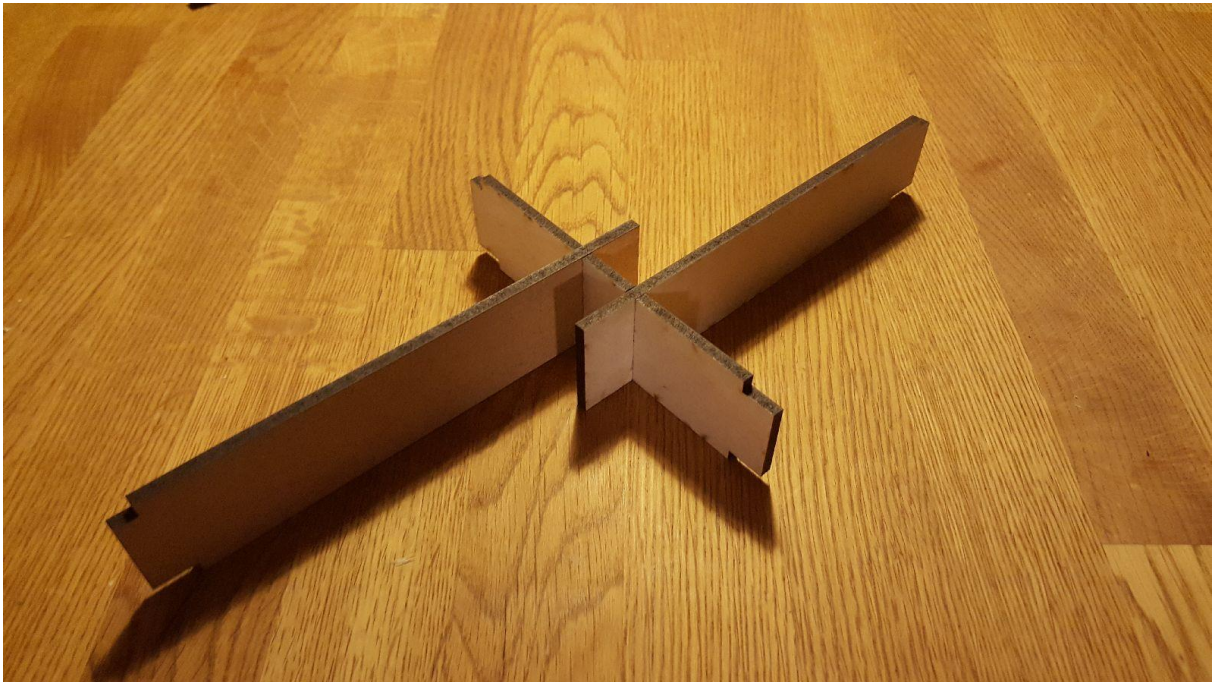
Now get the glue!

Glue time

It's all pretty straight forward to glue it together, see pictures below.



Put the inner support together. This is just to keep it steady while glueing and not not be glued to place!

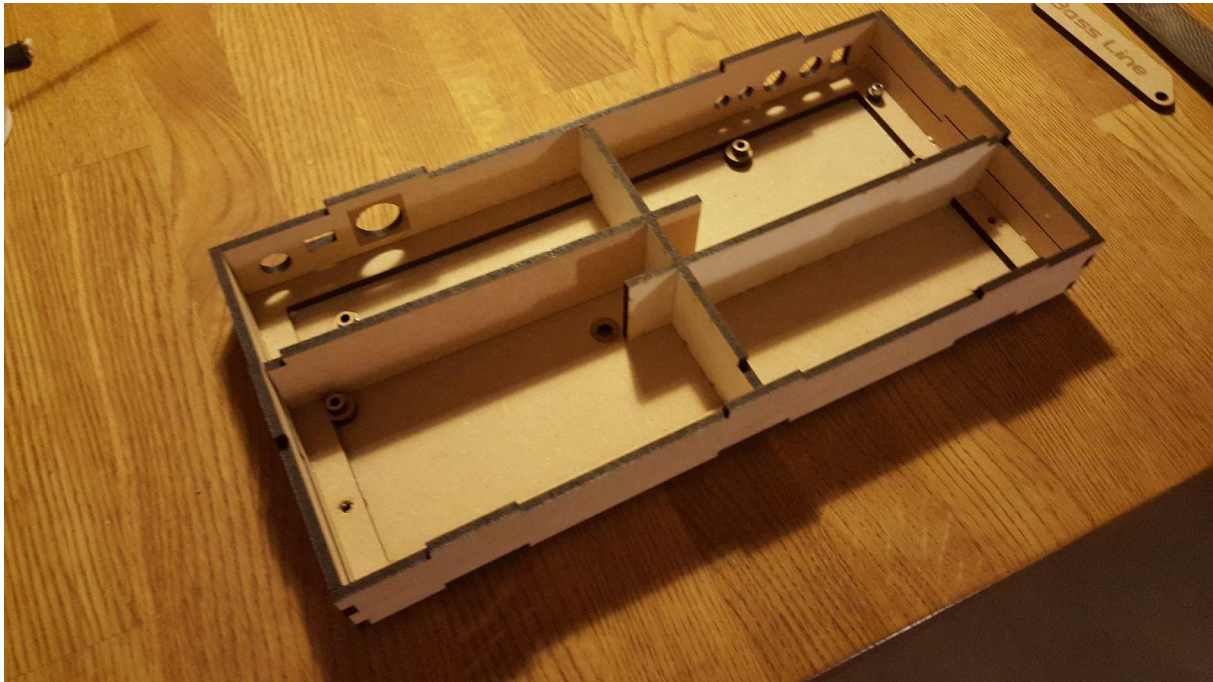


This only fits one way into the case so make sure you place it right.

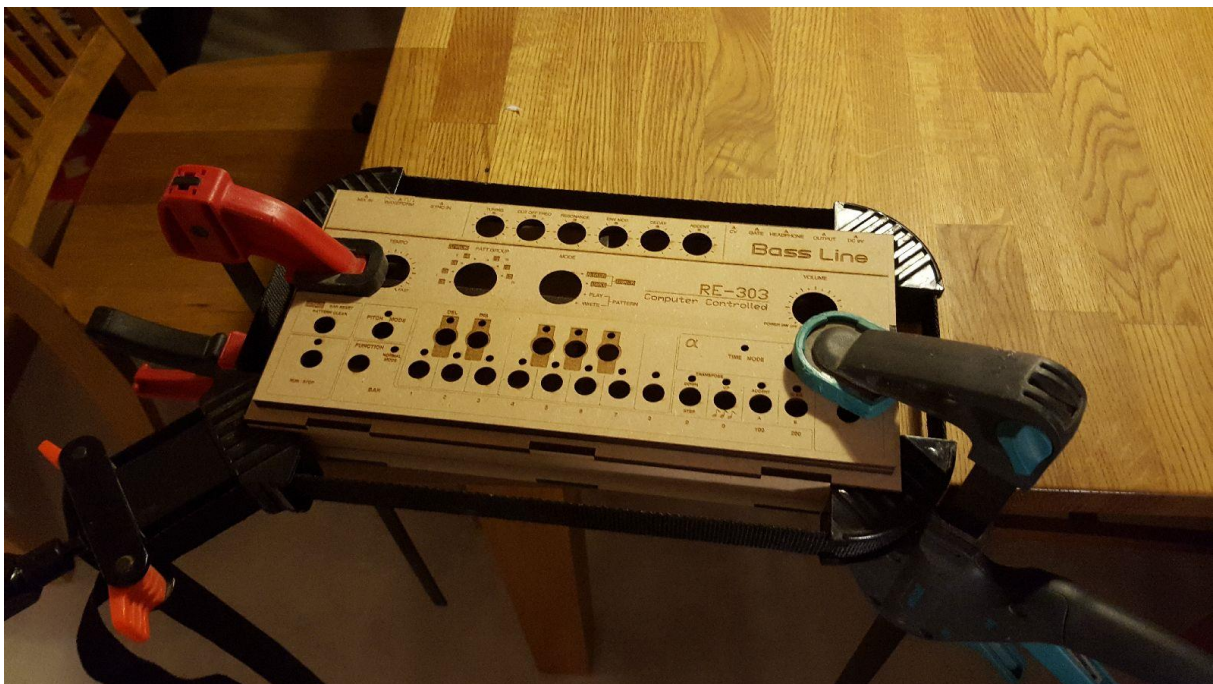


Start by glueing the bottom part. Place glue to all contact surfaces and put some pressure on joints using clamps or with something else.

When the glue is dry, go on with the top part.



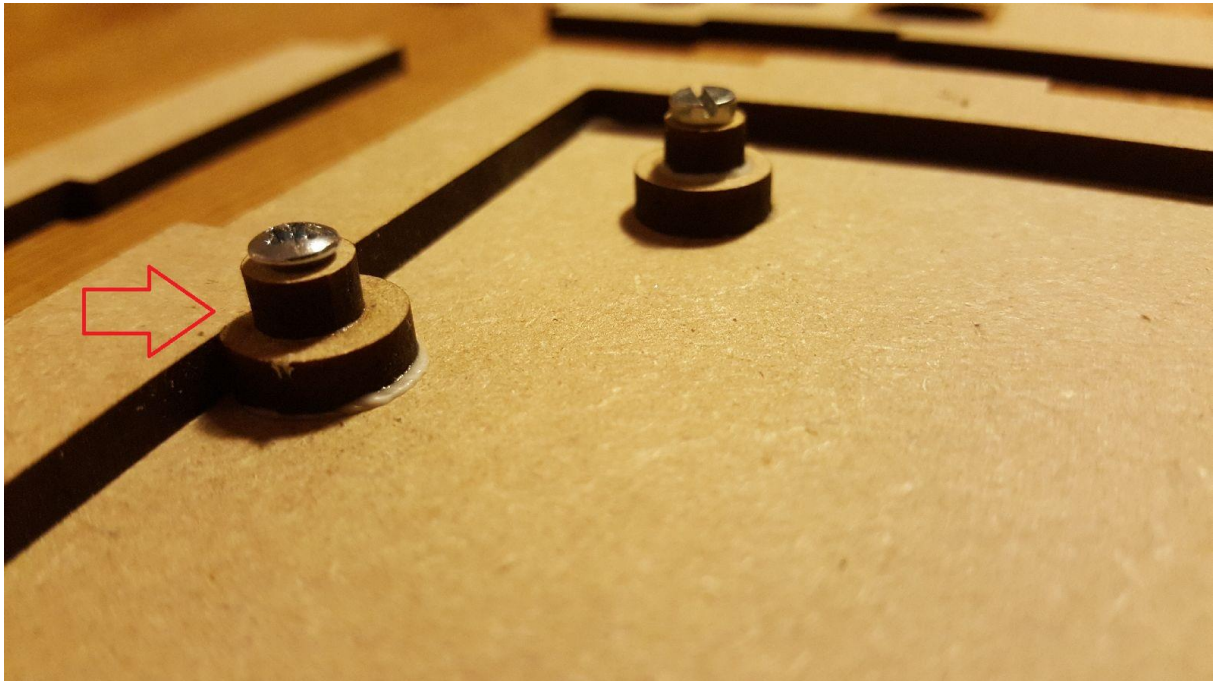
Do not glue the top side parts to the bottom parts but use the bottom part to align the top parts when glueing.



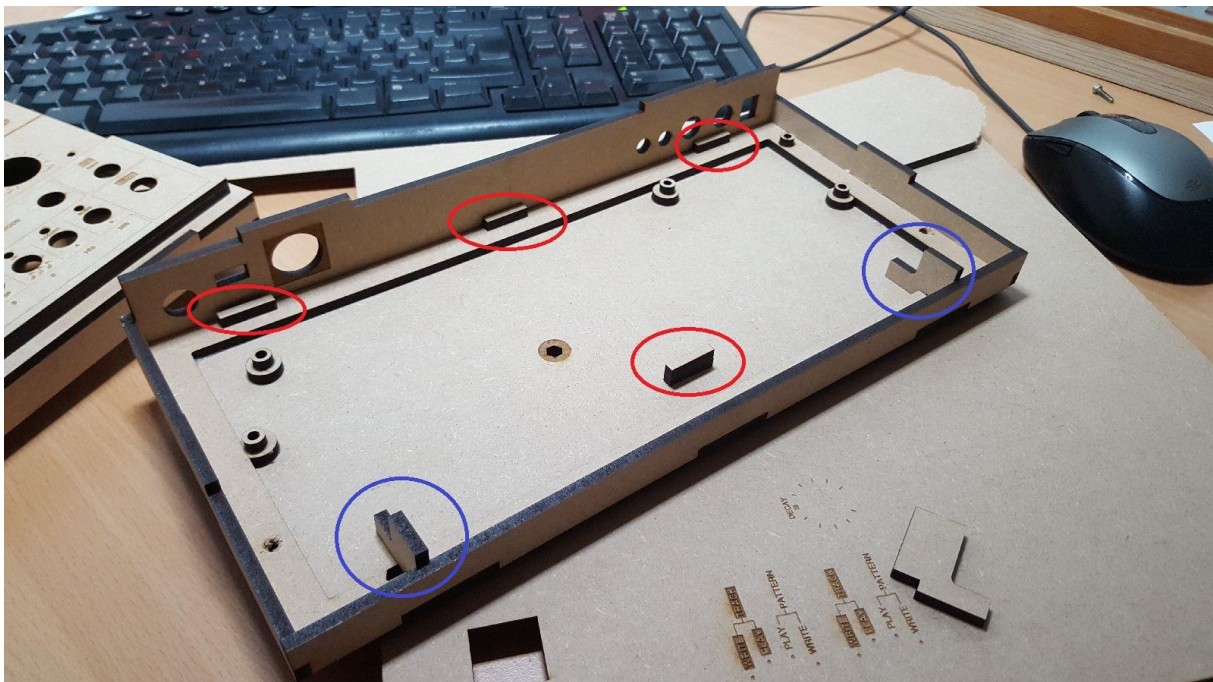
Keep enough pressure on the joints but not so much that the case gets warped or distorted.

Now to the small parts!

The supports for the PCB are glued like this:



The red arrow shows that for two of the supports you need so sand/file down the side of the large support disc to align the hole with the nut below. Glue and use screws to keep it together.

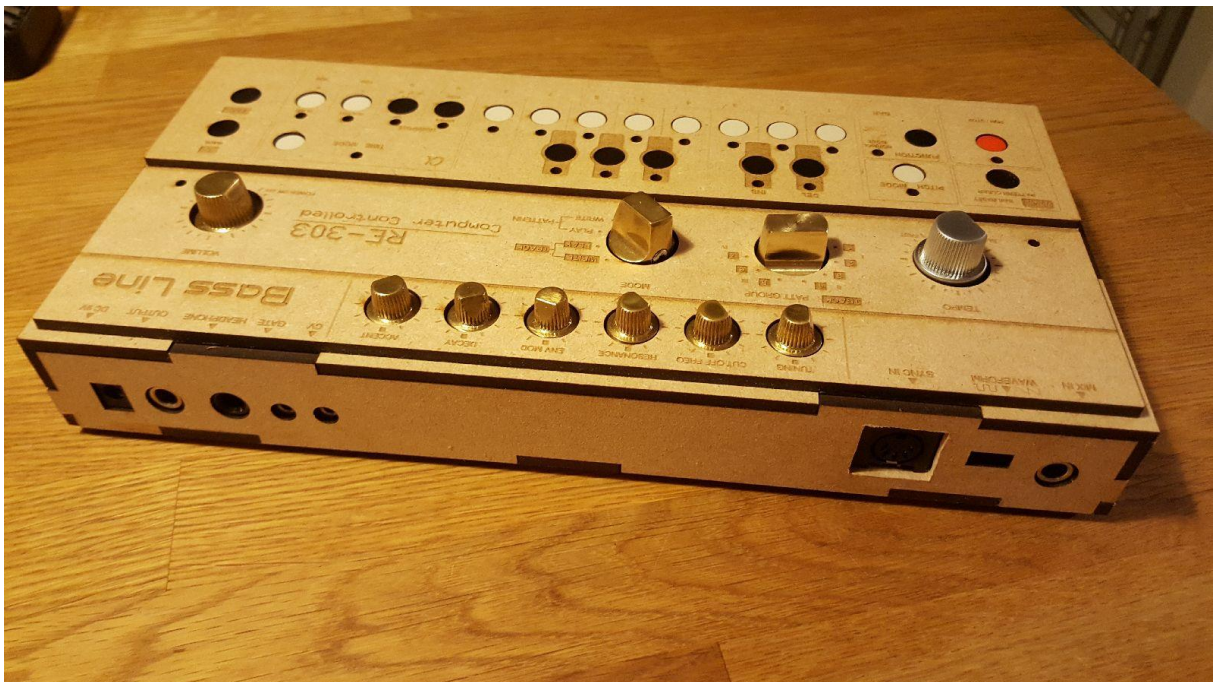


The red markings are PCB supports. Put these where you want them, check with your PCB before glueing them to place. The blue circles are PCB supports. There are two heights for these, use the lower one if you use the standard PCB spacers. The taller ones are to support the switchboard PCB if the standard standoffs are not used, please check this before glueing if you consider this option. Height might have to be adjusted to assure perfect fit.

You may need to file some chamfers for the waveform switch hole, CV/gate holes and make some adjustments elsewhere.

Be careful when dropping the main PCB in place, it is easy to shear the PCB supports if they catch the solder blobs on the PCB downside. The positive thing is that it is easy to glue it together again.

There are a number of different ways to hold this thing together and I designed it to be a bit versatile so if you wonder why there are more holes than you use don't worry. If you want to do it any other way, go ahead! Good luck!



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