

### **Sawing out the parts by hand:**

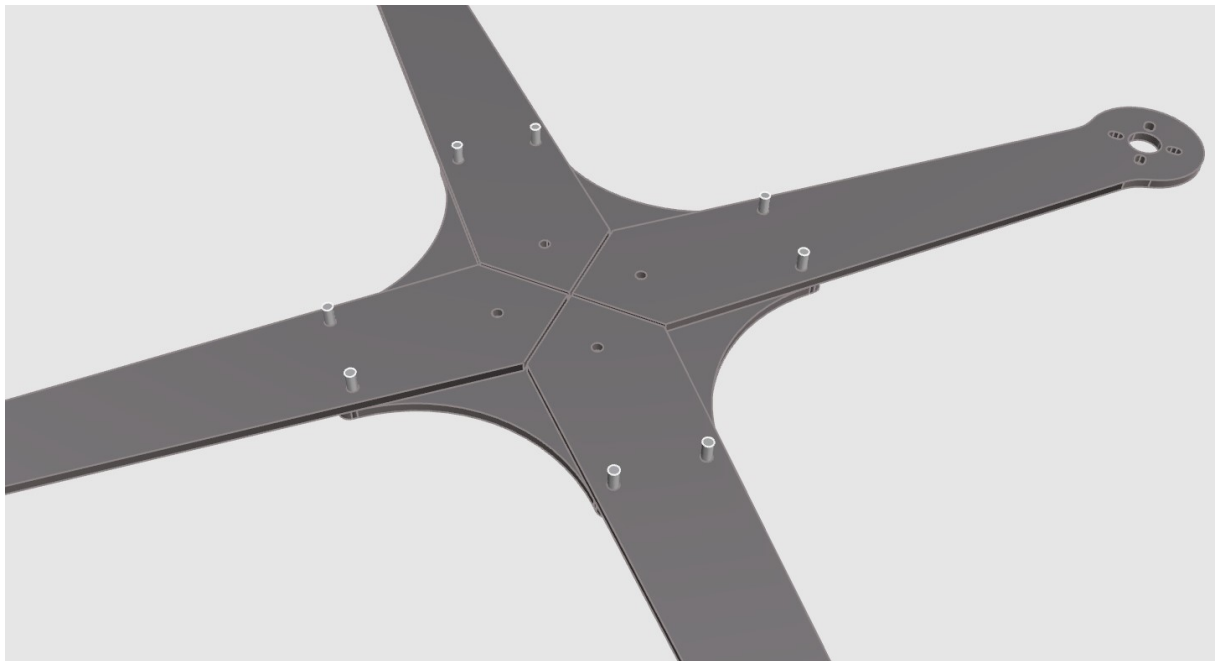
Print out the *Plywood-Parts.pdf* file and glue the paper onto 4mm plywood. In a pinch, 3mm plywood will do. Then saw the outlines out of the plywood. The lower center plate is the only part that differs in material thickness. No particular precision is required in most places. The rounded corners are also not important.

### **CNC controlled milling or laser cutting:**

Load the *Plywood-CNC.dxf* file. The inner and outer contours are each stored on a separate layer. Since the lower center plate differs slightly for 3mm or 4mm plywood, the level with the corresponding center plate must be selected together with the outer contours.

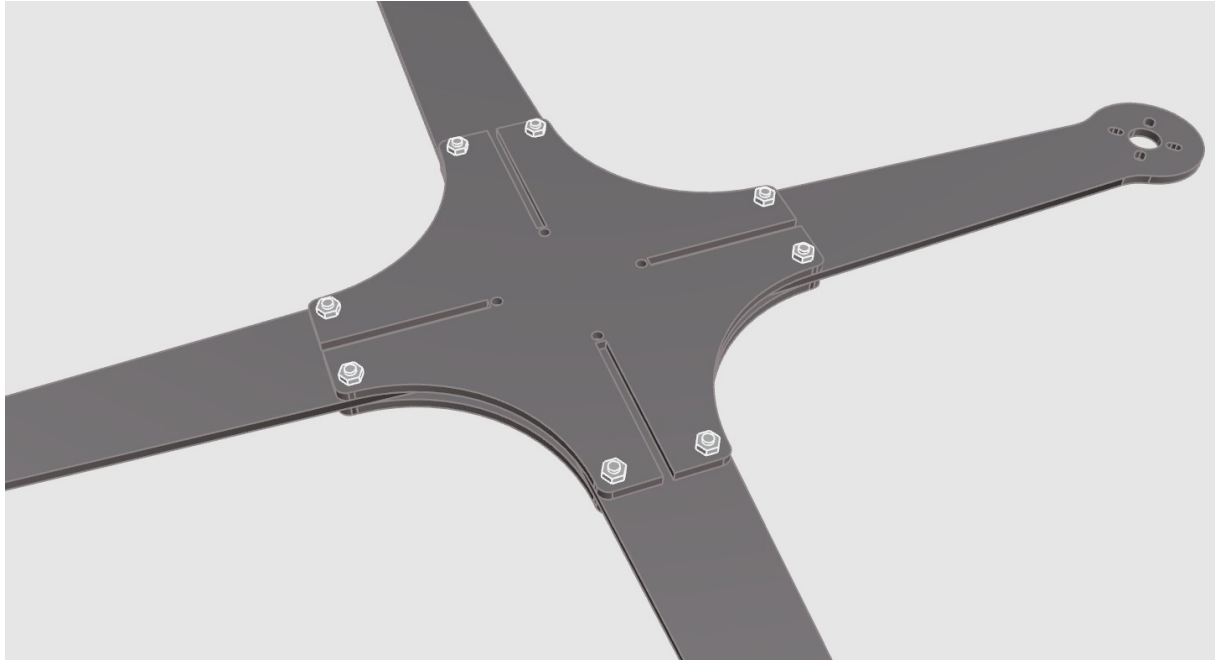
### **Assembly:**

The arms can either be screwed or glued to the two center plates. Gluing leads to greater stability, but prevents the possibility of later repairs. If the center plates are to be glued to the arms, the outer pairs of screw holes do not have to be drilled. The inner four holes in the 30x30mm grid must be drilled in any case.



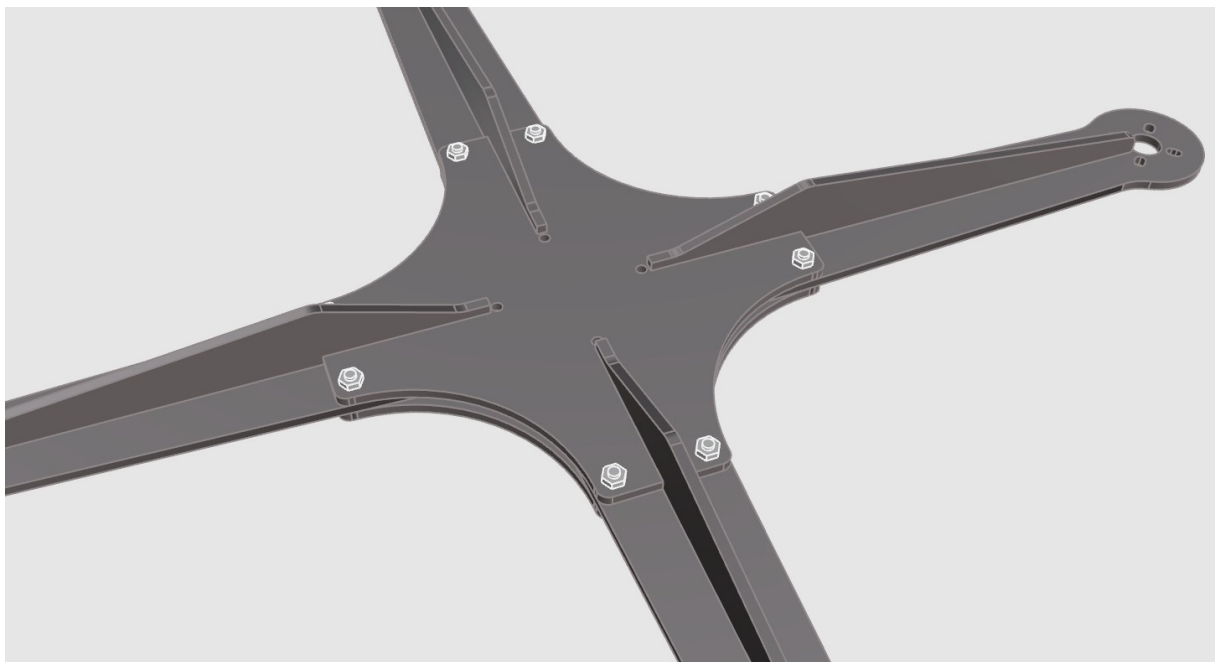
### **Step 1:**

At the outer ends, insert M3x15 screws through the upper center plate and the four arms. Alternatively, the arms can also be glued to the center plate. A gap of 1 millimeter should remain between the arms.



**Step 2:**

Place the lower center plate and screw it with M3 nuts. For better alignment, screws should be inserted through the four inner holes. As an alternative to screwing, the lower center plate can also be glued.



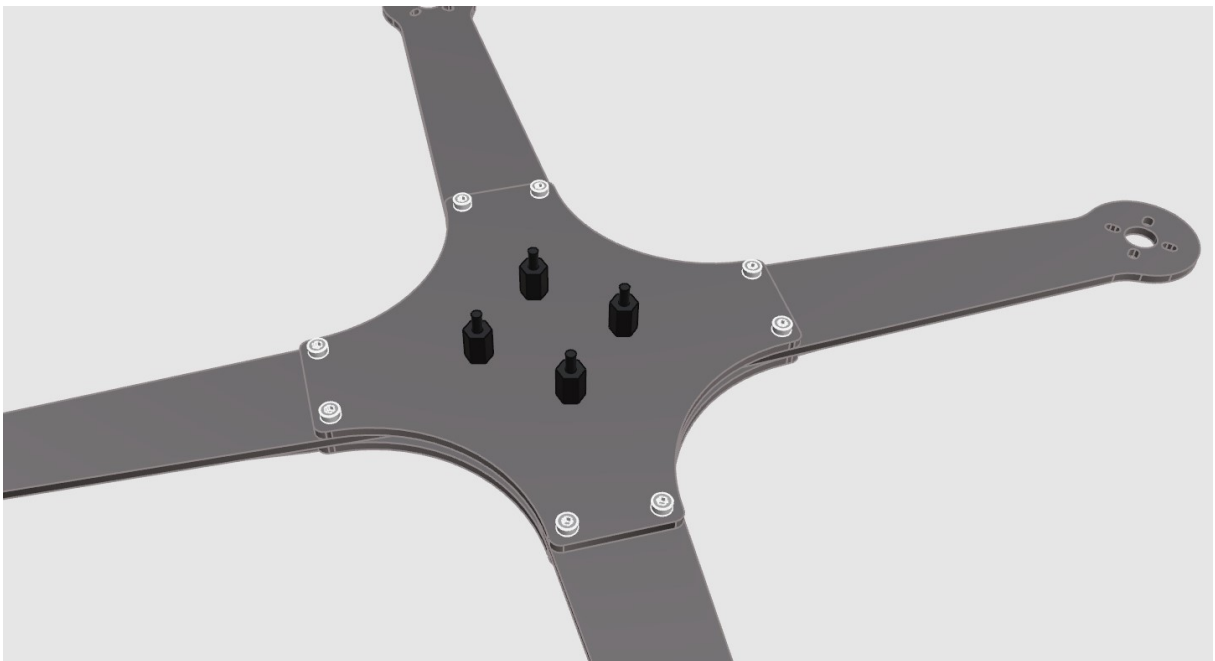
**Step 3:**

Fill the slots of the lower center plate with some glue. Also apply glue to the contact surfaces of the reinforcements and glue them to the arms. Press the reinforcements into the slots of the lower center plate as far as they will go.



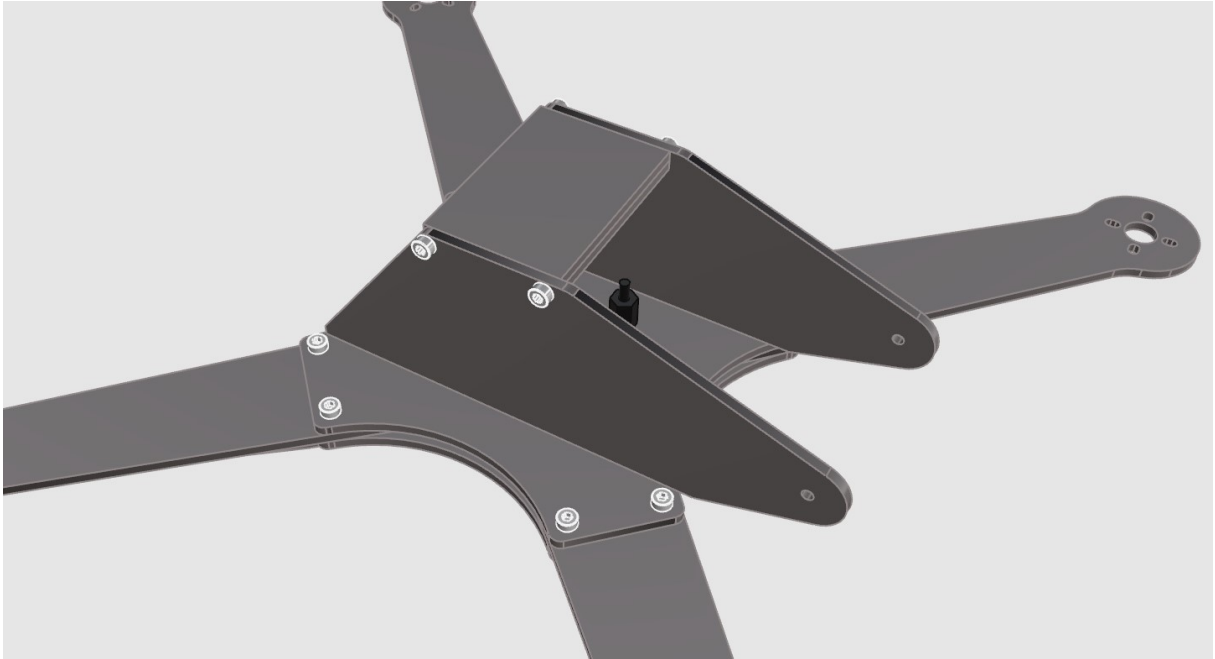
**Step 4:**

Attach the battery carrier with four screws M3x20. For better stability, the contact surfaces on the reinforcements of the arms can be coated with glue.



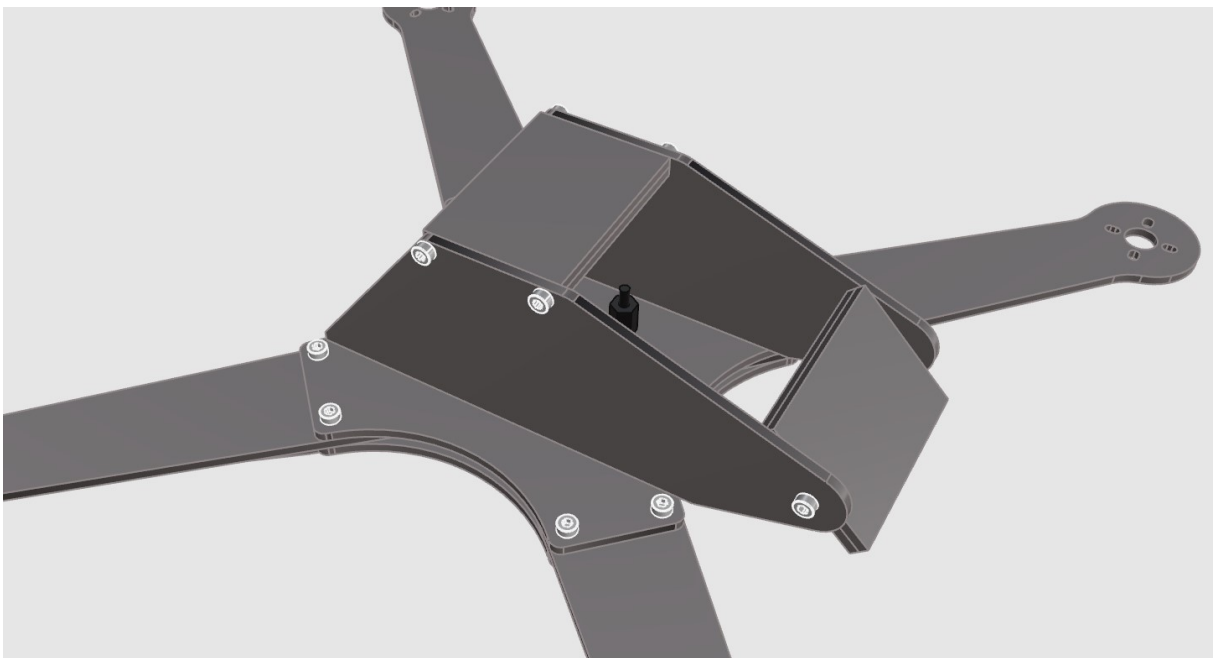
**Step 5:**

Place four M3 spacer bolts on the screws on the opposite side and tighten. A total height of 49 millimeters is available for the electronics. If there are several electronic boards, correspondingly short spacer bolts should be selected.



#### Step 6:

Glue two of the four 40x57mm carrier plates together and screw them to the two side panels. Wood screws up to approx. 3mm are suitable for screwing, whereby pre-drilling should be carried out to be on the safe side. Gluing the carrier plate to the side parts is not recommended, as this makes it difficult to assemble the electronics. Then place the structure on the upper center plate with sufficient glue on the contact surfaces and align it straight in the direction of flight.



#### Step 7:

Glue the other two carrier boards together as well. Mark the center point on each of the 40mm long edges and pre-drill before screwing