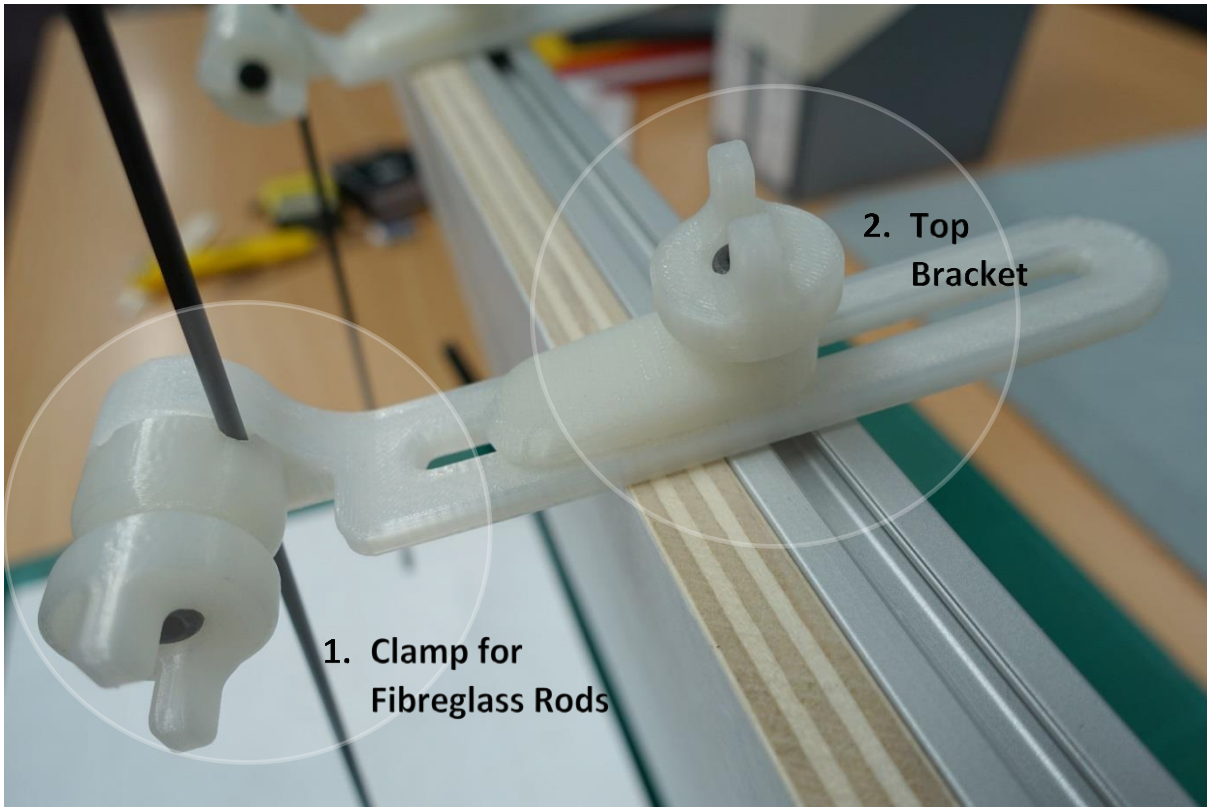
ACBS 3D Printing Components: *Assembly Instructions*

Prepared by Auckland Museum Tāmaki Paenga Hira, 23/09/2020

Washers: M5 X 10 X 1.0mm

Nuts: Standard metric M5 with other dimensions of : 7.7mm across the sides (8mm spanner) x 4.5mm deep

Bolts: Standard metric M5 cap bolts, 30mm for the two shorter ones (top bracket) and 40mm for the two longer ones (clamp for fibreglass rods). Other dimensions of: Cap diameter 8.4mm, cap height 5mm and hex key size 4mm.



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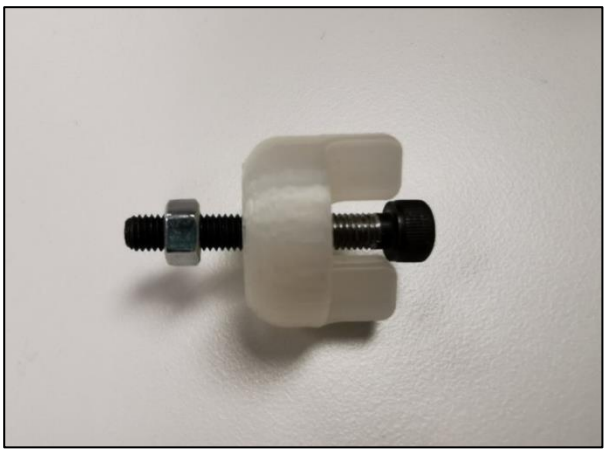
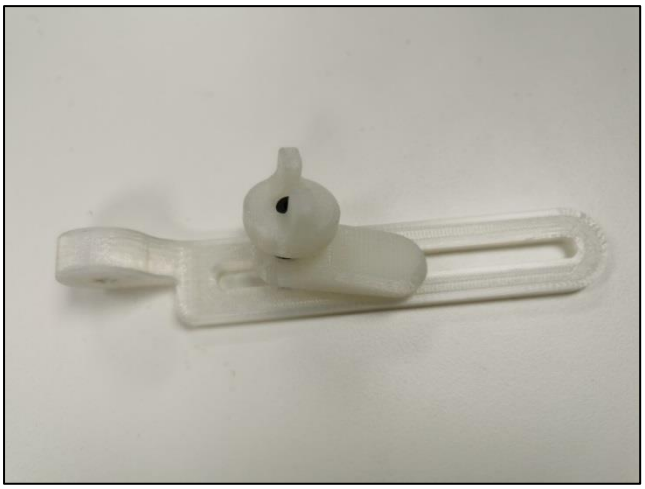
1. **Top bracket** (slides along T-slotted profile)

In order, bottom-up: T-slot nut (goes inside T-slotted profile), 3D-printed clamp arm (above the T-slotted profile), 3D-printed support block (this can swivel to allow the rod clamps to be closer to the board), washer, nut, 3D-printed winged toggle and bolt.

First the bolt is pushed through the winged toggle and the nut is done up tight on it to secure the nut, bolt and winged toggle together. As shown below, the bolt fits into a T-slot nut (custom made but you can find them in stores too) within the T-slotted profile. It's good to check that the bolt doesn't contact the T-slotted profile before it tightens properly. If it does it will need to be cut down slightly.





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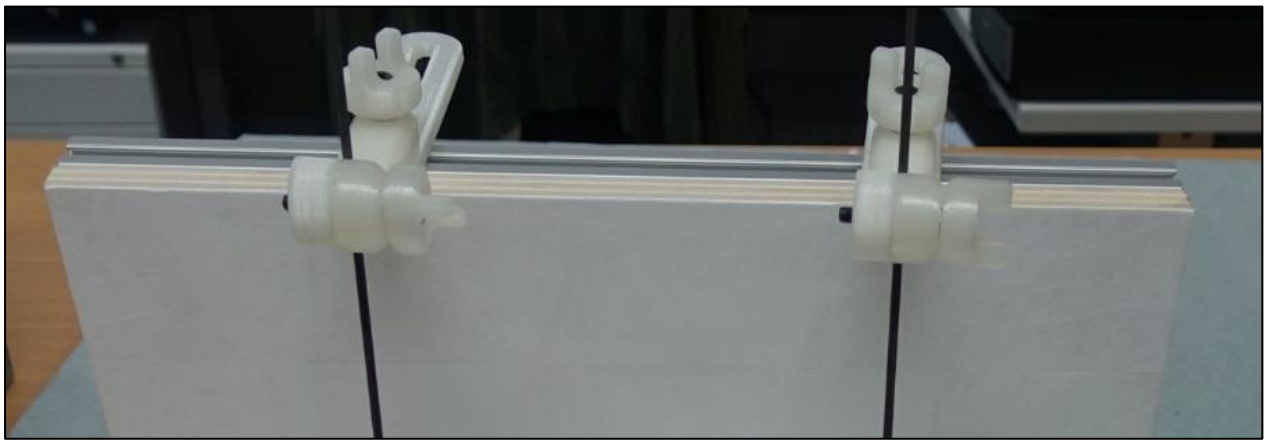
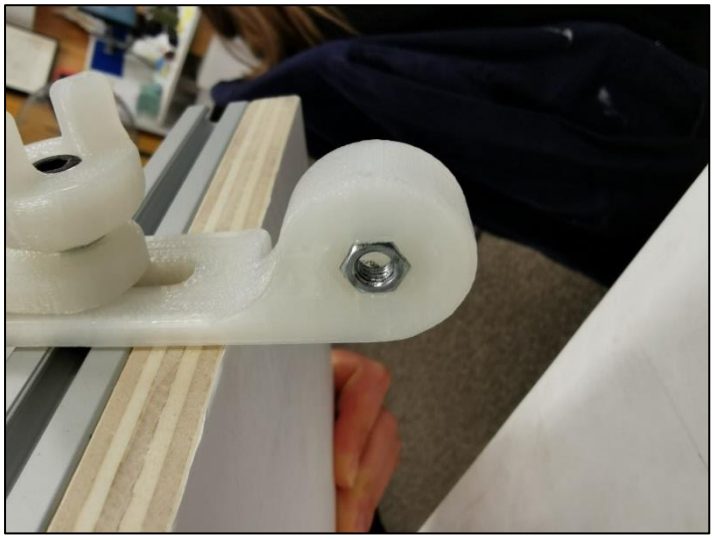
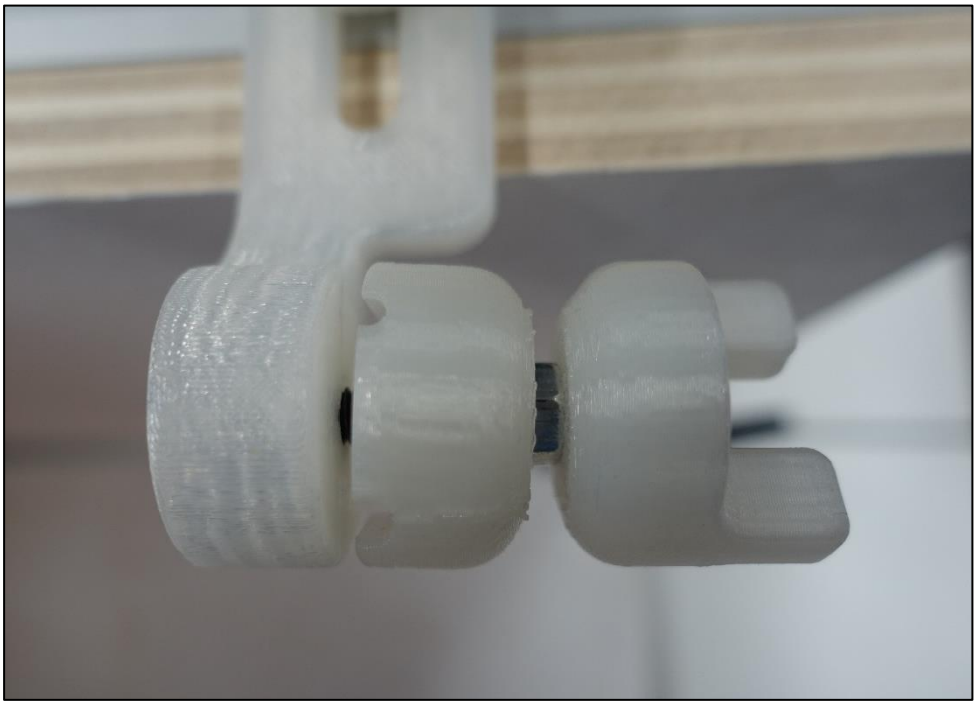
2. Clamp for fibreglass rods

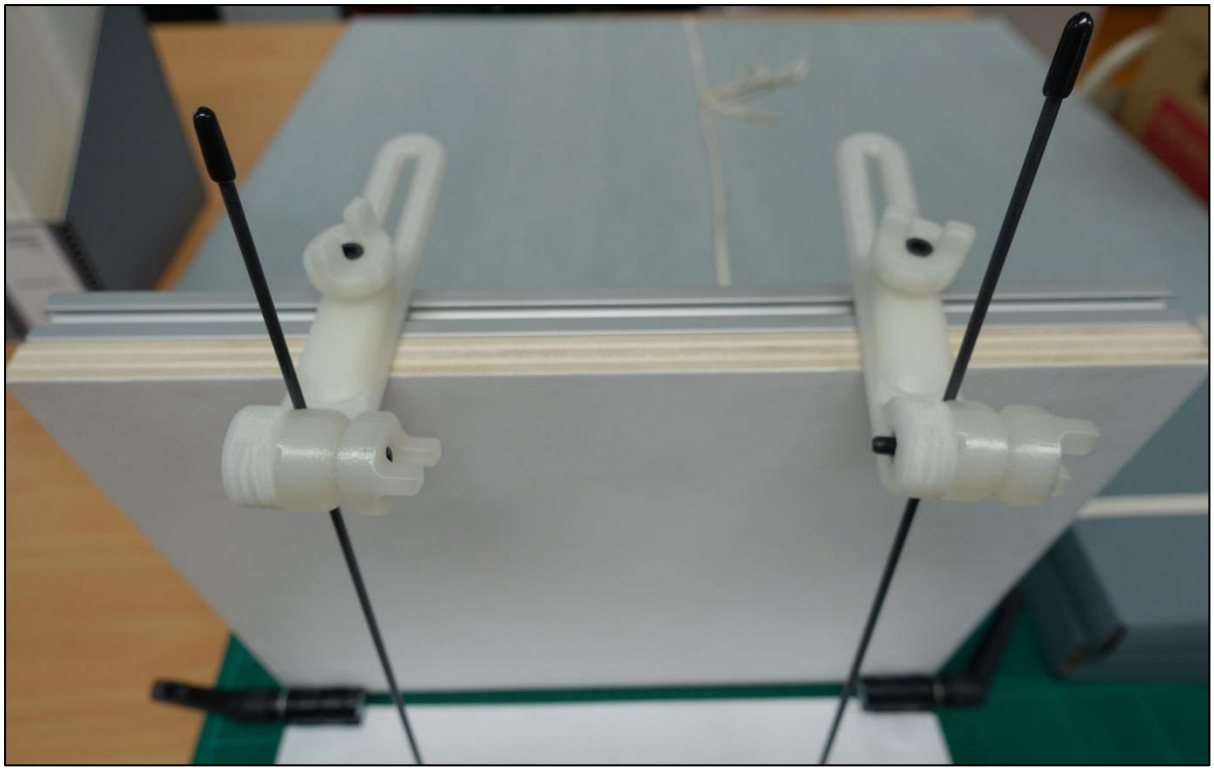


In order, left to right: Nut, sits inside attachment to 3D-printed clamp arm (as per photo on left), 3D-printed clamp for fibreglass rods, washer, nut, winged toggle, bolt.

The clamp for fibreglass rods (in the middle) has two grooves in it – one for 2mm fibreglass rods and one for 3mm fibreglass rods. The grooves face towards the clamp arm as per photo below.







The completed assembly should allow you to move the fibreglass rods towards or away from the board, tilt them in any direction, adjust their length and move them freely along the T-slotted profile.