

HKBay.com

B - Base Assembly

Before you begin, please watch this instructional video about how to properly use t-slot nuts. It will save you hours of frustrating assembly-time: <https://www.youtube.com/watch?v=D-E8VYJT4ml>

Written By: HKBay



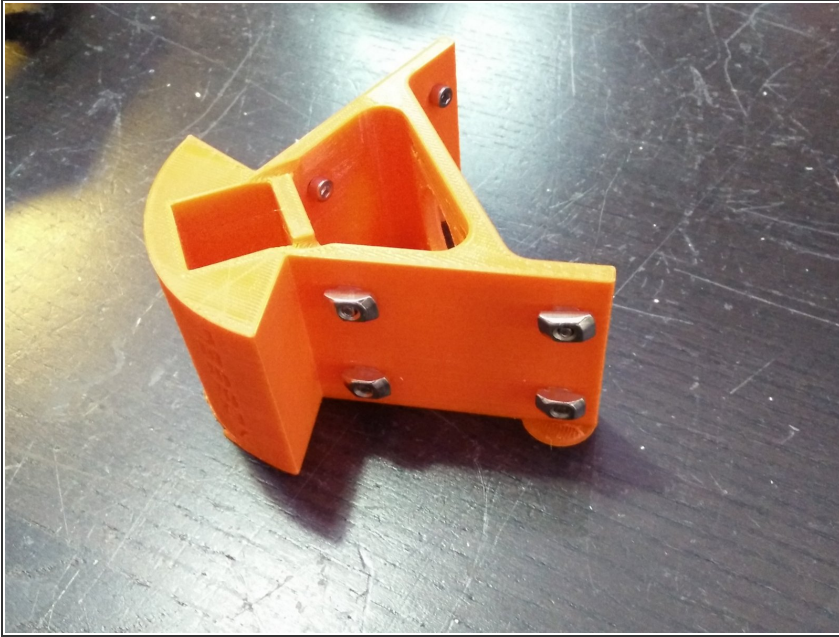
**TOOLS:**

- [Hex key; ball ended, long arm, 2.5mm](#) (1)
- [1.5mm hex key from kit](#) (1)

**PARTS:**

- [lower brackets](#) (3)
- [short Alu frame profiles](#) (6)
- [M3x8 screws](#) (36)
- [t-slot nuts](#) (24)
- [LCD flat cables](#) (2)
- [USB cable](#) (1)
- [small motors](#) (3)
- [GT2 pulleys](#) (3)
- [grub screws](#) (6)

Step 1 — Base Assembly



- Add all 24 M3x8 screws and t-slot nuts finger-tight to the 3 brackets.

⚠ Make sure they are in correct position, i.e. nuts facing outwards, so that profiles can be added later.

Step 2

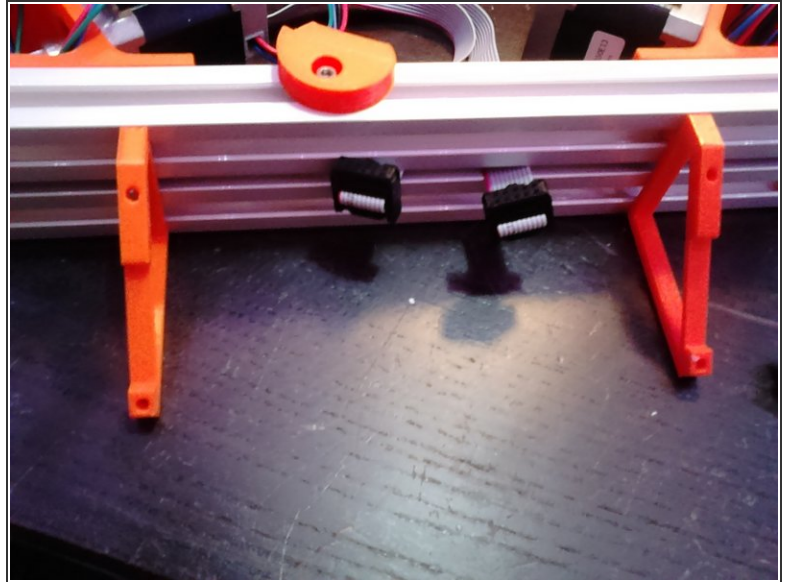
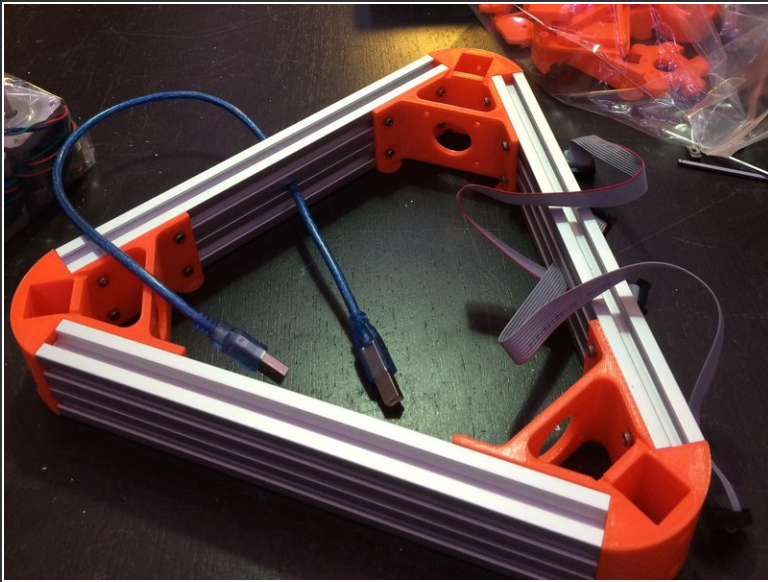


- Then align one of the profiles with the two nuts of one of the brackets. Always starting with the outer screw first, loosen the screw 5 full turns, then tighten it 2-3 full turns until the profile is held tightly against the bracket.

⚠ Check that the outer t-slot nut connected properly with the groove in the profile, only then repeat with the inner screw/nut. The inner t-slot nut can be checked visually.

- After both nuts connected properly, add a second profile to the same bracket.

Step 3



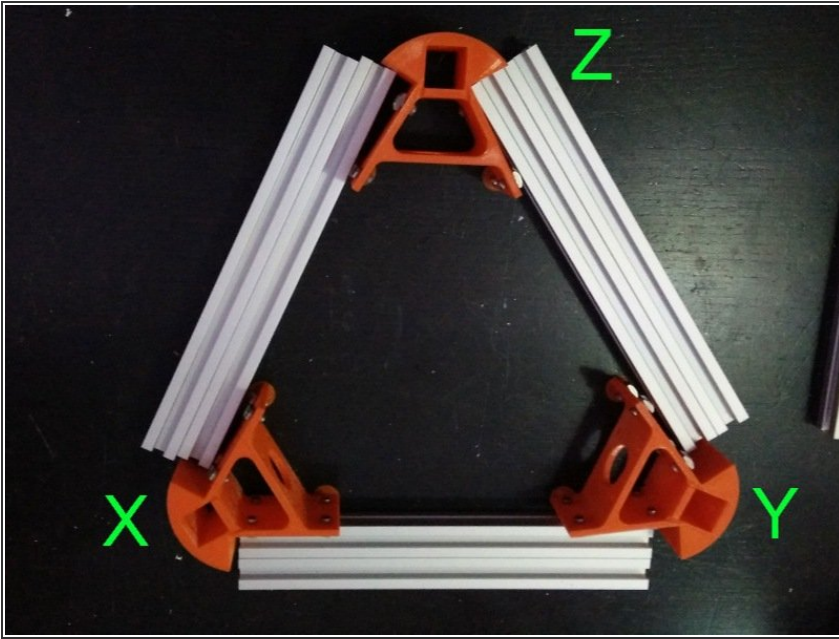
⚠ Before continuing, place the two LCD flat cables between the two profiles! Only then add a second bracket to the other end of the two profiles.

- Then add third and fourth profiles to one of the brackets and place the USB cable between these two profiles.

⚠ The flat USB connector should face outwards, the square connector into the triangle.

- Then add the third bracket and lastly, add the last two profiles to two brackets in order to complete the triangle.
- ☑ Make again sure that all the t-slot nuts have connected properly with the profiles. This is crucial for the future stability and rigidity of your printer!

Step 4 — Identify X, Y and Z towers




- From this point on in the assembly, it is necessary to identify the 3 towers individually. Looking at the profiles with the flat LCD cables between, the front left tower will be X, the front right tower Y and the rear tower Z. The extrusions joining them will be referred to as X-Y, Y-Z and X-Z.

Step 5 — Fit pulley to motor

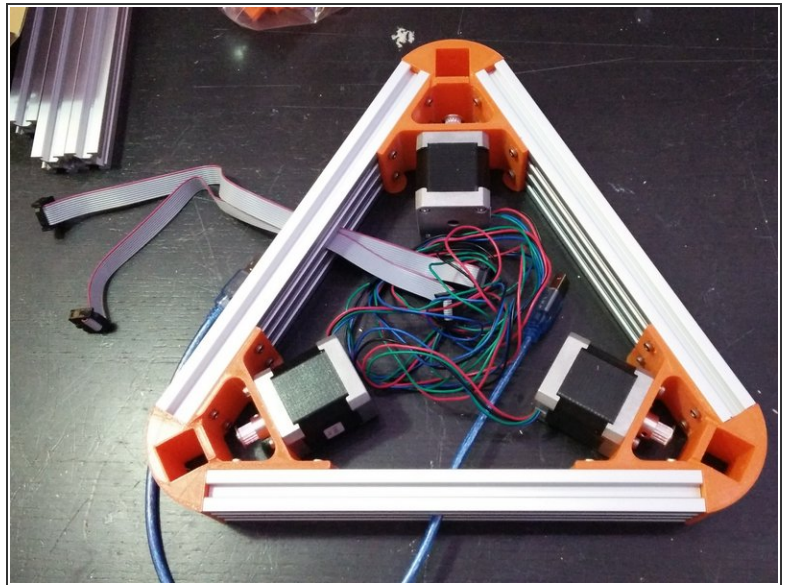
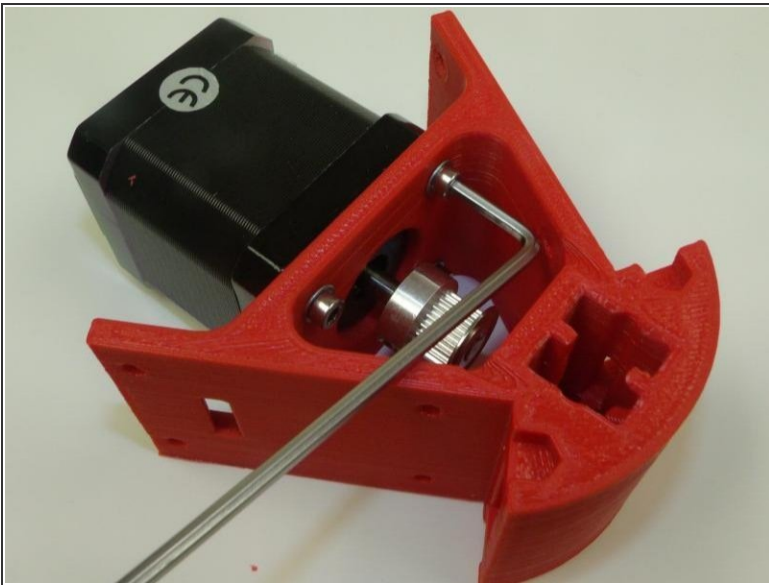



- The pulley is fitted with the collar and grub screw facing towards the motor. This provides correct

alignment with the idler at the top of each tower.

-  The motor shaft has a flat side - align the flat side with the first grub screw. This firmly couples the pulley to the motor shaft. Then secure the second grub screw. The shaft should not be sticking out more than 1mm from the pulley. Tighten firmly (but do not over-tighten) with the supplied 1.5mm hex key.

Step 6 — Fit motors to base assembly



- Align motor with plastic bracket, with the cable socket on the left-hand side of the motor viewed from the bracket end (hidden in the picture above). Insert four M3x8 screws and tighten with the ball end of 2.5mm hex key.
-  There is a groove in the printed part to reduce the angle of the key slightly. Make sure the screws go in straight - loosen and re-align any screws that have gone in at an angle. Do not tighten fully with the ball-end. Instead use the short leg.
- Repeat for the other 2 brackets. The completed base assembly may now be set aside while you get on with the top assembly.