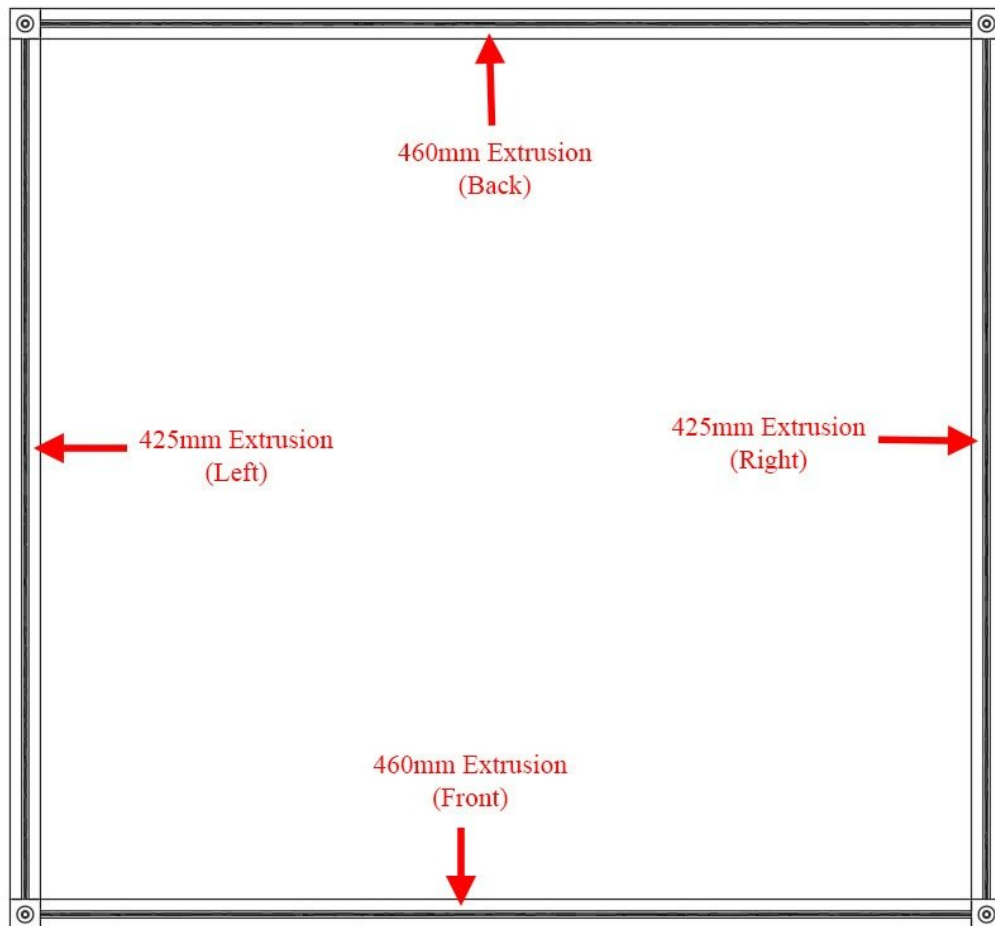


railcore

C) Top Extrusions Assembly

This guide will walk you through building the top frame assembly of your RailCore II.

Written By: Tony Akens



INTRODUCTION

It's assumed that you're building a kit from Filastruder, and you've completed all previous sections. At the end of this section you should have a "top extrusions" assembly together for your RailCore frame.



TOOLS:

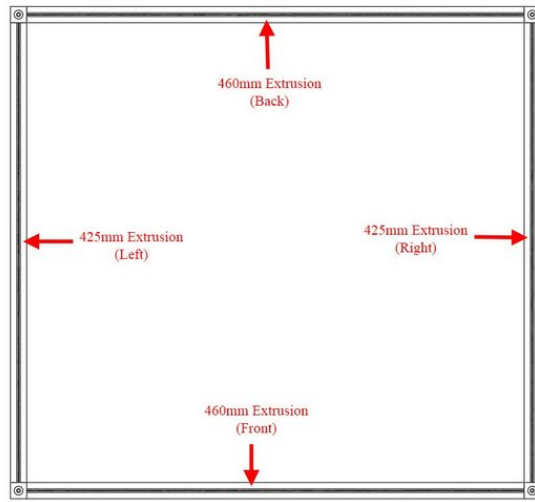
- [Allen Key](#) (1)
- [Masking Tape](#) (1)
- [Marker](#) (1)



PARTS:

- [460mm extrusion](#) (2)
- [425mm extrusion](#) (2)
- [Corner Cube](#) (4)
- [M3 Nut](#) (53)
(add 24 if using a Halo)
- [M3 x 10mm hex head bolt](#) (20)
- [M3 x 8mm Button Head Bolt](#) (16)
- [M3 x 16mm hex head bolt](#) (9)
- [400mm linear rail with carriage](#) (2)
- [M3 lock washer](#) (8)

Step 1 — Lay Out Top Extrusions

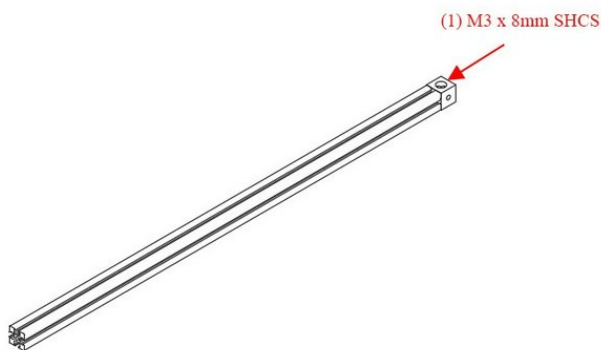


- Lay Out Top Extrusions as pictured

⚠ The kit includes (2) untapped 425mm extrusions - for this step be sure to use the tapped extrusions.

- It can be helpful to use masking tape to add a label to the top of each extrusion indicating which it is (Top Back, Top Left, etc)
- Be sure the Corner cubes have a larger hole facing up, smaller hole facing down.

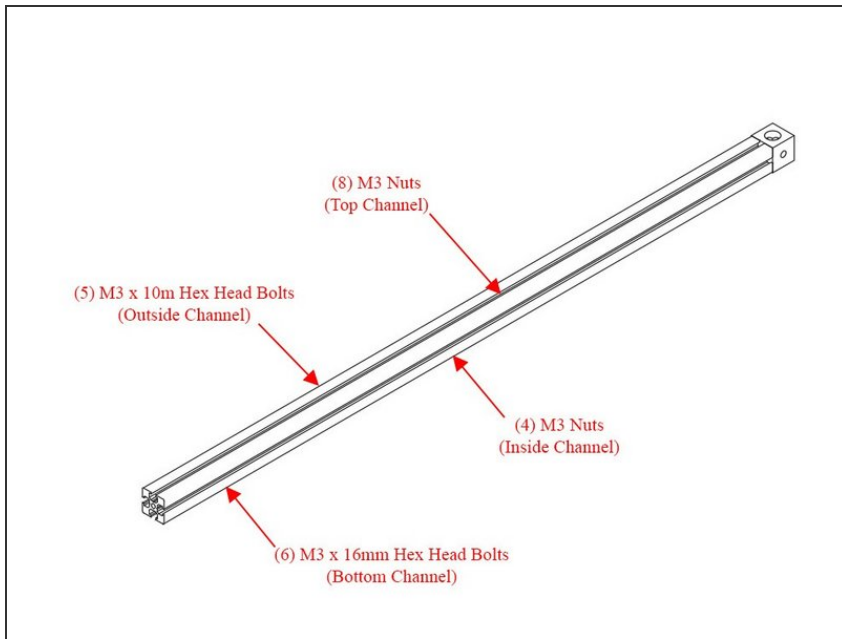
Step 2 — Bolt Corner Cube to Top Left Extrusion



- Bolt Corner Cube to Top Left 425mm Extrusion using (1) M3 x 8mm Socket Head Cap Screw

i Note on the corner cube, the small hole is pointing to the right in this image

Step 3 — Add Hardware to Top Left Extrusion



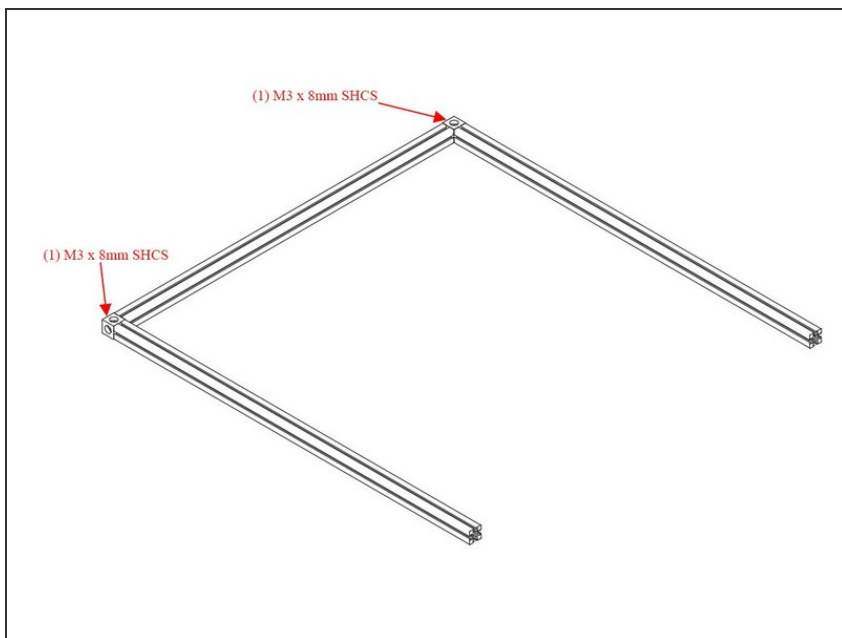
- Hold the Extrusion as it will be oriented on the printer (make sure the big hole on the corner cube faces up)
 - Slide (8) M3 nuts into the top channel (If you're installing a halo, add 6 additional M3 nuts for a total of 14)
 - Slide (5) M3 x 10mm Hex Head Bolts in the outside channel
 - Slide (4) M3 nuts in the inside channel
 - Slide (6) M3 x 16mm Hex Head bolts in the bottom channel
- i** Note on the corner cube, the small hole is pointing to the right in this image

Step 4 — Attach Second Corner Cube to Top Left Extrusion



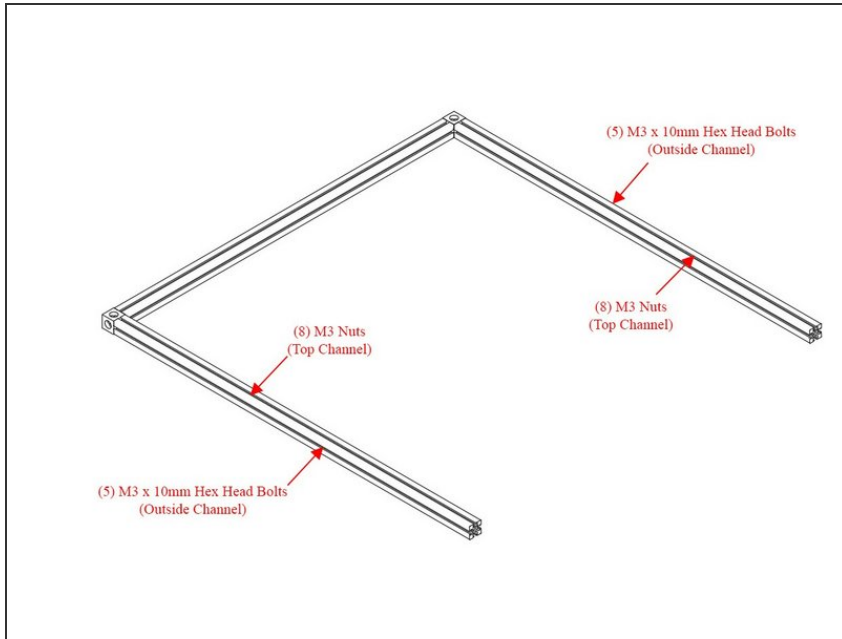
- Attach Second Corner Cube to Top Left Extrusion using (1) M3 x 8mm socket cap head screw. Be sure the large hole is up, small hole is down.
- ⓘ Note on both corner cubes, the small hole is pointing to the right in this image

Step 5 — Attach Top Front and Top Back Extrusions



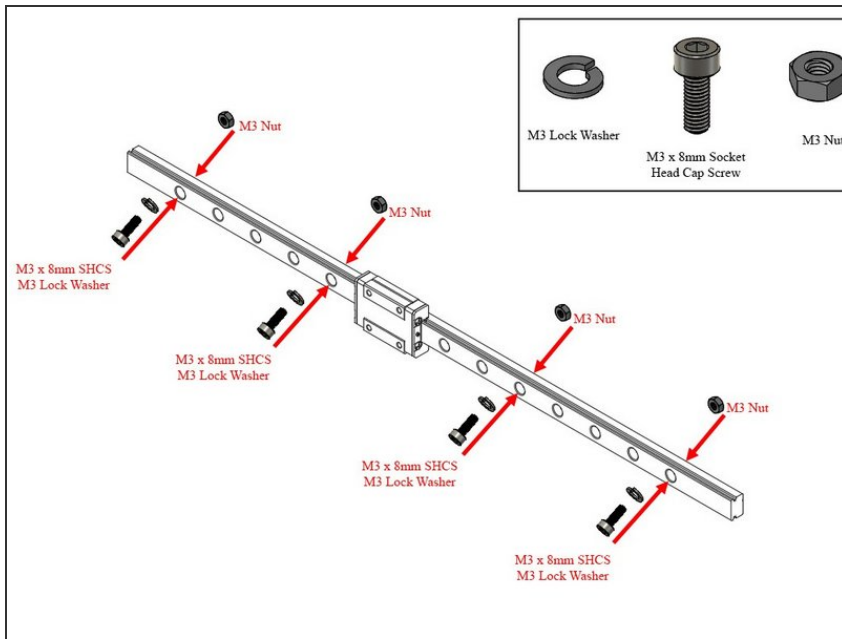
- Attach the (2) 460mm Top Front and Top Back Extrusions using (1) M3 x 8mm socket cap head screw each.

Step 6 — Add Hardware to Top Front and Top Back Extrusions



- (5) M3 x 10mm Hex head bolts go in the outside channel of the back extrusion.
- (8) M3 nuts go in the top channel of the back extrusion (if installing the optional Halo, add six (6) more nuts in this channel for a total of 14).
- (8) M3 nuts go in the top channel of the front extrusion (if installing the optional Halo, add six (6) more nuts in this channel for a total of 14).
- (5) M3 x 10mm Hex Head Bolts go in the outside channel of the front extrusion.

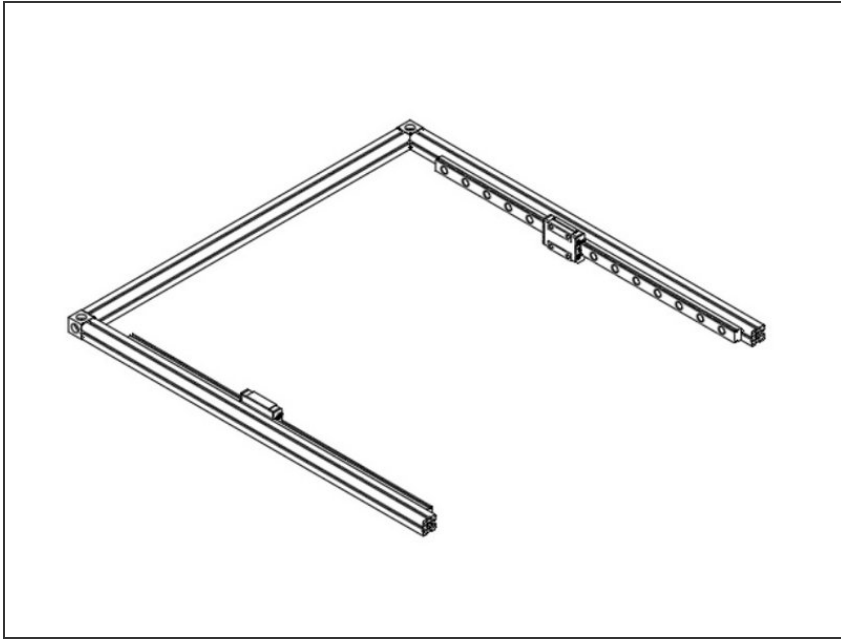
Step 7 — (2x) Install M3 Hardware into Linear Rail



- Use a bit of masking tape to keep your carriage from sliding off your linear rail.
- Select 4 evenly spaced holes in your linear rail. (roughly 3 empty holes between each bolt)
- Place a lock washer on (1) M3 x 8mm socket cap head screw, and place it into one of the holes selected. Loosely thread on (1) M3 nut to the bolt. **DO NOT TIGHTEN THEM FULLY.** The M3 nut only needs to be threaded onto the tip of the bolt, you want a gap between the nut and the back of the rail. Repeat for the other three (3) holes.
- Repeat the above steps for the other 400mm rail.

⚠ It is highly recommended to use a bit of masking tape to keep the carriage from sliding off of the linear rail.

Step 8 — Attach Linear rail to Top Front and Top Back Extrusions

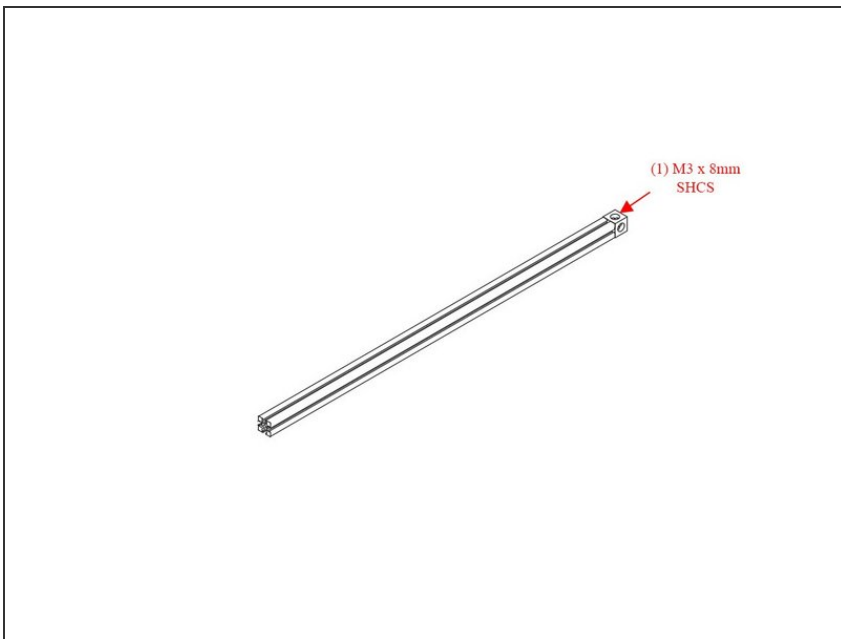


- Attach Linear rail to Top Front and Top Back Extrusions by sliding the M3 nuts into the inside channel on the extrusion.
- Roughly center the extrusion, and then snug up the bolts.

⚠ Do not overtighten the bolts, you just need them snug for now. They'll be tightened later.

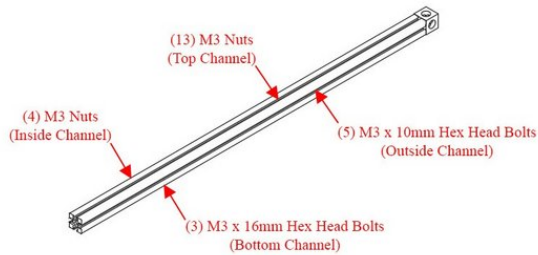
⚠ It is highly recommended to use a bit of masking tape to keep the carriage from sliding off of the linear rail.

Step 9 — Attach Corner Cube to Top Right Extrusion



- Set aside the rest of your top extrusion assembly for now, so we can work on the top right extrusion.
- Attach a corner cube to the right 425mm extrusion using (1) M3 x 8mm socket cap head screw.

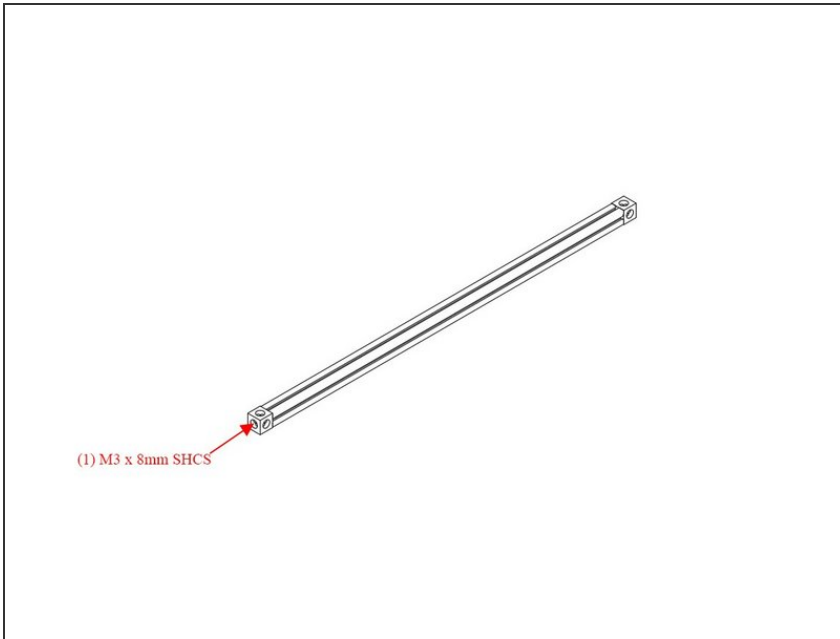
Step 10 — Add Hardware to Top Right Extrusion



- Slide (13) M3 nuts into the top channel (if installing the optional Halo, add six (6) more nuts in this channel for a total of 19)
- Slide (4) M3 nuts into the inside channel
- Slide (5) M3 x 10mm Hex Head Bolts into the outside channel
- Slide (3) M3 x 16mm Hex Head Bolts into the bottom channel

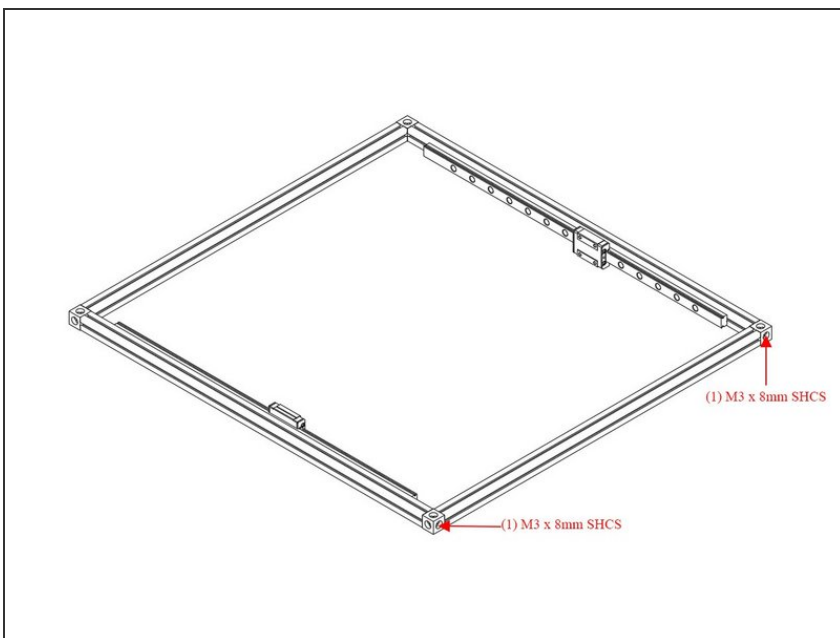
⚠ Be sure the orientation of the corner cube is correct. A large hole should face up, a small hole should be facing down, and a small hole should be facing towards the inside channel

Step 11 — Attach Second Corner Cube to Top Right Extrusion



- Attach Second Corner Cube to Top Right Extrusion using (1) M3 x 8mm socket cap head screw.

Step 12 — Attach Top Right Extrusion to the Rest of the Top Extrusion Assembly



- Attach Top Right Extrusion to the rest of the Top Extrusion Assembly using (2) M3 x 8mm socket cap head screws.