Some of these notes may be trivial, but felt it was necessary to mention since it is beta.

Needed tools for day-to-day use and assembly:

Collet Wrench

USB Cable

Thread Lock

8mm Combination Wrench

Red Thread Loctite

4mm Allen Wrench

3 mm Allen Wrench

2.5 mm Allen Wrench

Metal File

Combo Square or Steel Square

Assembly Notes, Step 1:

-Smooth/file down sharp edges/burs on aluminum gantry plate holes and edges. Could possibly interfere with screws/eccentric spacers from setting flush or lead to cuts from sharp edges.

-ACME Block, may want to mention the M5 20mm length screw (20 vs 25) as you are building it (was mentioned initially in the parts lay out, but not in the assembly)

-Add 3rd screw to the ACME block? With just two screw, has some alignment play in it and worried about the long thread rod alignment/assembly later.

-Cherry pick the nylon nuts for the inner mini extreme wheels, otherwise will have to file them down later. Can visually see which nylon nuts have too much nylon washer sticking out into the screw space and will flare out once the screw is tightened.

-Maybe mention something about how much to screw/tighten the adjustment Allen screw on the ACME Blocks, before assembly to the gantry plate

-Assembling the normal extreme wheels to the plate(s), the shim between the bearings will slide around some. When trying to align the screw through the bearings and shim, just spin the wheel on the screw and it will typically align and screw will go through.

-I took a marker, and made a tic mark at the same location on the outer edge of all eccentric spacers (thinnest section), for referencing/adjusting them during assembly. Also, make sure you turn/adjust all eccentric spacers in the same direction (CW vs CCW) during adjustments and keep your orientation the same all the way through, while referencing from the same side of plate.

-After tightening each Extreme wheels, check to make sure they will roll/spin freely with no binding as they turn, before proceeding further.

-Update build/assembly video of the extreme wheels not using the shim (.2mm spacer) during the assembly, even though it was noted at the beginning of the video that it was removed from the BOM.

Assembly Notes, Step 2:

-Concern with tightening the two ACME Blocks down enough to the Gantry Plate, but loose enough not to bind the Threaded Rod. Currently, cannot get the blocks tight enough so there is no loose play in them w/o the rod threaded through them and still have the threaded rod turn with ease once it is in place.

- Triple check that mini extreme wheels are adjusted correctly. If not, incorrect adjustments will be more pronounced when adjusting the outside extreme wheels.

Assembly Notes, Step 4:

The tick mark (suggested earlier) on the outside of the eccentric spacers, will come in handy during this part of the assembly. Line up the tick marks on the eccentric nuts as you thread the 60mm screw through, so you are not fighting against the wheels pushing against the C-Beam.

Tip for lining up the 2nd eccentric nut with the 2nd extreme wheel; Use one of the screws or allen wrench and slide it in from the nylon nut side of the plate to hold the 2nd eccentric spacer in place. Slide the 2nd extreme wheel in and twist (will help line up the washer/spacer in the extreme wheel) the 60mm screw though 2nd extreme wheel and line it up with the 2nd eccentric nut, then just push out the screw or allen wrench holding the 2nd eccentric nut in place.

*Idea for an Adjustable Tension Anti-Backlash Nut/Block*

*-Run M5 screws through springs, may need to add small washer(s) too each end of the springs as well.*

*-Then through the 8mm ACME Nut Plate outside holes (non-threaded)*

*-Then screws the M5’s into a threaded ACME Block on the opposite side.*

*(or place spring between the Nut Plate and the block)*

*Tightening or loosening the spring loaded screws will add or remove tension to the ACME Threaded Rod, as it runs through both Nut Plate and Block. This could work on the Z-Axis plate, would be able to access the screws heads from behind the edges of the plate, and inside the C-Beam (could add a hole/window to see the screw heads). Of course, accessing the screws around mini wheel post, may require the nut plate/block size to be adjusted with the current screw hole placement.*