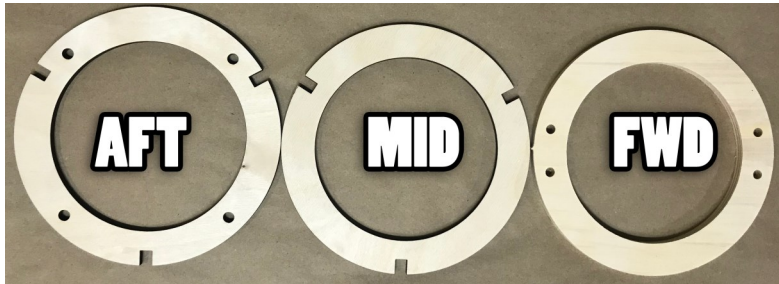


# LOC MMAS

## INSTRUCTIONS

**Due to the high thrust motors that can be flown in this rocket, epoxy is recommended!**

**Before beginning construction**, read over instructions to become familiar with the proper construction steps. **TEST FIT ALL PARTS!** Light sanding may be necessary to obtain proper fit.



*This kit may be constructed one of two ways. Inserting the built motor assembly, then epoxying the fins in the slots. OR building the fin can outside the airframe, cutting the airframe fin slots to the aft and sliding the fin can up into the airframe. Please decide which flavor you prefer before proceeding with construction.*

### STEP 1

Hammer or press the 1/4" x 20 T Nuts in the AFT and 54mm rings lasered holes. Epoxy fillet the aft outer diameter of the T Nuts to ensure they remain in place.

### STEP 2

Remove the glassine paper from the 5.5" motor mount tube to ensure proper adhesion of the rings. Loop each U-bolt through the double sided end of the Y Recovery Harness. Install a nut on each threaded end of the U-bolt and tighten all the way tight. Use a washer on each threaded portion. Install the U-bolt into the 3/8" ring. At the aft of the U-bolts insert the washer plate. Tighten with locking nuts. Epoxy the AFT locking nuts onto the ring/washer, cause that's just smart! Slide the FWD ring onto the 5.5" motor tube so the tube is 1" exposed from the ring. From the other end take the MID ring and slide up the 5.5" motor tube approximately 10.625". Slide the AFT ring on leaving 1/8" of the motor tube exposed. Insert the fins into the AFT and MID ring slots to obtain proper alignment. When aligned properly remove the fins. With mid/long cure runny epoxy, secure each ring into place and fillet the intersection where the rings meet the motor tube. Allow to cure.

### STEP 3 (Optional FWD Thrust Ring)

Secure forward thrust ring (5.5" x 4mm) in 5.5" motor tube. The trick here is making sure your modular adaptor system is flush with the AFT ring but also meets the



with the thrust ring. Plan carefully!!! We want to distribute the thrust of the motor on the AFT ring but also the FWD thrust ring. Recommended is the thrust ring 16" up from the AFT epoxied into place. Test fit adaptor so AFT and FWD rings are touching each at the same time. When certain about the alignment and fit, epoxy into place the thrust ring making sure NOT to have any epoxy on the AFT end of the thrust ring AND being careful not to leak any epoxy AFT down the 5.5" motor tube. Build the adaptor as well. Once again removing/peeling the glassine off of the 54mm motor tube will ensure a solid build!



**STEP 4 Your choice!** Lightly sand airframe/fill spirals if desired.

**IF** constructing by building the fin can outside the airframe to obtain MAXIMUM strength...let's do it! Insert a fin into the ring slot, slather epoxy to adhere the joints from the motor tube to the rings. Allow to cure and move onto the next. When all fins are secured, use a hobby knife to cut the slots, all the way to the aft of the airframe. Test fit the fin can separating/expanding the aft of the airframe to allow room for the fins to meet and nest in the slots. Sand the rings as needed. When satisfied with the fit, remove the fin can. Apply nominal bead of epoxy forward of the slots inside the airframe. Slide fin can up the airframe until the fins meet the forward end of the slots and nests properly. Leave upright to cure. Feel free to drizzle epoxy from the forward end of the booster onto the forward ring to adhere the ring to the airframe; being careful not to get epoxy in the motor tube. Next turn the booster upside down so the AFT section is up. Apply a nice epoxy fillet to the aft ring where the ring meets the airframe, squeezing the airframe to bring back together. DO NOT get any epoxy in the T Nuts!!! Allow to cure. Next epoxy fillet each fin joint externally to the airframe.

**IF** constructing by inserting the assembled motor tube assembly into the airframe THEN epoxying the fins in place...cool. Apply nominal bead of epoxy forward of the slots inside the airframe. Push the assembly forward until the MID and AFT ring slots are visible and aligned properly through the slot. Check your alignment by inserting the fins in the slots before it cures!! Set upright to cure. At this point you may drizzle epoxy from the forward end of the booster onto the forward ring to adhere the ring to the airframe; being careful not to get epoxy in the motor tube. Next turn the booster upside down so the AFT section is up. Apply a nice epoxy fillet to the aft ring where the ring meets the airframe. DO NOT get any epoxy in the T Nuts!!! Allow to cure. Reposition airframe laying down. Finally apply a generous bead of epoxy to the root edge of one fin and insert in the fin slot. Allow to cure before moving onto the next fin. When all fins are epoxied in place, apply an external fillet to each fin to airframe joint.