



May 2021 M2 Update

Tail and Triple Rudder Flight Testing

After we concluded that mustering maneuverability required triple rudders (instead of merely a slotted vane vertical stabilizer), we converted the outside vertical stabilizers. (We had designed the tail with this possibility in mind.)



We immediately got the enhanced maneuverability we sought, but with some unexpected tail buffeting at 50+ mph. Solving this took many weeks, and was not easy. We developed several theories, and adapted the outside rudders to test-fly each theory.

So, what is our tail testing goal? To employ a **true aerodynamic fix** vs. a mechanical "Band-aid" that other gyros make do with (such as: banjo-string taut rudder cable, or overly tightened rudder bolts).

We experimented with shorter rudders (custom made from aluminum), and different linkages. We also experimented with vortex generators (VGs). We tufted the tail surfaces and filmed each flight for careful review, and sorted through hours of footage.



After relentless testing we finally zeroed in on the cause of buffeting, and have increased the airspeed of its onset to now 90+ mph (over 80% of expected V_{NE}). So, we know that we're on the right track and will soon eliminate it from the M2 flight envelope. Your Sport Copter M2 will have sure, dependable flight characteristics, with no oddities or surprises.

Repositioning the M2 Radiator & Oil Cooler

We were beginning to notice some increased oil and coolant temps, and wanted to solve that before our Summer arrived.

This required a few concurrent changes (a larger core radiator, an electric radiator fan with panel warning light, and moving both the radiator and oil cooler for better air flow).



M2 Baggage Space

Because of the rudder boxes and the single central stick, cabin floorboard space that would normally be unusable can easily and safely contain medium-size soft bags.







We'll have more photos and information again soon, as we finalize our last mods and polish up the M2 for full production!

Safe flying!



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"REMEMBER: WE BUILD THE BEST BECAUSE WE WILL ONLY FLY THE BEST!!"