

# Cat's Meow V2 for AMA UCLG

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Most records are set using purpose built airplanes designed to push out every last bit of possible performance. This model, however, is the lowly demo model I used for a build video to go along with my introductory F1N/UCLG kit. The wood was nothing special, just what I would have included in a kit, a compromise between durability and performance. The resulting airplane was always a fine flier, but I never expected more than 35-40 seconds out of it. At the 2021 Nats it got a pair of 58 second flights from well below the ceiling, which was exciting, and there was some discussion that the model could probably have handled more launch power than a single loop of 1/8, but I gave no more thought to that and put the plane away for storage. At the Nats and at subsequent sessions it gained some hangar rash but continued to fly well when I brought it out. On a whim, I packed it for the 2023 Kent meet since forecasts indicated cold, rainy weather. Packed is a generous term. It was laid atop a model box with a rubber band to keep it from wandering around. Moreover, it was unpacked in the rain and carried in without an umbrella!

All flights were made on the first morning, all in a 2 hour period. I started with a 9" loop of 1/8" rubber which was gradually shortened to get more launch height. A loop of .050" rubber was added to the catapult, and gradually the flight times went from 60s past the 67 second threshold of the record and up to a consistent 69 seconds. The rubber was shortened once more, now down to about 6 inches for both loops, and the model came to within 5 feet of the lights to achieve 3 or 4 flights over 70 seconds in a 9 flight string. The launch and glide were shockingly consistent with no bad flights throughout all of the contest and record official flights, and no flights under 65 seconds. All variability was seen in the turbulence when the model descended under 10 feet altitude. The glide circle was extremely tight, less than 20 feet diameter, and I suspect that widening this a little and then launching even more aggressively could gain another 5 seconds or so. Or maybe leave the circle alone and use up that 5 feet of altitude buffer! Either way, I was tired after 27 official flights stretching my hands as far apart as they could possibly go for absolute dead vertical launches and decided to move on to other flying so my brain and arms could rest. The next day I videoed a few launches but didn't see a way to get more time without getting extremely aggressive with the plane. Maybe next time.

A word on this model's design and assembly: the airfoil and the flap slots look weird, but they work. Don't thin the main section of the wing leading edge too much; there's no benefit to doing so and you can lose stability if you do. With the flaps drooped about 1/2" or slightly more, the model has an extremely flat glide. I used a lot of left rudder and right wing wash to get a steady glide in small flying sites and this seems to work well. Dive-outs from bad launches can be prevented by washing out the wingtips. Counterintuitive, yes, but it works great and also reduces the bunt so you can get a higher launch from a given launch velocity so that the model is stressed less at launch.

No carbon is used in this model except the fuselage itself which is an off the shelf product. Decent wood selection (not punky wood) provides all the strength you need. I built the model entirely with thin CA glue. It has not failed me.

I'd like to credit Mikhail Yashinskiy for the areas, moments, and basic outlines of this model. I took his design and changed the structures to meet my own needs for a production airplane. The result has been a delight to refine over the past 5 years.

I hope you'll give the Cat's Meow a try. It has been a truly rewarding project for me and my family.