

Meeting #6

Date: 9/26/19

Time: 5:00-8:00 PM

Location: 98C, Apt. 1035

Agenda:

- Clean and Inventory the Aero cabinet in the shop
- Disassemble 2019 plane
- Plan out Propeller testing
- Discuss design ideas

Meeting Notes:

- 98C
 - Summer Aero Micro actually cleaned out most of the cabinet
 - Alex requisitioned a separate cabinet and table *just for us*
 - We found a LOT of propellers to use in testing
 - Inventory in the drive
 - Two controllers (one battery)
 - No charger for the plane battery?
 - Balsa scraps
 - Fish scales
- Apt. 1035
 - Disassembly
 - Motors and most servos still functional
 - We can use a lot of this stuff, at least in the Mule plane
 - Motor
 - Battery
 - Luckily is already charged
 - We'll need to find/buy a charger at some point
 - Servos
 - Intact enpennage
 - Design
 - Reaffirm our payload scoring decision
 - To add another row of balls (increasing cabin length), there would need to be about 5 more balls per row (this would make our cabin very oversized)
 - *Decision: Only do one plane of balls*
 - Options: 1, 3, or 5 balls
 - We will move forward with a 1-ball design, *unless* testing/lift calcs show that we can carry 3 (or possibly 5)

- Alex will eventually do some flow sim. on these configurations
- Design ideas: Tricycle versus backdragger
 - Tricycle is basically just for steering, backdragger is basically just because other bush planes do this
 - Nate's solution: Backdragger that has two-wheel steering in the front
 - Jacob's solution: just put both on the mule plane and see which works best. Alternatively, plan for tricycle, but have a tail wheel just in case
 - Alex: Tricycle will be fine. Let's fly planes with the Flag Flyers just to see how landing works
- Prop Testing
 - Two potential setups with fish scales
 - Face assembly down, zero with gravity, see how much additional force the active prop adds
 - Put assembly on wheels, let it blow itself forward, see how much forward force it pulls
 - We will conduct testing on Saturday

Action Items:

- **Test props on Saturday**
- **Review design ideas during next meeting**
- **Determine manufacturing process for Mule plane**
- **Contact Alum Mentor**

Next Meeting: 9/28/19, 10:00AM @Home Depot