

# ALLIAJ HM

## 1. Radio Recommended

The servos used for the v-tails do not need to be powerful but should be accurate. The mounting bracket is provided for Futaba S3155, which will be perfectly suited for this function. The thickness of the wing can allow servos max 13mm thick for flaps and 12mm for ailerons. It is strongly recommended to use powerful and robust servos as possible. Personally I use Aitronics 94761Z whose reputation is excellent for the ailerons and flaps. The fuselage is sufficient to use a relatively large battery. Personally I use 4 pieces of 2000mA Enrichpower (NiMH powerful has low internal resistance). The receiver is a compact design of the Schulze Alpha8w or equivalent, the antenna should be extended and exit through the rear fuselage on a minimum length of 50cm.

## 2. Center of Gravity

The CG is 88 mm from the leading edge. Be careful, this balance is the balance of performance, more back and trajectories of Alliaj HM are not good anymore.

## 3. Travels and Mixings

Note: the neutral of flaps will be aligned to Karman and match 1 degree negative.

The positive deflections are downward and are measured at the root of the components (except for flaps they are measured at the dihedral). For the sake of performance it is advisable to schedule a mixing depth curve nonlinear snap flap (when pulling on the elevator stick ailerons and flaps go down at first very little and much later)

### Travels of v-tails:

Elevator:	+7	-7
Rudder:	+7	-7
Compensation for butterfly:	+3	(3mm down when the butterfly are maximum)

### Travels of aileron:

Function ailerons:	+13	-23 (when flaps are lowered should increase the differential)
Elevator halfway Function:	+2	-2 (when the stick is pulled halfway ailerons are lowered 2mm)
Elevator full range:	+7	-7 (when the stick is full pulled)
Function airbrake		-20
Function of components		
Curvature (4 axes):	+7	-7

Note: when air brake is used, you need a proper aileron deflection and the maximum deflection of the ailerons up with airbrakes is -30 mm minimum

**Travels of flaps:**

Function ailerons:                +8   -13

Function elevator:                +7   -7

Function crow components at very low (between 70 and 80 degrees down)

Function of components

curvature (4axes):                +7   -7

Note: When the air brakes were up to it is not necessary nor recommended that the flaps have a downward deflection in use ailerons

**4. Settings in the race****Flaps:**

The use of flaps will be used for taking altitudes, the maximum deflection under the conditions indicated mild to moderate. In stronger wind (> 15m/s) will be analyzed for components to remain above the ridge but without backing. The flight will be timed rudder made in smooth even in small conditions. The snap flap will never be disabled, whether by race, in-flight entertainment, or aerobatic or landing.

**Ballast:**

Contrary to popular belief the amount of ballast to bring the glider is not a function of lift but only the strength of the wind measured with meteo station.

So we will fly:

Empty 3 to 5 m/s

With 200-400g of ballast 5 to 7 m/s

With 400-800g of ballast 7 to 10 m/s

with 800-1400g of ballast 10 to 15m/s

With 1400-2000g of ballast 15 to 20m/s

With more than 2000g of ballast 20 to 25m/s.