VJX Settings

April 2023

This is a summary for an initial setup of VJX. As the aerodynamic concept of VJX is a little different, take your time to unlock the full power of VJX with an optimized setup.

CG- Center of Gravity

98mm – 100 mm

A good starting point for the first flights is 98 mm – measured from wings leading edge at root.

Ballast

As the wing area of VJX with 54,9dm² is 3–5% smaller than typical F3F planes – and the airfoil JX-GS “”enjoys” to fly at lower Cl, it is recommended to have a lower flight weight. Start with 100-200g less than you use to fly in a specific situation with other models.

Deflections

Up to now nothing special was realized regarding deflection setting of VJX.

For elevator a maximum deflection of +- 8° is already fine to get a good response.

Set aileron, rudder, aileron-flap coupling to your needs.

Camber

The low cambered JX-GS airfoil is designed to have minimal drag at 0 degrees flap deflection. With 0.5 – 1.0 degrees deflection the airfoil compares to typical airfoils used.

As the wing and airfoil design along wing span has enough high list reserves there is no need to have a reduced aileron deflection when camber is set. There the aileron should be flush to flap for best performance.

	Normal	Speed	Float
Flap deflection	0.5° - 1.0°	0.0°	2.0° – 4.0°

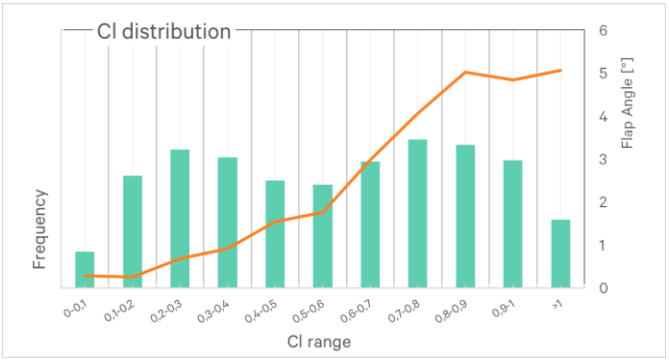
The optimized camber setting is one of the keys to achieve full performance of VJX.

Snap Flap

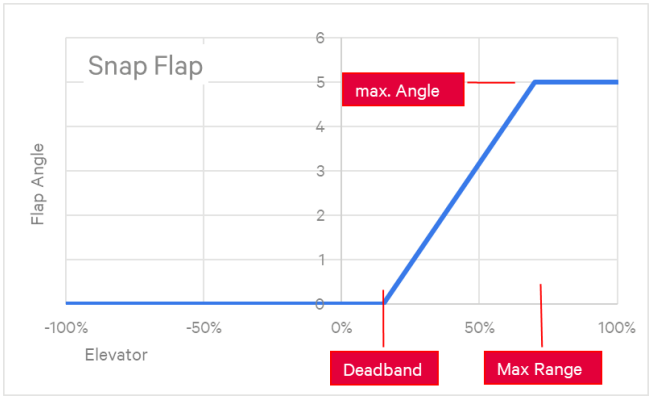
Combining the elevator deflection with a deflection of the wing flaps (and ailerons) has two objectives:

1. Adapting camber of the wing section to the current lift requirement to minimize drag.
2. Increase maximum lift the wing can produce without stall for narrow turns.

As a good example we have here a typical Cl distribution during a flight in the mid-40s. Most of the time the model is flying a curve which results in higher Cl load. The flap angle ranges from 0° to about 5° degrees for maximum lift support.



Be careful defining a max. flap angle above 5° – 6° as the band of minimum drag is getting smaller the more flap angle is applied. It's a good rule: Snap Flap as much as needed, as little as possible. The "deadband" or offset between elevator and flap should be in the range of 5 – 10%



Finally

Enjoy and have a lot of pleasure with VJX!

We are happy to get feedback and recommendations for the setup.

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