

Please read the entire instruction before starting the build.

For general information and more tips on how to print my airplanes, also read the „How To...“ document, which goes into more detail on the basics.

If you have questions, recommendations or problems, please write me an E-Mail: emde.modeldevelopment@gmail.com

Specs:

Wingspan: 800mm

Length: 574mm

Weight: 240 – 500 gramms

1. Print settings and requirements:

Min. print volume: 200mm x 200mm x 230mm

Material: LW PLA / PLA

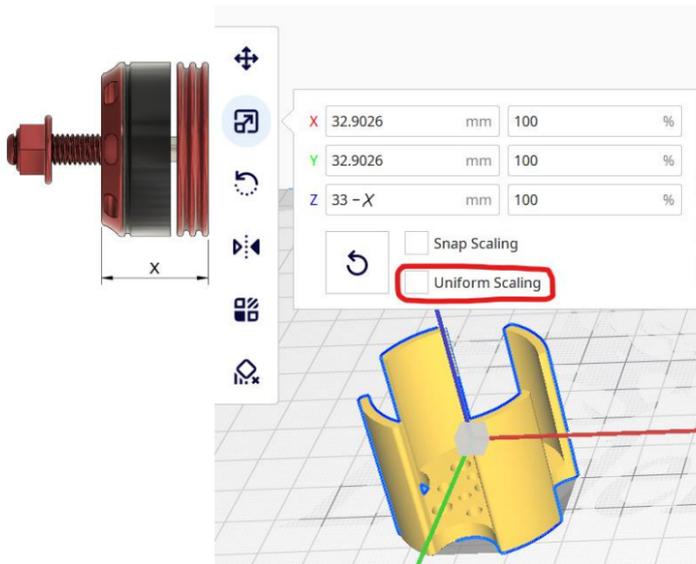
Nozzle: 0.4mm

Slicer: Cura

Part	Surface Mode	Buld Plate Adhesion	Mateial
Fuselage	Surface	None	(LW) PLA
Canopy	Surface	None	(LW) PLA
Wing	Surface	Brim	(LW) PLA
Wing Spar	Normal	None	PLA
Horizontal Stabelizer	Surface	Brim	(LW) PLA
Vertical Stabelizer	Surface	None	(LW) PLA
Engine Nacelle	Surface	None	(LW) PLA
Motor Mount	Normal	None	PLA / ABS
Spinner	Surface	None	(LW) PLA
Spinner Baseplate	Normal	None	(LW) PLA
Pin	Normal	None	PLA

The model is designed around LW-PLA, but you can print it completely out of standard PLA. Just keep in mind that it will have a much higher landing speed. If you want to push it to maximum speeds, use standard PLA. If you want the best slow flight characteristics, use LW-PLA.

Depending on your motors size, you have to change the Z-height of the motor mounts. Measure the distance (X) between bottom and top plate of your motors, then subtract it from the Z-height of the motor mounts. Uniform Scaling must be unselected.



2. Electronics and Parts:

No carbon fiber reinforcements are needet for this build!

2 x brushless Motors 1103 - 2205

2 x 20A ESC

2S-4S 800mAh LiPo Battery

4 x 5 gramm or smaller Servos

2 x 5 inch Props

Min. 4ch Reciever

1mm steel wire.

Velcro for Battery

This plane can take a wide range of motors and batteries. It does not need a lot of power to fly and can cruise just fine at 2S with small motors. The most important thing is to select the right props and KV for your motors. Motors for 3“-5“ Multirotors work just fine, but here they should spin steeper props.

3. Build:

Before starting the build, center your servos, check servo and Motor direction and make sure all your cables are long enough! Make sure that all parts printed well before glueing. Put servos and cables in first before glueing the parts togeher.

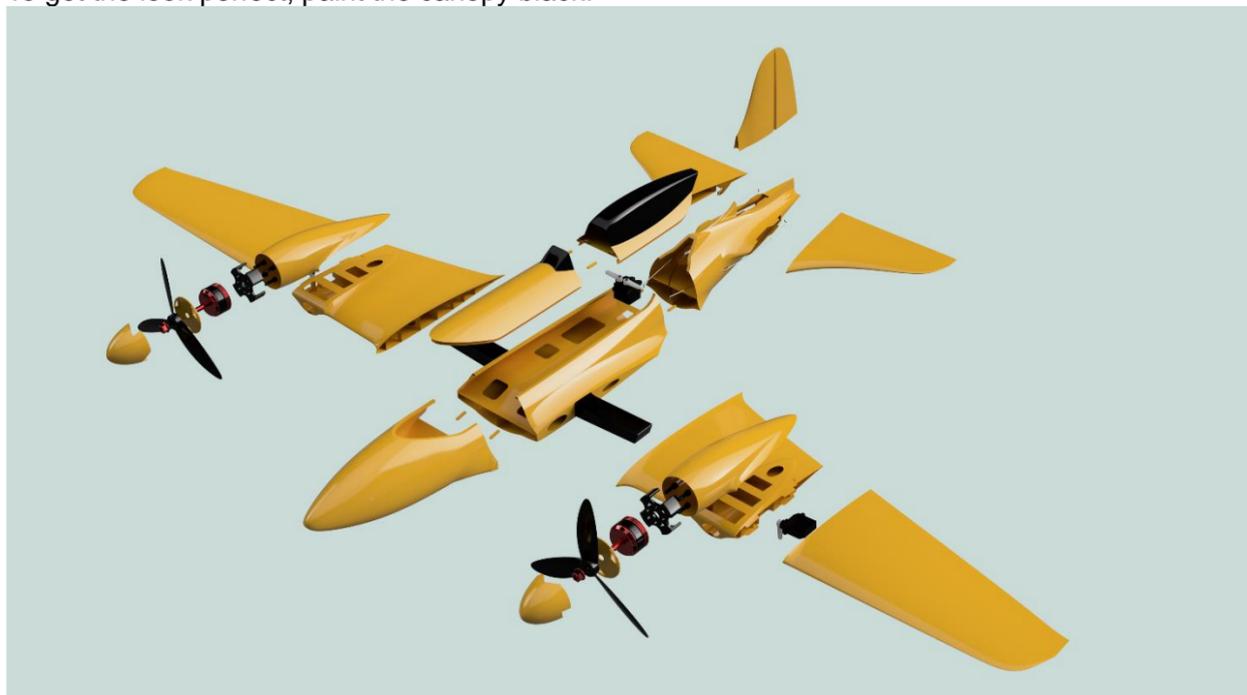
First you need to carefully bend the control surfaces. They are hinged with a single printed layer. The control surface is very stiff when it comes off the printer. Run a knife through the gap with very light pressure, then very carefully bend the surface until it moves smoothly. Never bend it more than 90 degrees! This process can take a few minutes, but it works nice.

Then install the servos. Cut the wire to length and bend it to Z - bends.

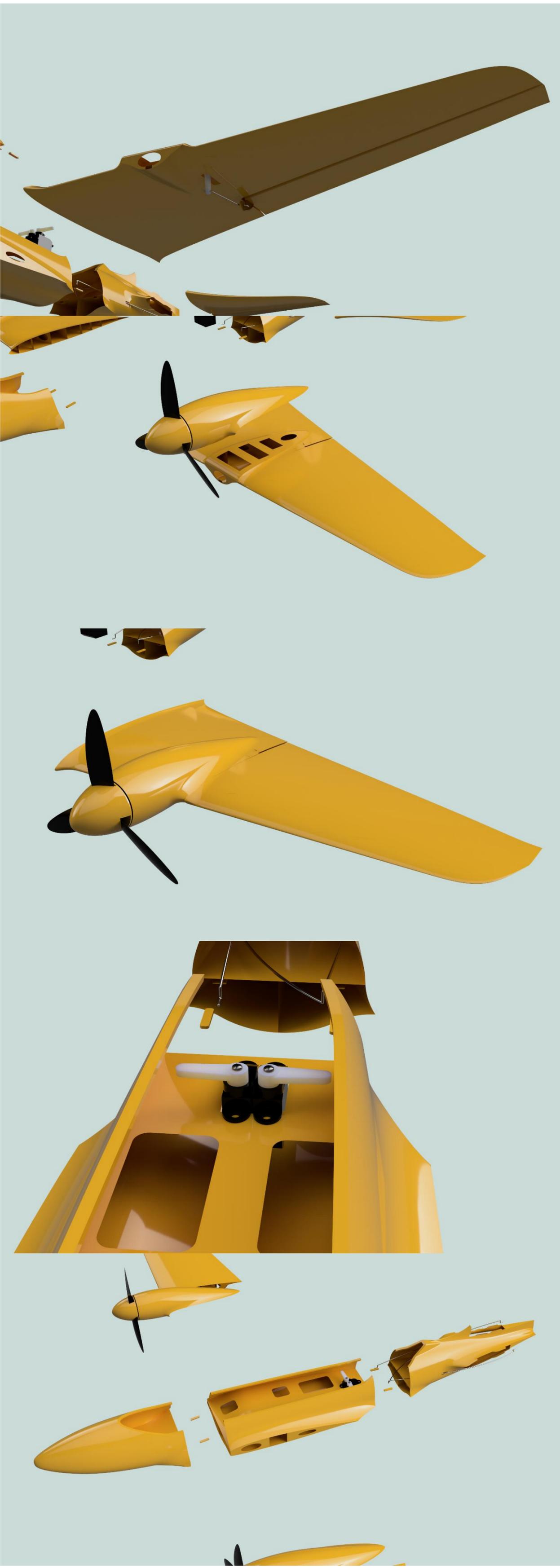
Before glueing the parts, clean them up and test fit them. Guide the cables through before glueing the parts togeher.

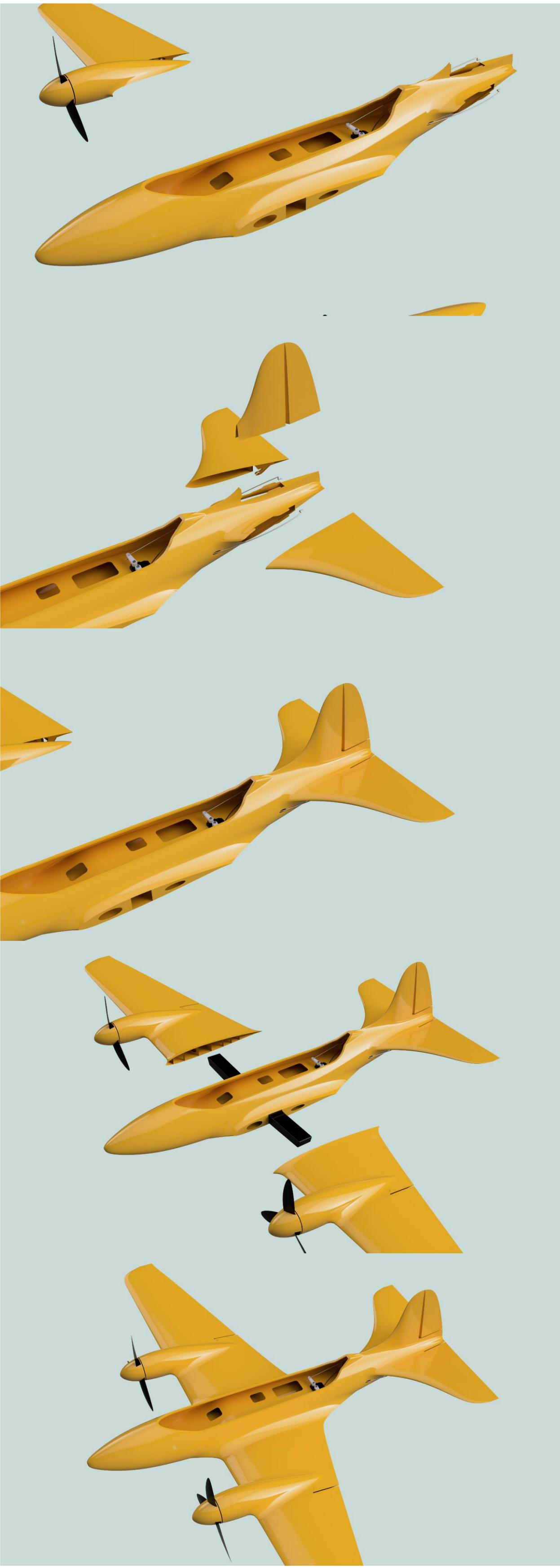
Glue the parts together using the pins and the rectangular holes or the tabs. Use **medium** CA glue and accellerator.

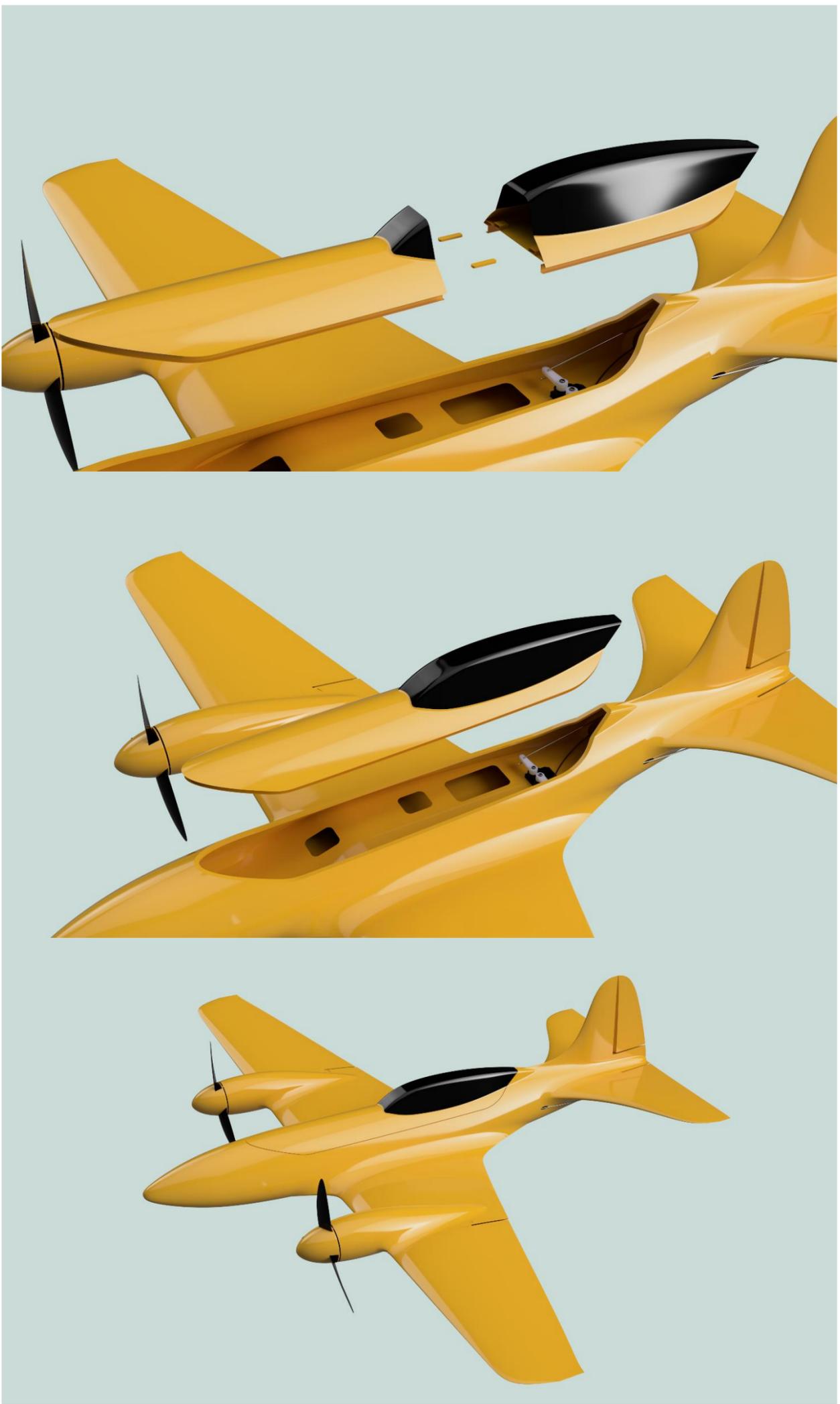
To get the look perfect, paint the canopy black.











4. Flying:

CG: 40mm behind the leading edge of the wing.

Control Surface deflection: 20°-30°

This plane requires medium flying skills, because it is relatively small and fast. But it does have very gentle stall characteristics, especially when build light. Set up differential thrust to get very fast flat spins. If you set up differential thrust, set it to 10-25% and put it on a switch. Land on grass to save the props and keep the bottom from scratching up.

5. Disclaimer:

Caution! This is not a toy, but a remote-controlled flight model, which requires responsible thinking and acting by the pilot. Be sure to check the safety regulations for the necessary RC components and be aware of the dangers of rotating propellers or accidentally short-circuited batteries. Of course, we do not have any influence over what you, the user of this product, do with the product and associated RC components and can not be made liable for damages, injuries or violations of the law in association with our product.