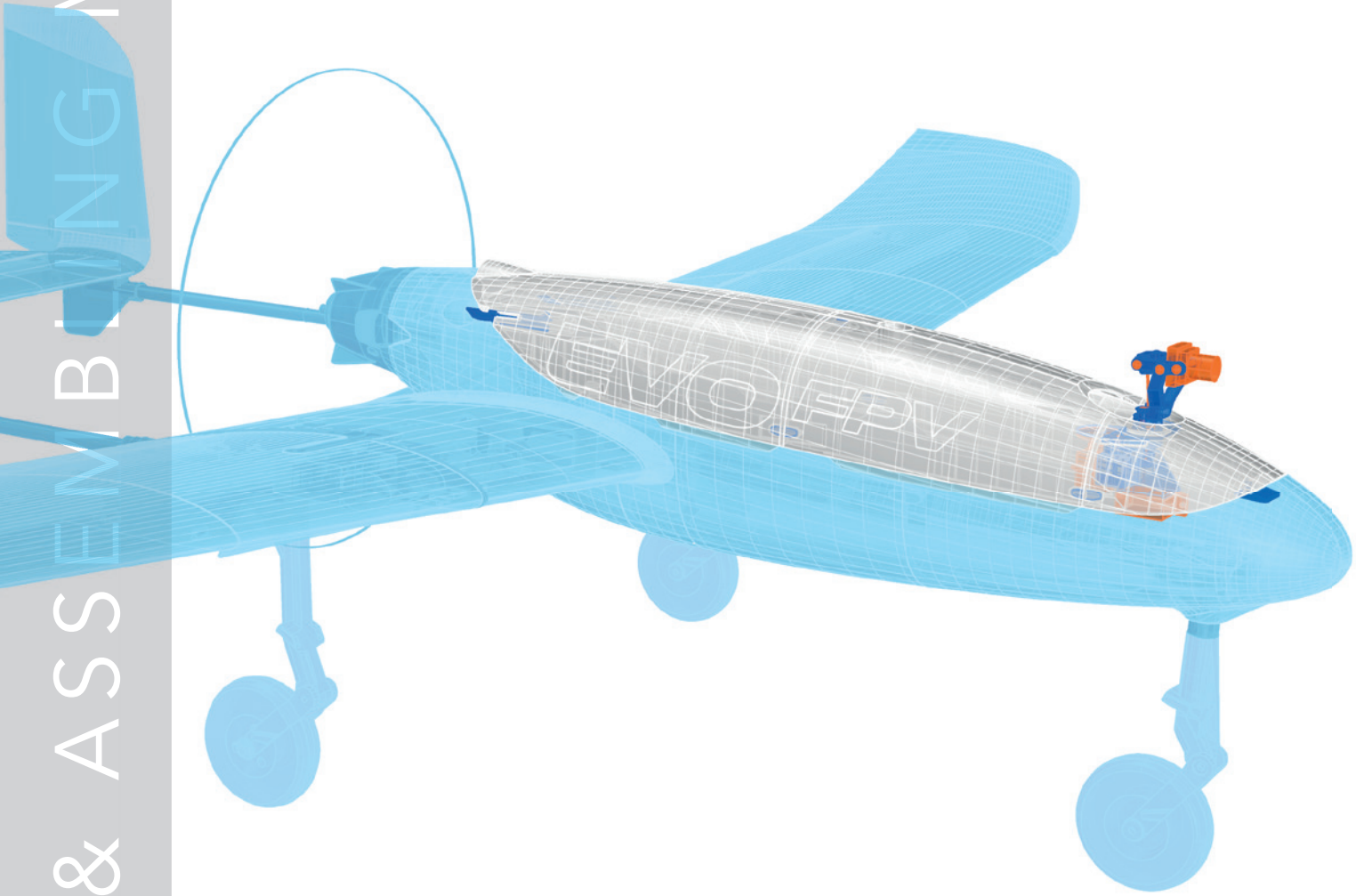
PRINTING & ASSEMBLING MANUAL

PLANE PRINT



PLANE PRINT EVO

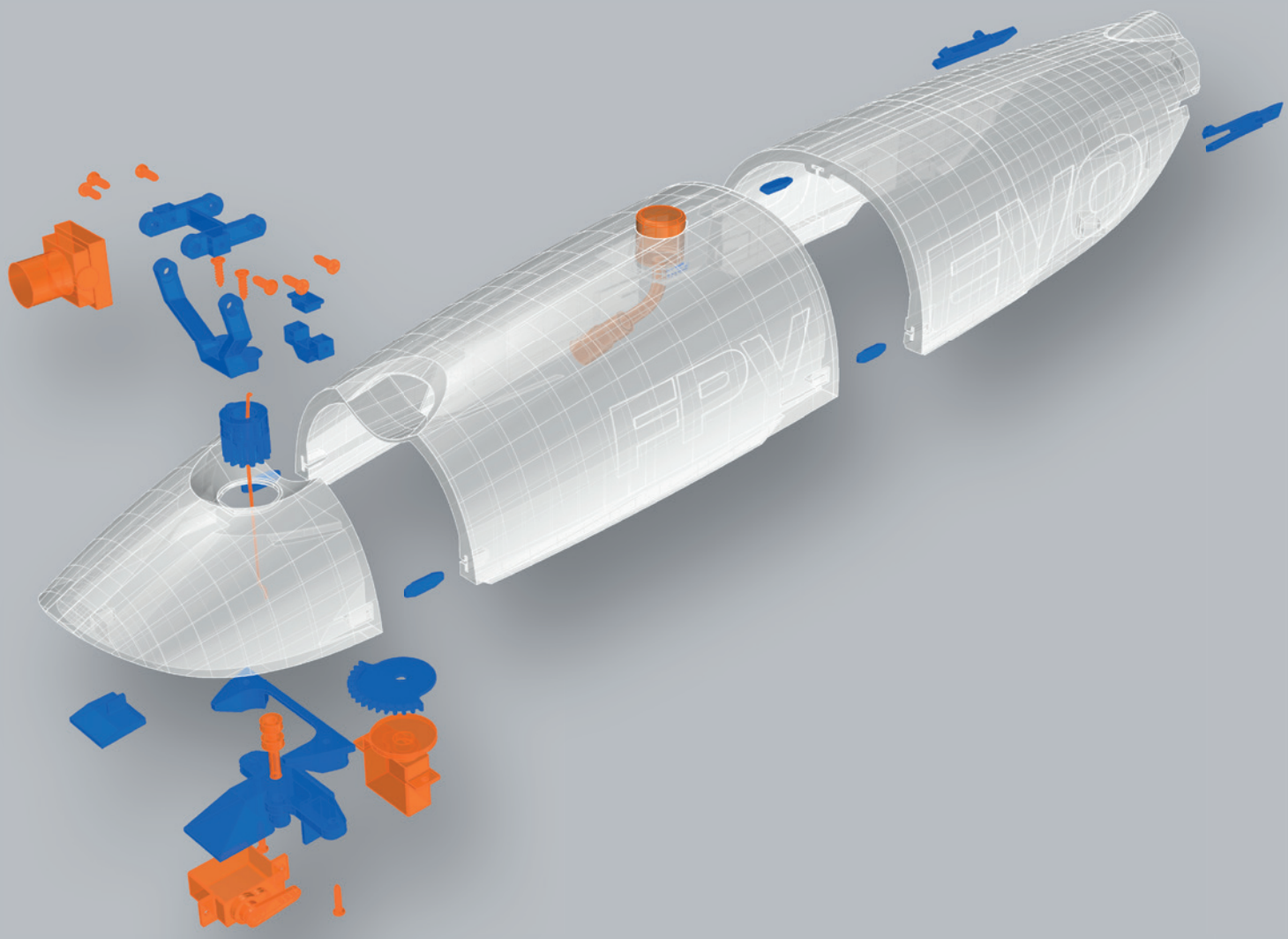
Additional package – **FPV Canopy**

www.planeprint.com

the **ONLY** place where you can get original Planeprint STL files **legally!**

PLANE PRINT EVO

Extension module – **FPV Canopy**



Also included as a **STEP version**

LW-PLA PLA OTHER

Required accessoires – basic equipment

Links to recommended accessories can be found on
www.planeprint.com/evo (scroll down)

- **LW-PLA** foaming! **(cannot be replaced by PLA!)**, ~20 grams
- **Tough PLA**, ~20 grams

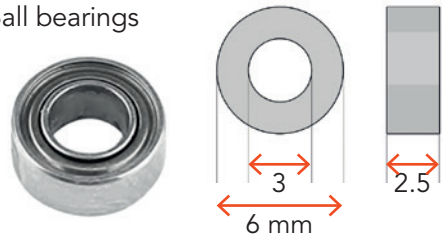

Tapping screws Ø2mm

Materials

- CA super glue (liquid medium)
- CA activator
- Sortiment of Tapping screws Ø2mm
- Steel wire Ø0.8*60mm
- small cable ties

OPTIONAL (more accurate version):
- Brass tube or plastic bowden Ø3*20mm (Inside at least 1 mm)
- Ball bearings 3x6x2.5mm, 2 pieces

Ball bearings



Tools

- Cutter knife
- small Philips screwdriver
- Sandpaper grain ~150
- Metal saw
- Needle nose pliers

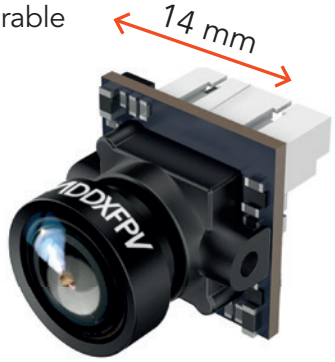
RC Components

SERVOS **2 Micro or Nano Servos** for example:

- PLANET-HOBBY ECO PLUS PICCO 8 DIGITAL SERVO
- CHASERVO D S 06
- Hitec HS 40 Eco Servo 4,8g
- Diamond D47
- Stemedu Micro 3.7g Servo GH-S37D

ANTENNA **VGEBY Antenne, 5,8 GHz 3dBi RHCP-Antenne** or comparable

CAMERA **Caddx Ant 1.8mm 1200TV** or comparable



The development of a complex, airworthy RC flight model to express on any standard 3D printer is a very extensive process. **Therefore, we appeal to your fairness not to forward the STL data you have acquired to third parties.**

Thank you for your understanding and have fun with your PLANEPRINT MODEL!

Printing the parts – Printing profiles

This manual is constantly being improved and supplemented, we recommend downloading the **latest version** from our website **before building**.

To print all **PLANEPRINT** models **you need to set some basic profiles in Cura** (If you use another slicer, please set the same parameters).

You can find the description at www.planeprint.com/print

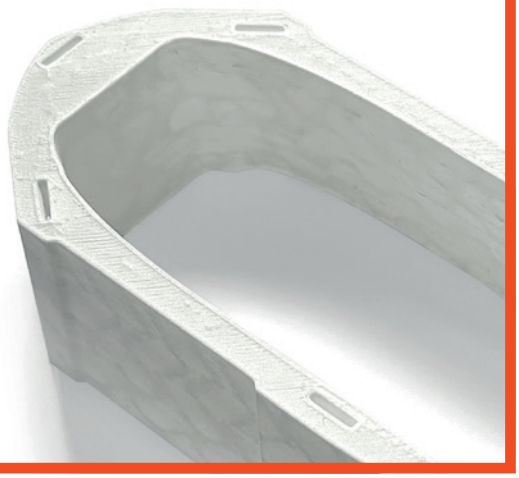
For this model you need the following profiles:

P2 P5

NOTE When printing the PLANEPRINT EVO you should pay particular attention to a light weight of **each** individual part.

PROFILE P5_Gyroid

It is **essential for the necessary stability** of the **LW parts printed with PROFILE_5 are as stable as possible**. Please use a test part to check the strength by fracture tests. It must not break along the layer lines under any circumstances! Also note that the printing temperature for LW-PLA is as low as possible to obtain a wall thickness of 0.4 to 0.6 mm at a flow of 55 to 65 % (depending on brand and printer).
Caution: at too high temperatures, LW-PLA becomes brittle and breaks more easily.



PROFILE P2_Hollowbody Tough PLA or PLA

The information about the basic settings you can find on our website at PRINT.
Please note the additional settings for the individual parts!

P2_CAM holder 14mm_evo.stl

MATERIAL PLA, Weight: ~ 2 g

ADDITIONAL SETTINGS

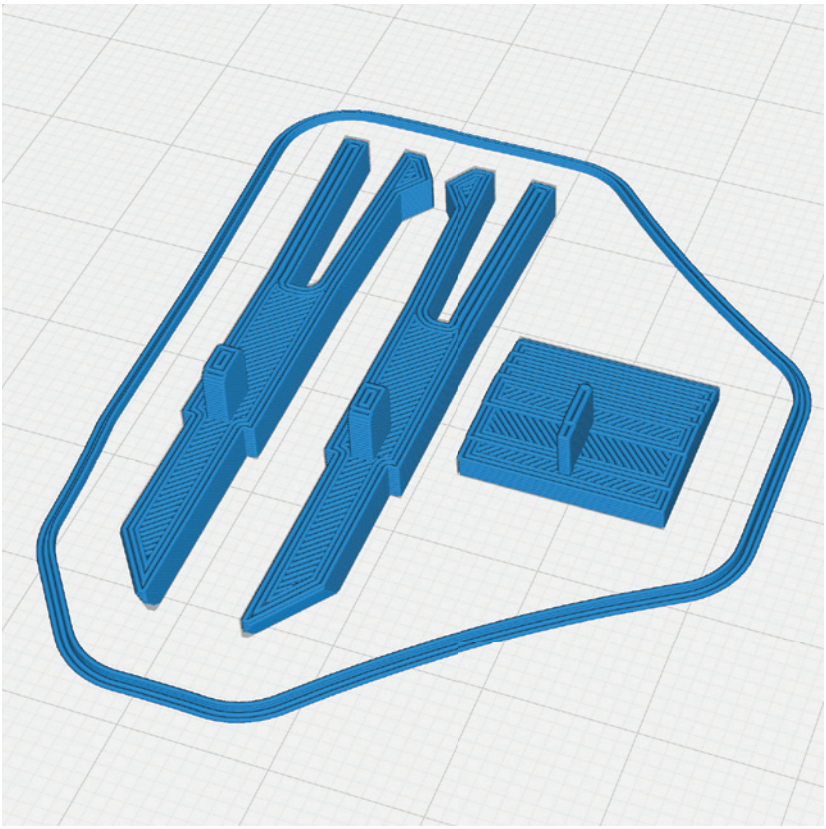
None required

P2_Cano lock FPV_evo.stl

MATERIAL PLA, Weight: ~ 1 g

ADDITIONAL SETTINGS

None required



PROFILE P2_Hollowbody Tough PLA or PLA

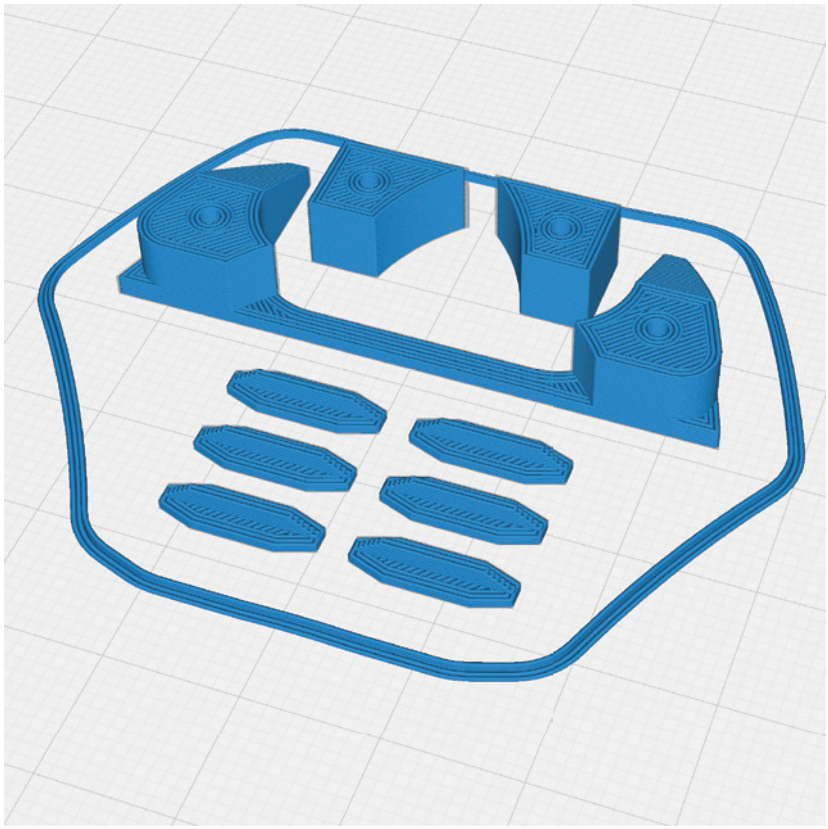
The information about the basic settings you can find on our website at PRINT.
Please note the additional settings for the individual parts!

P2_FPV Parts_evo.stl

MATERIAL PLA, Weight: ~ 2 g

ADDITIONAL SETTINGS

None required



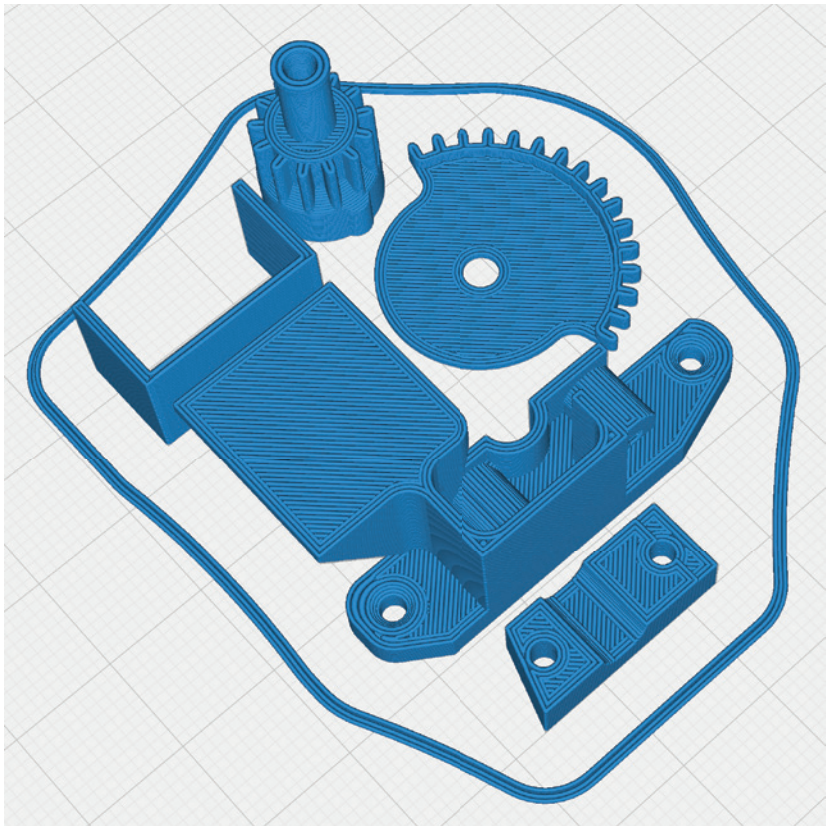
P2_Gearbox FPV_evo.stl or P2_Gearbox BB FPV_evo.stl

MATERIAL PLA, Weight: ~ 6 g

ADDITIONAL SETTINGS

None required

BB means: version with ball bearings



PROFILE P2_Hollowbody Tough PLA or PLA

The information about the basic settings you can find on our website at PRINT.
Please note the additional settings for the individual parts!

P5_RC brackets FPV_evo.stl

MATERIAL PLA, Weight: ~ 2 g

ADDITIONAL SETTINGS

None required

PROFILE P5_Gyroid LW-PLA (foaming)!

P5

The information about the basic settings you can find on our website at PRINT.
Please note the additional settings for the individual parts!
It is essential to print these parts with foaming LW-PLA (pre-foamed is heavier)!

Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment! Print only one STL at a time!

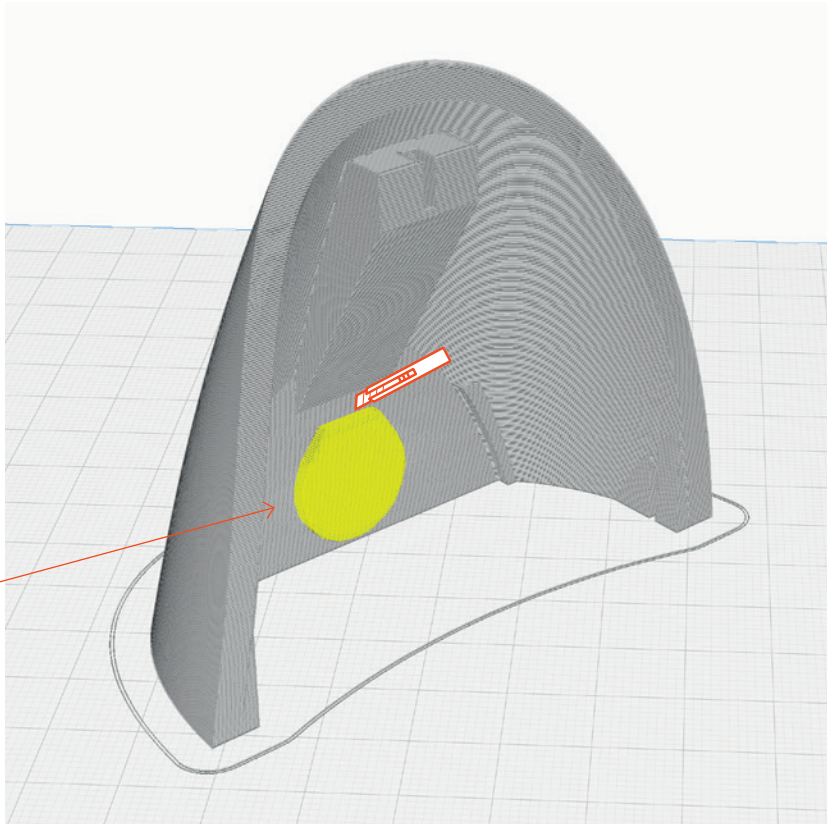
P5_Cano FPV 1_evo.stl

MATERIAL LW PLA, Weight: ~ 4 g

TIME ~ 50 minutes

ADDITIONAL SETTINGS

None required



Remove support.
Please be careful with the knife!

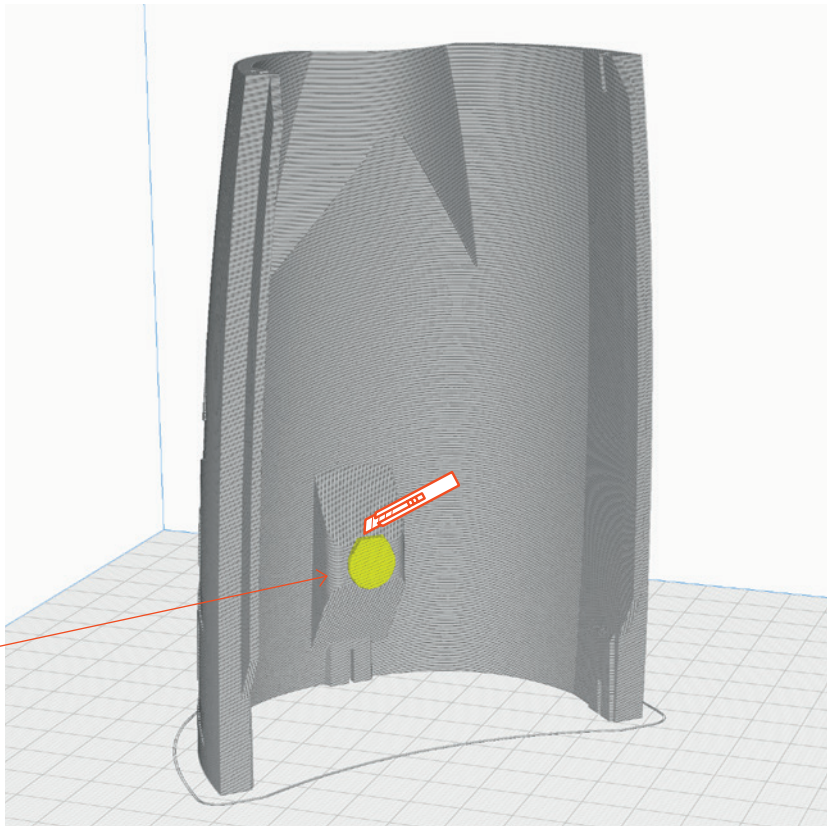
P5_Cano FPV 2_evo.stl

MATERIAL LW PLA, Weight: ~ 15 g

TIME ~ 3 hours

ADDITIONAL SETTINGS

None required



Remove support.
Please be careful with the knife!

PROFILE P5_Gyroid LW-PLA (foaming)!

The information about the basic settings you can find on our website at PRINT.
Please note the additional settings for the individual parts!
It is essential to print these parts with foaming LW-PLA (pre-foamed is heavier)!

Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment! Print only one STL at a time!

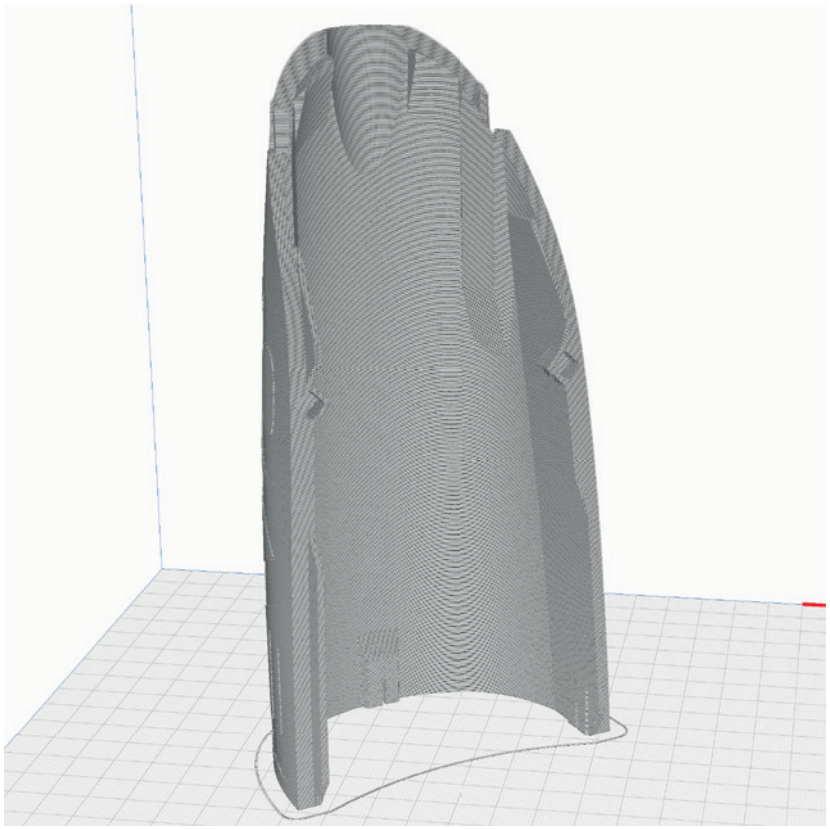
P5_Cano FPV 3_evo.stl

MATERIAL LW PLA, Weight: ~ 18 g

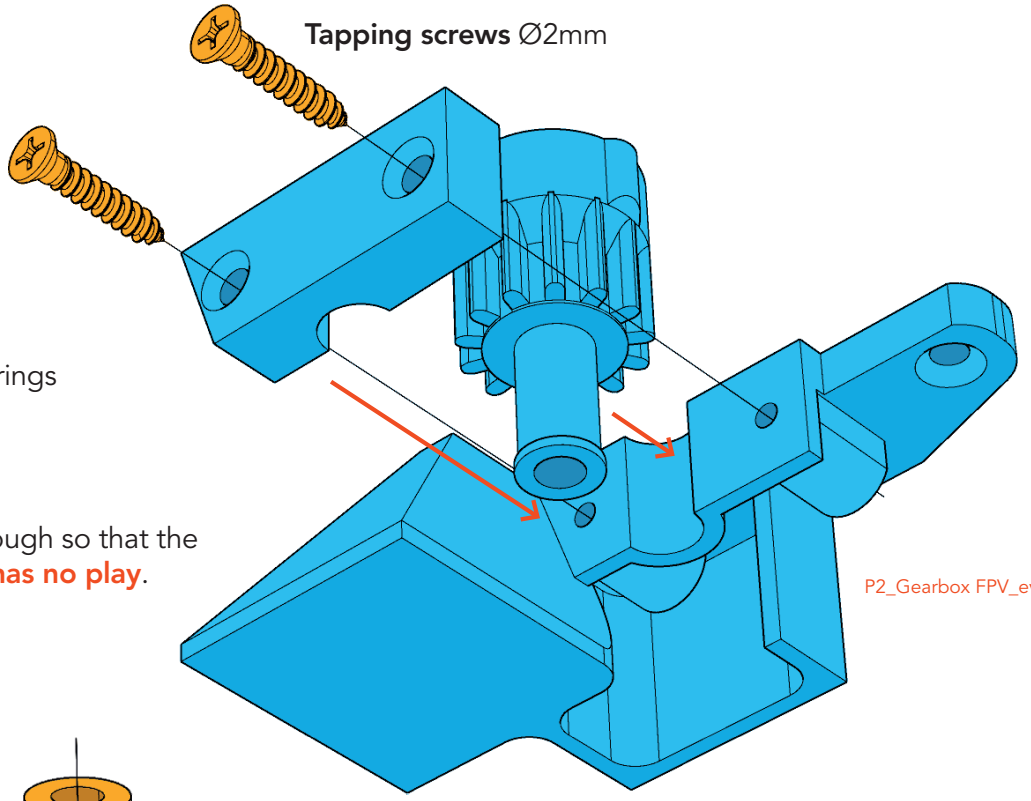
TIME ~ 3 hours 40 minutes

ADDITIONAL SETTINGS

None required

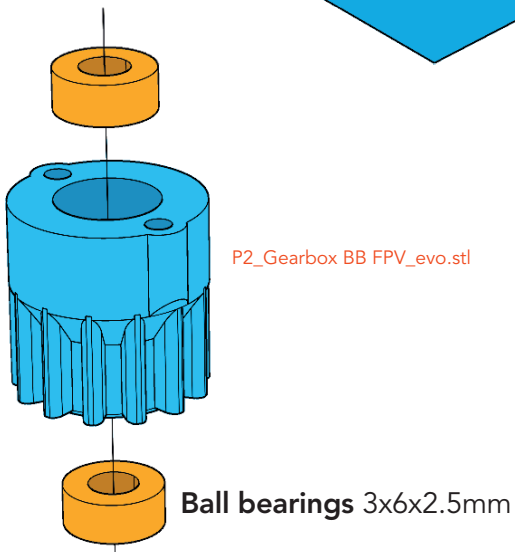


Assembly

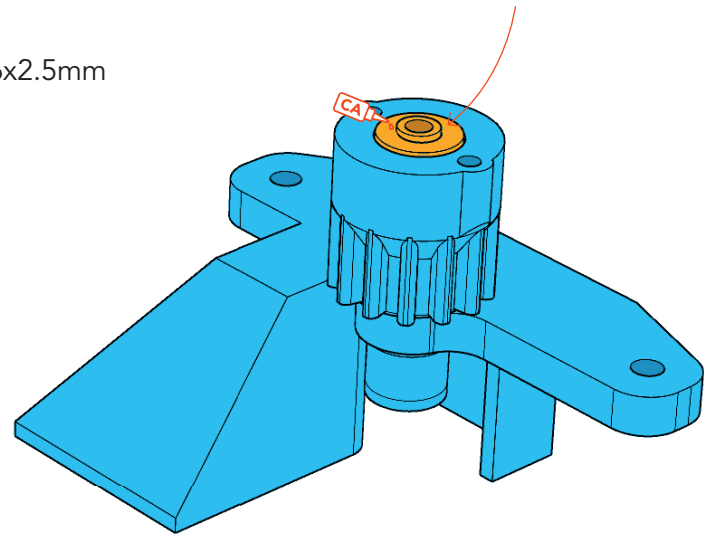


Version without ball bearings

Tighten the screws just enough so that the gear **turns easily but still has no play**.

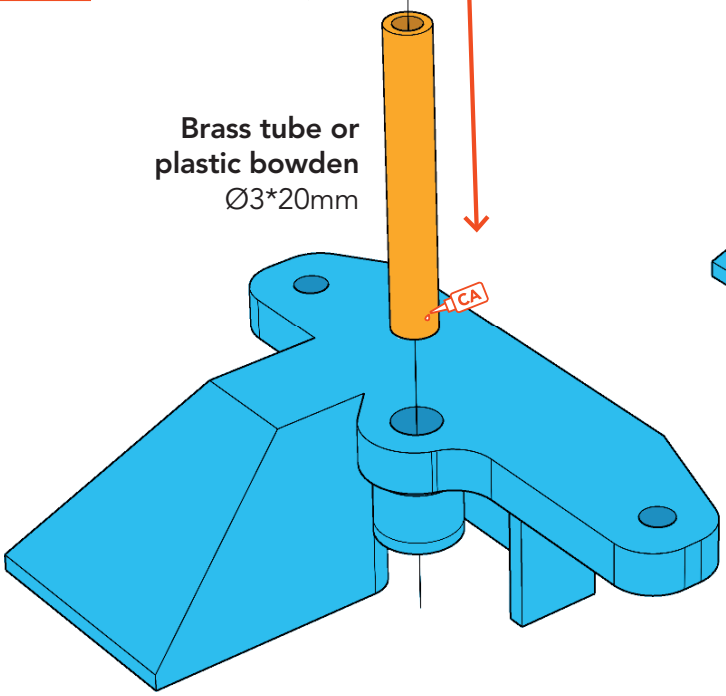


If the ball bearings do not automatically sit firmly on the tube, carefully apply a drop of glue to the top to secure them in place. **Be careful not to get any glue inside the ball bearings!**



Version with ball bearings

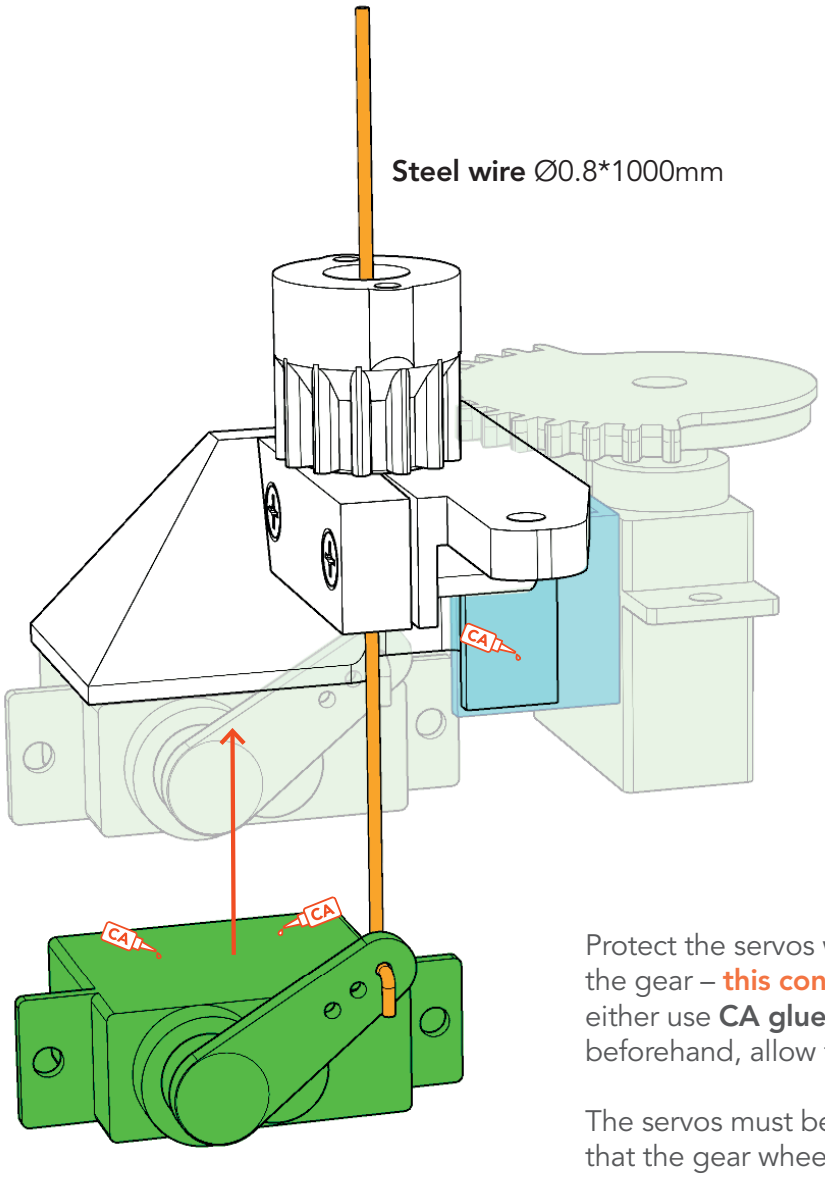
Brass tube or plastic bowden Ø3*20mm



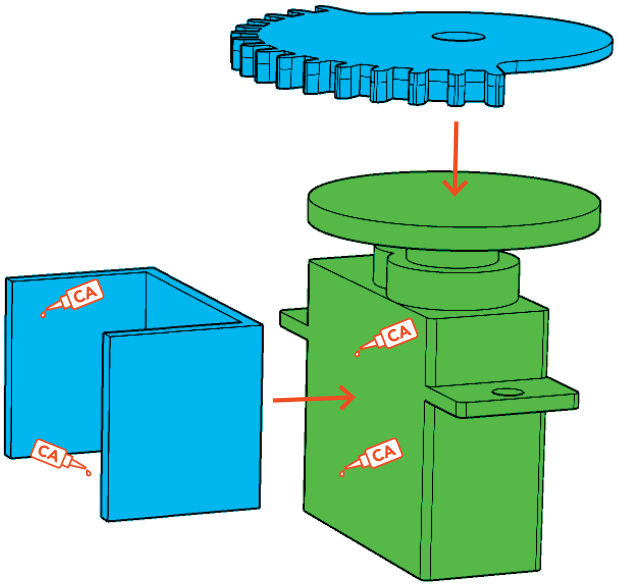
The gear wheel must be easy to turn.

Assembly

CA medium liquid or UHU



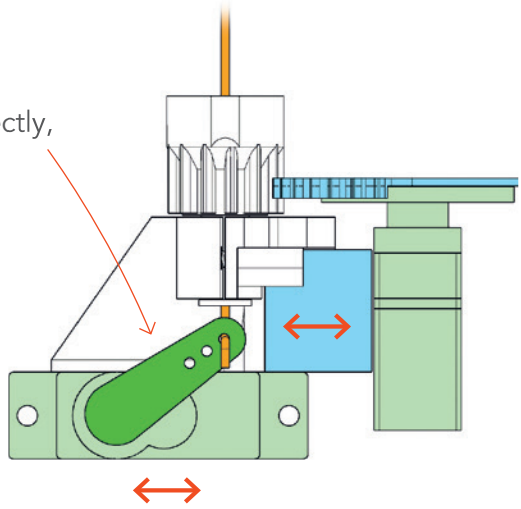
P2_Gearbox BB FPV_evo.stl
P2_Gearbox FPV_evo.stl

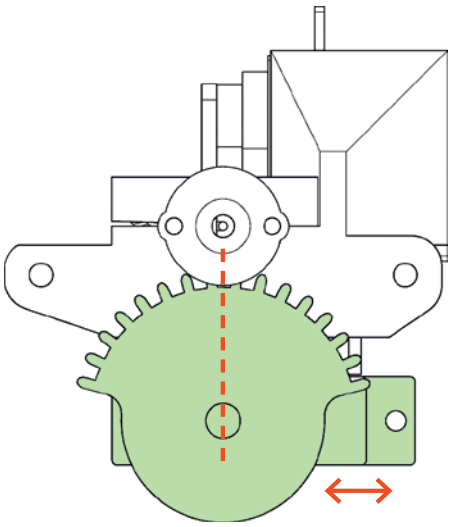


Protect the servos with tape and stick them directly onto the gear – **this connection must be very secure**. You can either use **CA glue or UHU Por** (coat both sides with glue beforehand, allow to dry, then join together).

The servos must be positioned as shown here. Make sure that the gear wheel on the servo is exactly centered and that everything can be moved smoothly and precisely.

To position this servo correctly, the lever must be moved upwards. The later zero position is then horizontal.





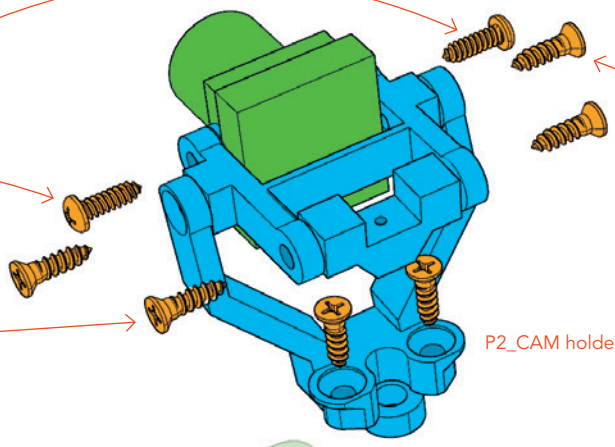
Assembly

medium liquid

Assembly

The camera screws must be tightened securely.

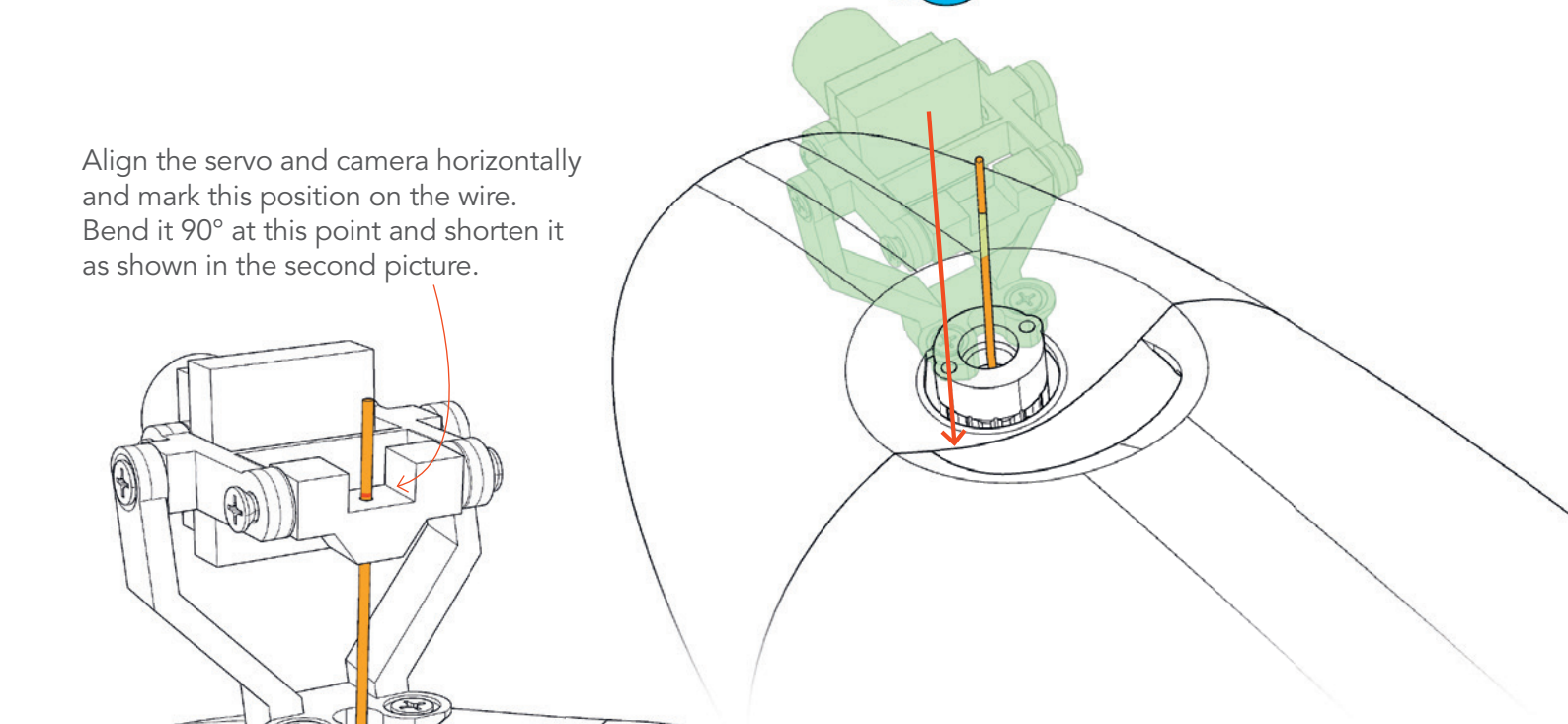
These screws must be **tightened loosely** so that the joint can move freely.



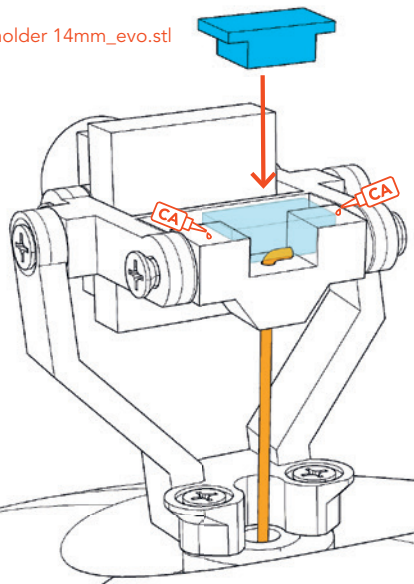
These screws must be **tightened loosely** so that the joint can move freely.

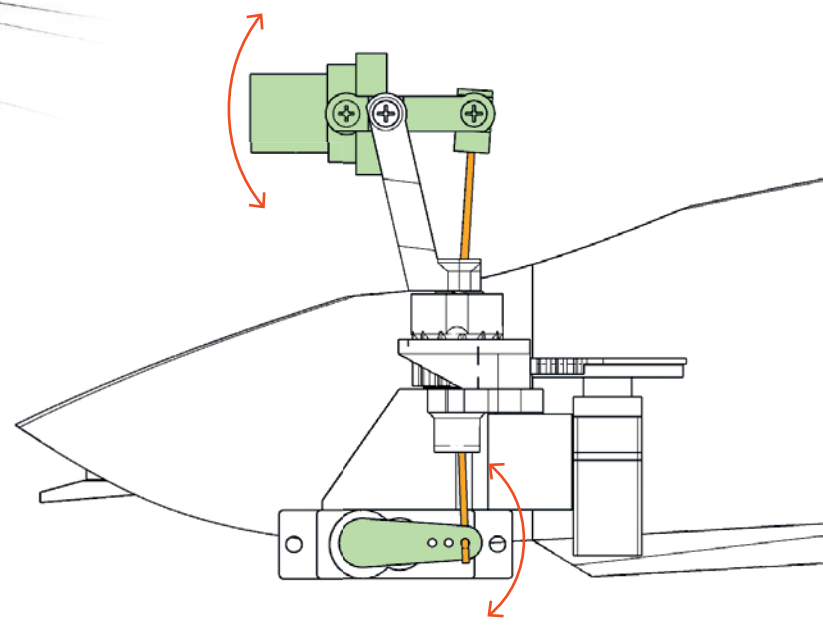
P2_CAM holder 14mm_evo.stl

Align the servo and camera horizontally and mark this position on the wire. Bend it 90° at this point and shorten it as shown in the second picture.

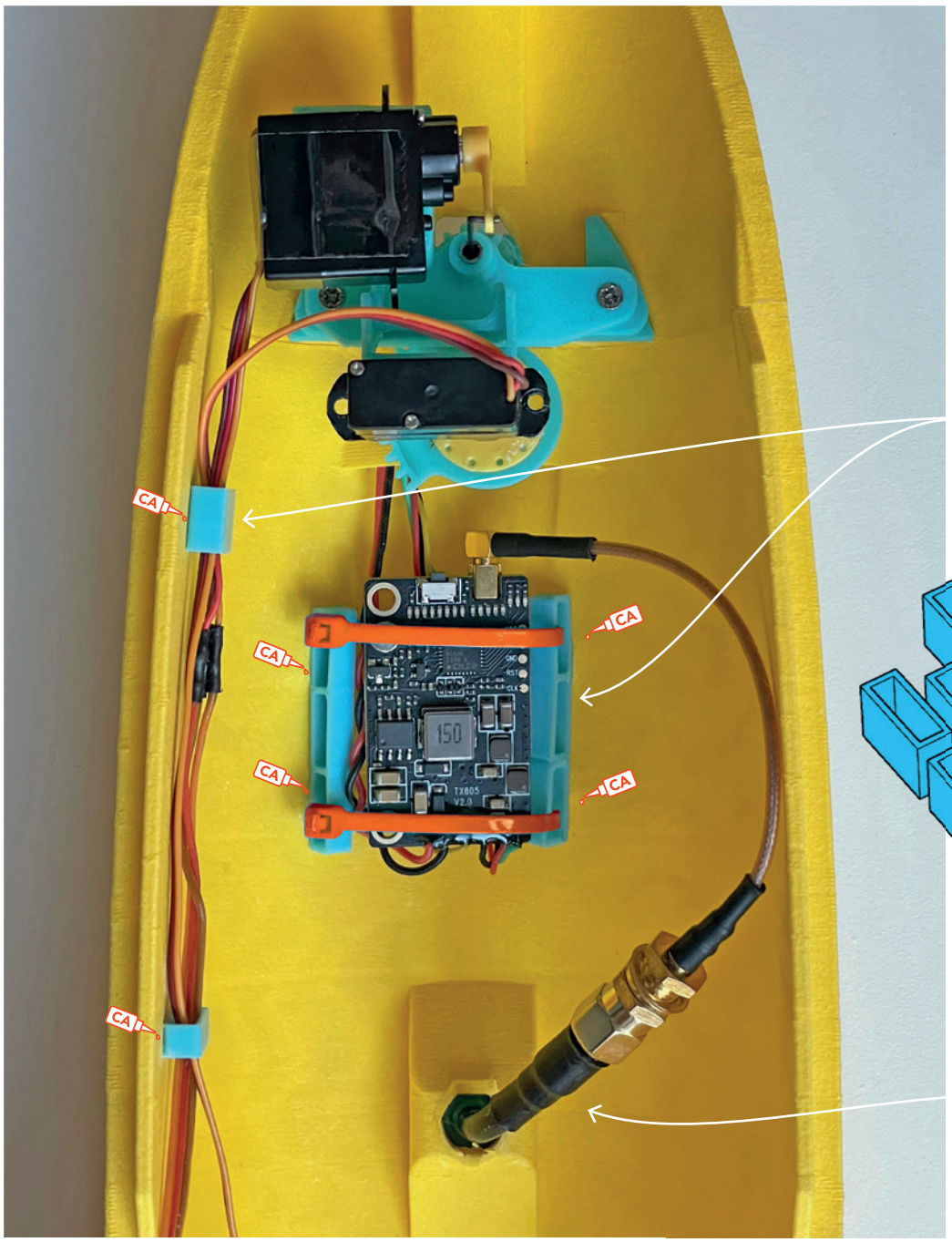


P2_CAM holder 14mm_evo.stl

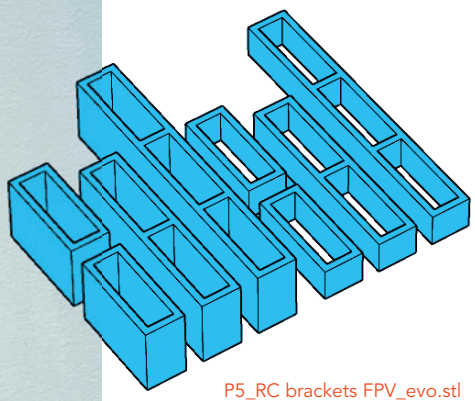




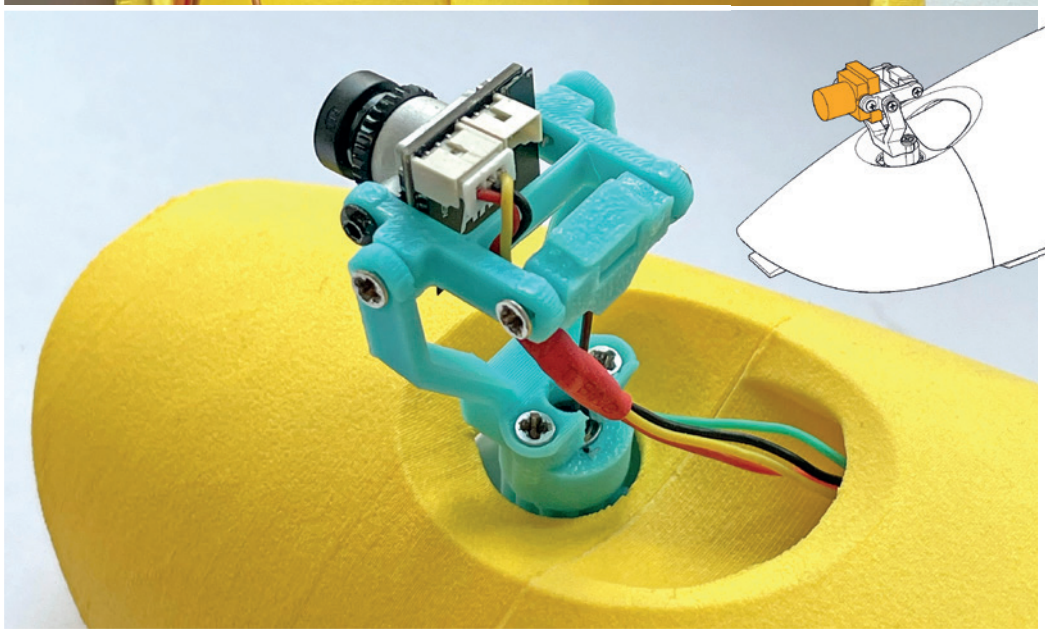
RC components

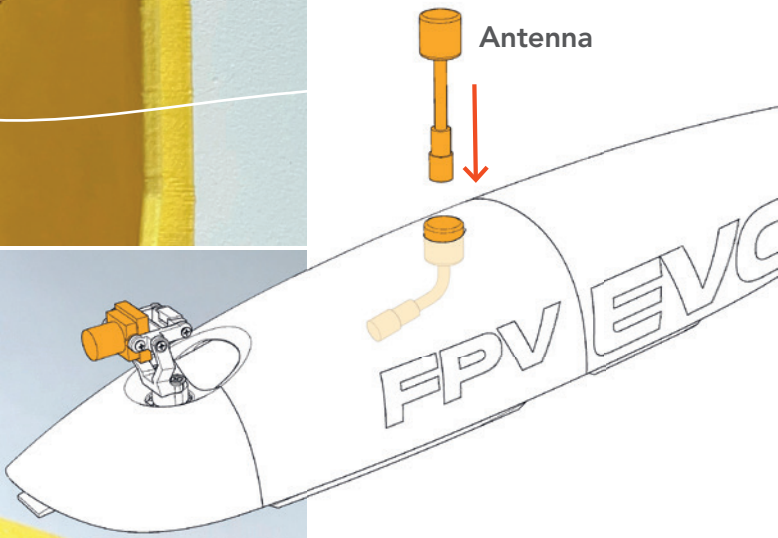


Use these **brackets** to secure cables and electronics.



P5_RC brackets FPV_evo.stl





AGE RECOMMENDATION 14+

NOT FOR CHILDREN UNDER 14 YEARS.
THIS IS NOT A TOY!

The STL data (or data processed from it, such as G codes) must never be passed on to third parties!

The purchase of the STL does not authorize the production of models for third parties.

By using the download data, an RC model airplane, called „model" for short, can be manufactured using a 3D printer. As a user of this model, only you are responsible for safe operation that does not endanger you or others, or that does not damage the model or property of others.

PLANEPRINT.com assumes no responsibility for damage to persons and property caused by pressure, transport or use of the product. Filaments, printing supplies, hardware or consumables that can not be used after faulty 3D printing will not be replaced by PLANEPRINT.com in any way.

When operating, always keep a safe distance from your model in all directions to avoid collisions and injuries.

This model is controlled by a radio signal. Radio signals can be disturbed from outside without being able to influence it. Interference can lead to a temporary loss of control.

Always operate your model on open terrains, far from cars, traffic and people.

Always follow the instructions and warnings for this product and any optional accessories (servos, receivers, motors, propellers, chargers, rechargeable batteries, etc.) carefully.

Keep all chemicals, small parts and electrical components out of the reach of children.

Avoid water contact with all components that are not specially designed and protected. Moisture damages the electronics.

Never take an item of the model or accessory in your mouth as this can lead to severe injuries or even death.

Never operate your model with low batteries in the transmitter or model.

Always keep the model in view and under control.
Use only fully charged batteries.

Always keep the transmitter switched on when the model is switched on.

Always remove the battery before disassembling the model.

Keep moving parts clean and dry at all times.

Always allow the parts to cool before touching them.

Always remove the battery after use.

Make sure that the Failsafe is properly set before the flight.

Never operate the model with damaged wiring.

Never touch moving parts.

We develop our models to the best of our knowledge and belief. We accept no liability for consequential damage and injuries caused by improper use or incorrectly printed parts. **Please be careful when handling motors, batteries and propellers** and only move your model with insurance and in approved places!

PLANE PRINT