



rc3Dprint



DRACO

***PRINTING &
ASSEMBLY***

THANK YOU

Thank you for purchasing the Draco. These models take many hours of work to make available to you so please don't share the STL files with others. Send them to www.rc3print.com so they can purchase them at a reasonable price. This enables us to keep making improvements and bring you new aircraft.

This document aims to help you print and assemble your aircraft. Our designs are made to be simple "print and glue builds". If you follow the instruction you will end up with a beautiful flying machine. That being said 3D printers often have many differences so you may need to tweak settings to get the best results.

As you are printing and assembling the model yourself we take no liability for damage or loss resulting from your use of these files. Please fly responsibly and follow all local laws. Share your flights on instagram and tag [@rc3dprint](#) for discount codes on future orders.

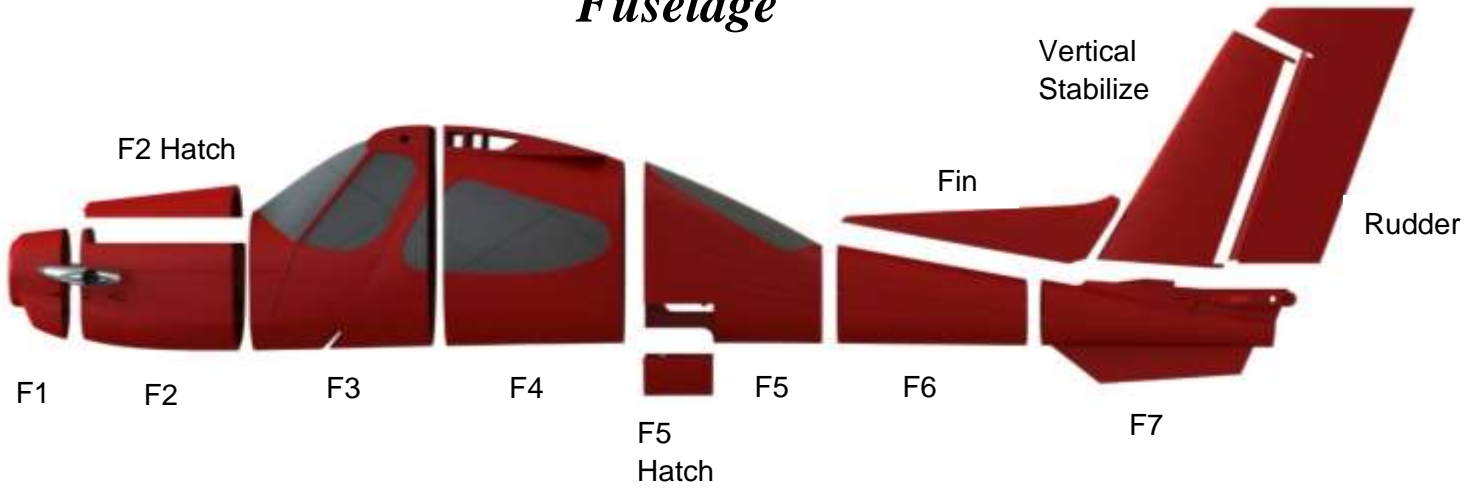
PARTS LIST

1. Motors x 1 - 3548 (minimum) or larger Brushless Motor. (Static Thrust should > 1500gm).
2. 60 amp ESC (minimum).
3. LIPO - 3S/4s battery minimum.
4. 1 x Propellers.
5. 6 - Channel radio kit.
6. 6 x 9g servo + servo extensions.
7. 12mm*12mm (0.5mm-1mm thick wall)Square Aluminum Hollow.
8. 5mm*1m Cf Hollow Tube.
9. 8 x “servo size” screws for mounting motor
10. 2m of piano wire for control rod.
11. 2mm-3mm thick spring steel wire for landing gear. (You Can also Use Wire Cloth hanger of reasonable stiffness)
12. CA glue

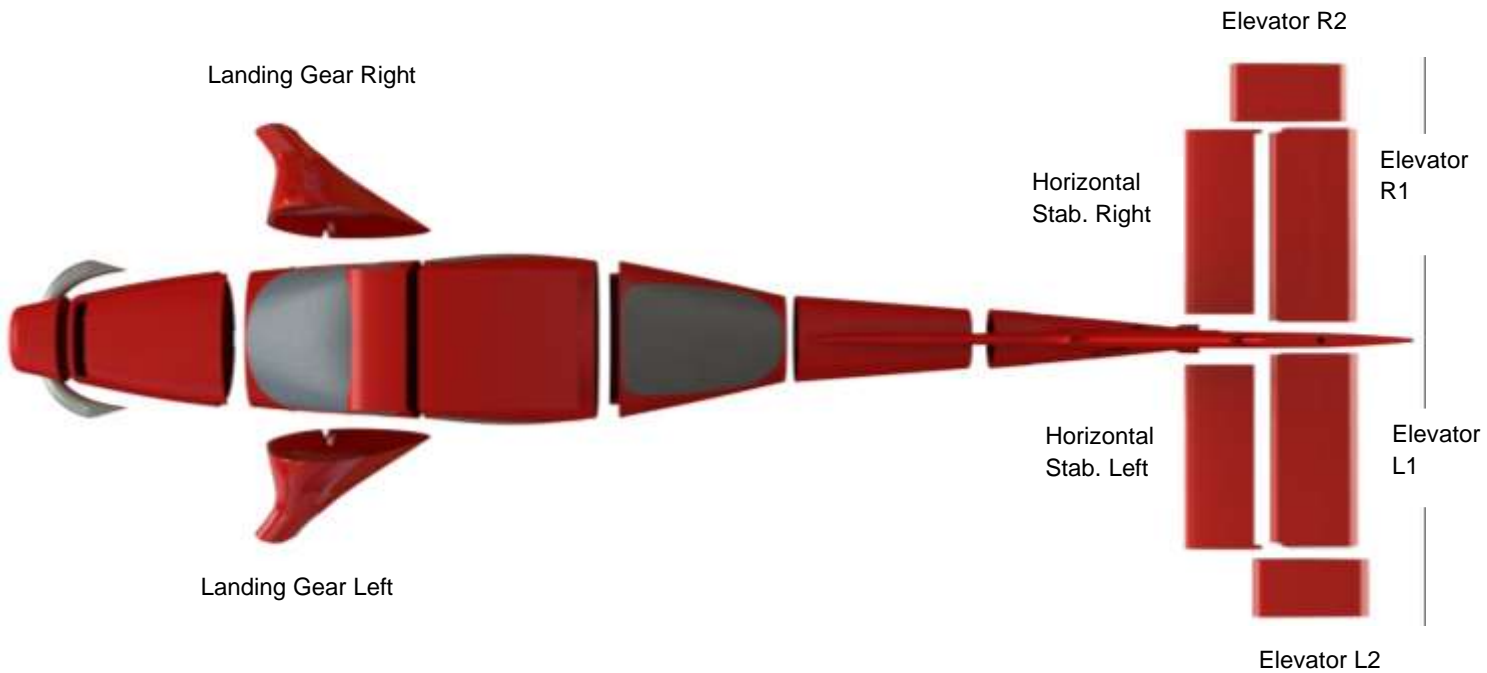


INCLUDED STL FILES

Fuselage



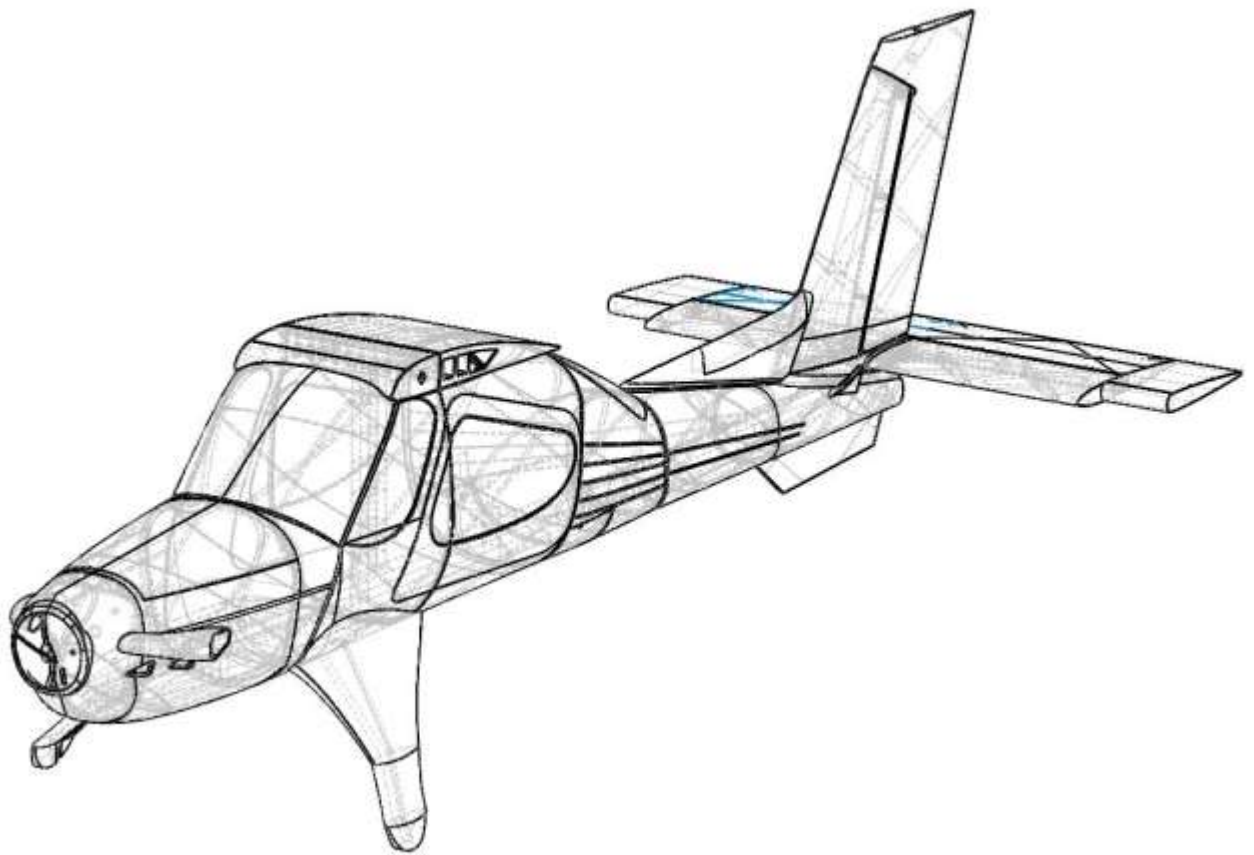
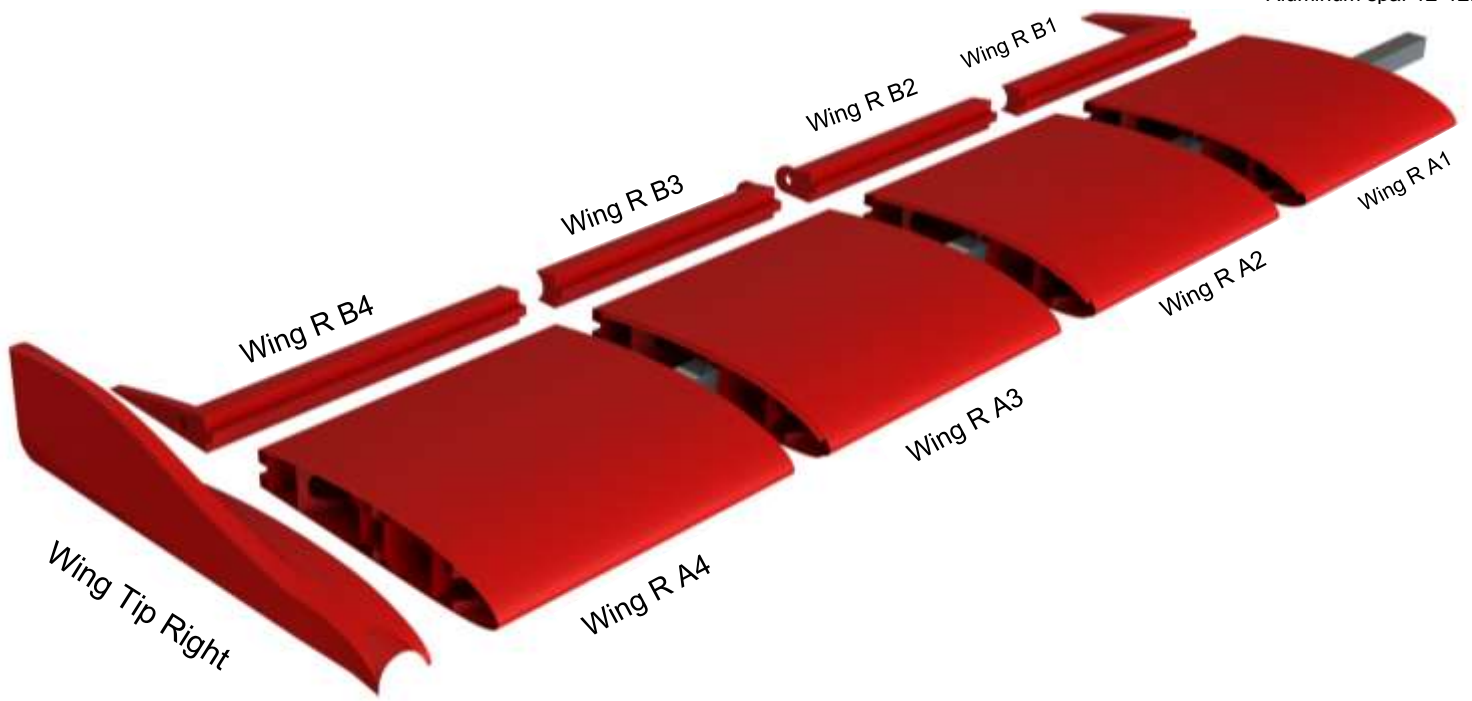
Side View



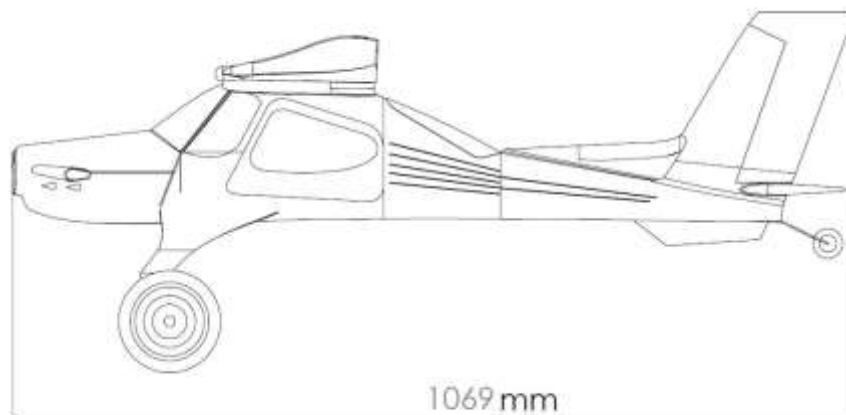
Top View

Wing

Aluminum spar 12*12mm



SPECIFICATIONS



- **Wing Span: 1400mm**
- **Flying Weight (2200mAh 4S): 1600gm**
- **Wing Loading:**
- **Channels: 5 Channel**
Diff. Throttle/Aileron/ Elevator/Rudder/Flaps.
- **Centre of Gravity: 6.6cm behind leading (Exactly on the Main Wing Spar)**

PRINTING PROFILES

Please save the following two profiles in Cura, ready to be used as required for the selected parts to be printed.

PLA Profile 1 (Surface)

Layer Height	0.2mm - 0.25mm
Line Width	0.4mm
Wall Line Count	1
Top/Bottom Layer	0
Z-Seam Alignment	Sharpest Corner
Infill % *	0%
Printing Temperature	220-230 C
Build Plate Temperature	60 C
Print Speed	50-60 mm/s
Retraction	Yes
Extra Retraction Prime amount	0.3mm ³
Cooling fan	30 %
Supports **	No
Build Plate Adhesion	Brim 5-10mm
Union Overlapping Volumes	Untick the Box
Surface Mode	Surface

PLA Profile 2 (Body)

Layer Height	0.2mm - 0.25mm
Line Width	0.4mm
Wall Line Count	1
Top/Bottom Layer	4
Z-Seam Alignment	Sharpest Corner
Infill % *	0%
Printing Temperature	220-230 C
Build Plate Temperature	60 C
Print Speed	50-60 mm/s
Retraction	Yes
Extra Retraction Prime amount	0.3mm ³
Cooling fan	30 %
Supports **	No
Build Plate Adhesion	Brim 5-10mm
Union Overlapping Volumes	Tick the Box (Default)
Surface Mode	Normal (Default)

ASSEMBLY

1. THE ELEVATOR IS ASSEMBLED IN PLACE, DON'T GLUE IT TOGETHER PRIOR TO ASSEMBLY.
2. THE AILERON-SERVOS EXTENSIONS SHOULD BE IN PLACE BEFORE GLUING THE WING TOGETHER.
3. THE AILERON NEEDS TO BE IN PLACE BEFORE GLUING THE WINGTIP ON.
4. DO NOT GLUE THE FUSALEGE SECTION (F1) BEFORE ATTACHING THE MOTOR

Fuselage

- Glue together the sections of the fuselage starting from the Section F2 to F7. It is important to sand each surface to make sure the joins are strong.
- 12mm*12mm Aluminum square tube slot is provided in the fuselage to align and strengthen fuselage.
- Glue the horizontal stabilizers into its place. Pass an 5mm CF rod through the horizontal Stabilizer (Optional)
- Make sure you take a moment to put them the right way round.
- Glue the vertical stabilizer into Place.
- Glue the Vertical Fin in Place.
- Assemble the Elevator 4 parts and glue them together.
- Drill through the indented circle of horizontal stab to allow 5mm tube to pass through it
- Align the elevator holes to the horizontal stabilizer holes and pass 5mm CF tube through all the holes.
- Place the vertical stabilizer and rudder align it and pass the CF tube through.
- Make sure you get enough movement of control surfaces before gluing the CF tube.
- Place and screw in your servo into the Servo Tray just Under the F5 Fuselage Section and feed the servo wire into the fuselage Center all the servos before gluing F5 Section Hatch. •Make sure you take a moment to put them the right way round.
- Landing gears are optional, you can glue together the legs on the fuselage and run a 3mm wire through the slot for reinforcement and add wheels directly on the wire
- Fill the slot with a strong epoxy.

Wing

The wing Assembly consists of two half's right wing and left wing.

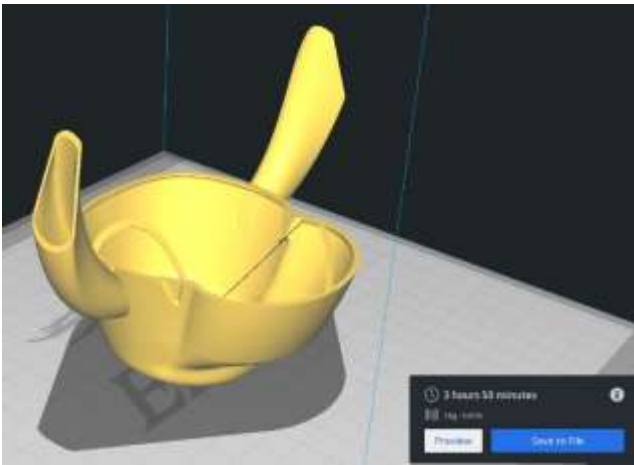
- Cut 2*68cm Long Section of 12mm*12mm Aluminum square tube.
- Mark 6cm on one side of the section leave that area as it will be inserted into the fuselage and start inserting wing sections **R A1,R A2,R A3,R A4** all these sections intersect into each other for better structural strength (sand or trim the ends if they do not intersect) glue the sections together once you confirm the sections are in correct order
- Sections **R B1,R B2,R B3,R B4** will be attached behind the 'A' Sections of wing as shown in figure 3.
- Glue Flaps **R F1 , R F2** together and **R AI 1 , R AL 2,**
- The flaps and ailerons now can be hinged with the main wing structure with the help of 5mm CF tubes.
- Check if they have desired movement.
- Glue the wing tip to the end.
- Same process applies to the other half of wing.

Final Checks

- Line up your motor mounts on the front of the nacelle. The printed hole markers may not be in the right place, this is ok. Mark and drill your holes with a drill bit size suitable for whatever screws you are going to use to secure your motors. Glue the cowlings(F1) onto F2. With the motors in place connect up your
- Glue in place the servo linkages to the elevator and ailerons. Hook up the servo linkages in the usual way. I usually use a dab of hot glue to secure the servos in place.
- Check all links and motor mount is secured
- CG Position is under the main wing spar please make sure the aircraft is well balanced before going for a test flight.

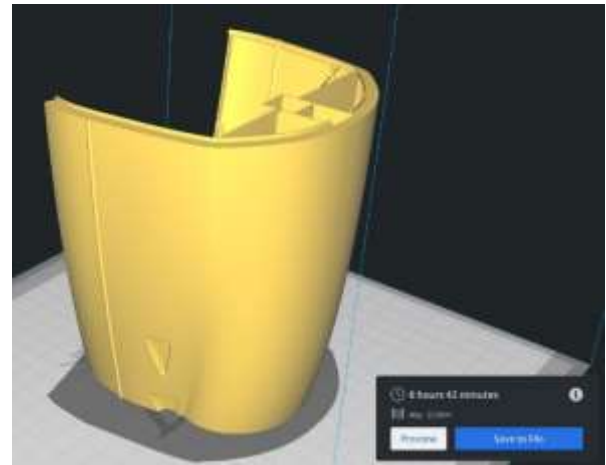
CURA COMPONENT PLACEMENT

Part placement of all the important parts have been shown below rest all parts can be printed by following the same steps



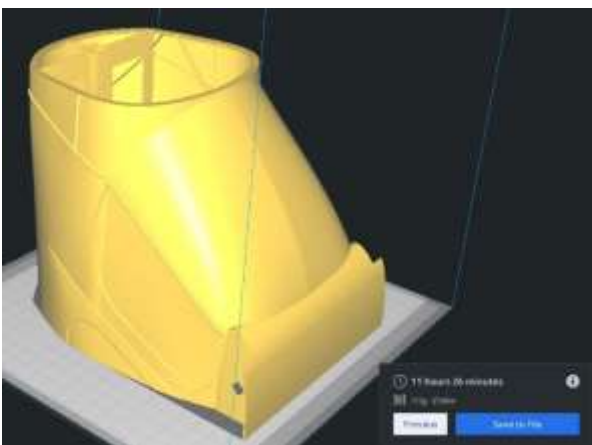
F1 Print Profile 2 Layer

Height:0.12mm

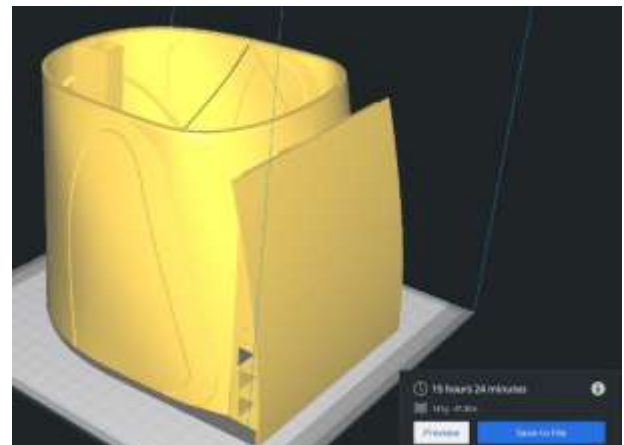


F2 Print Profile 2

20 % Infill

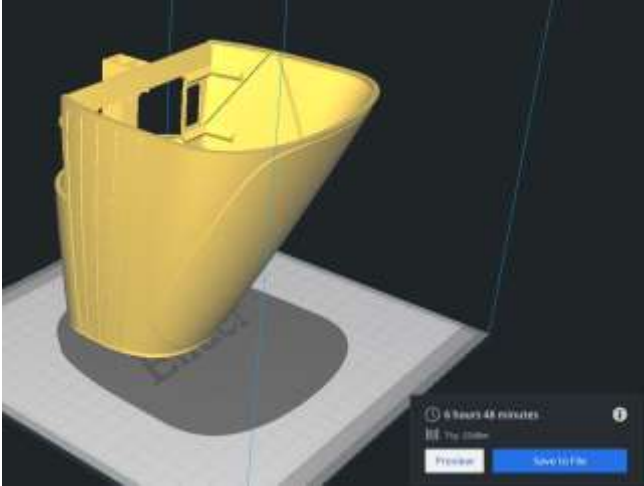


F3 Print Profile 2

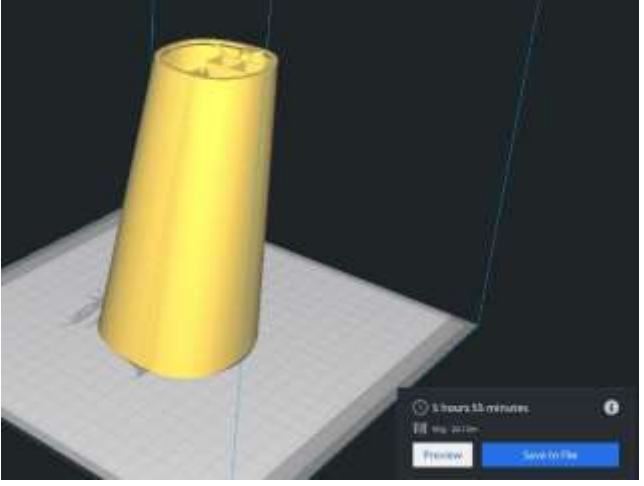


F4 Print Profile 2

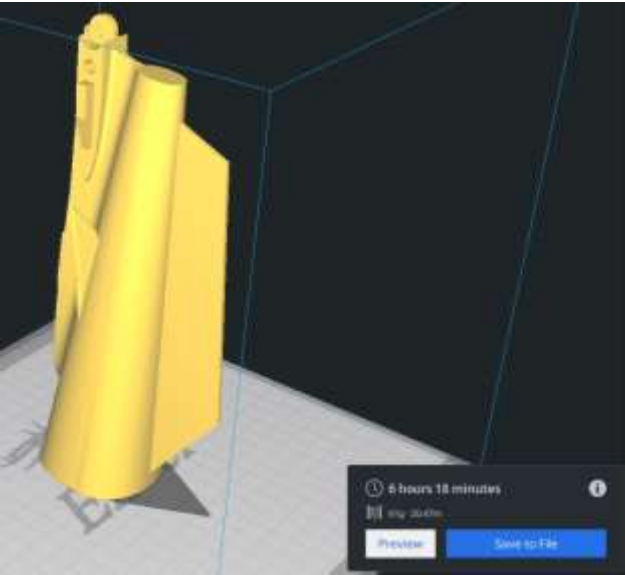
Infill:5%



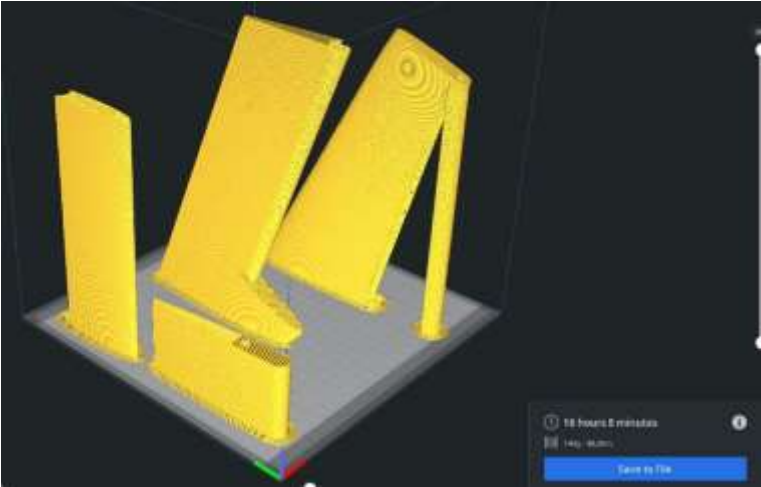
F5 Print Profile 2



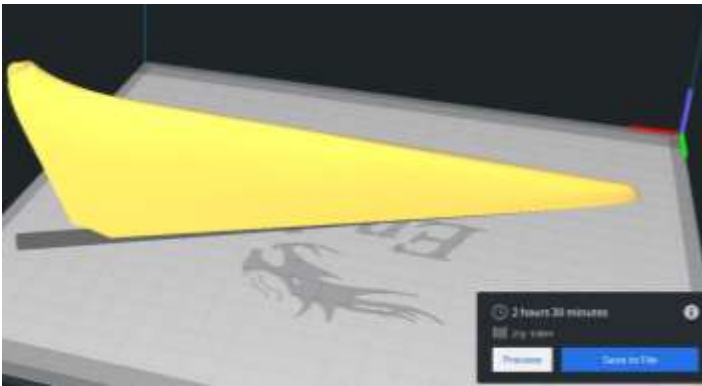
F6 Print Profile 2



F7 Print Profile 2

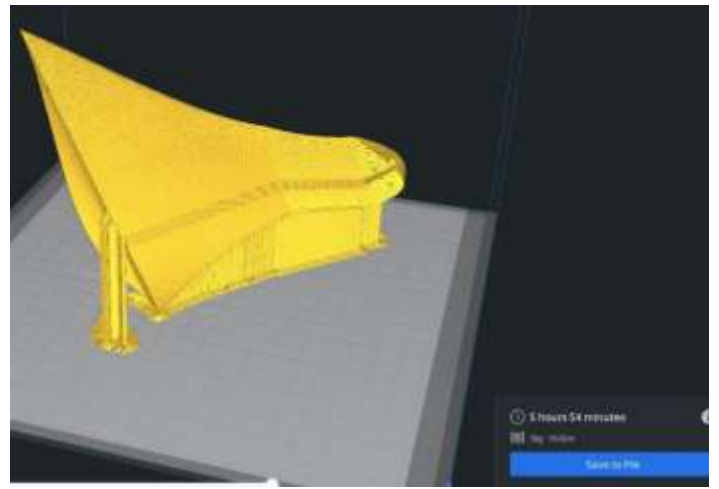


Horizontal Stabilizer R1&R2
Vertical Stabilizer -Support Enabled
Rudder



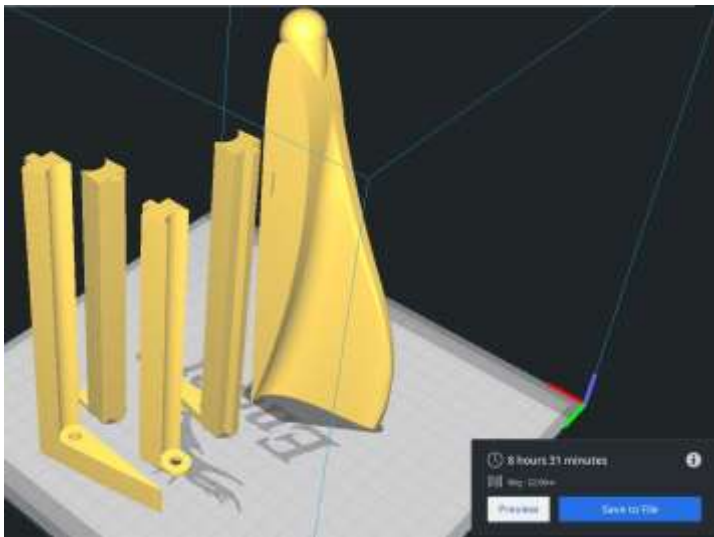
Fin Print Profile 2

Support Enabled



Landing Gear Print profile 2

Infill 12%

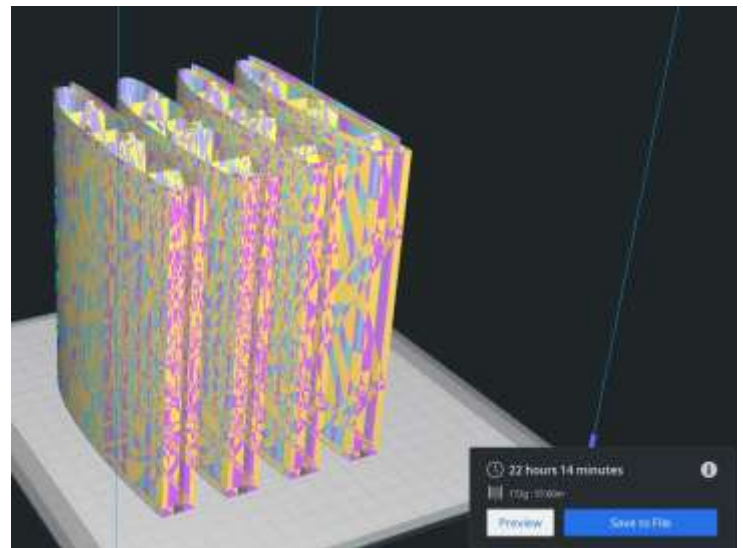


Wing B Sections Print Profile 2

Infill 10 %

Wing tip Print Profile 2

Infill 10 %



Wing A1-A2-A3-A4 Sections Print Profile 1

An error pops-up but if you have configured the profile settings as mentioned in profile page there wont be any issues with the print.

Note: The wing sections have a thin single wall border on top of them make sure that wall faces the upside

