



You can find the STL data at www.planeprint.com

PRINTING THE PARTS – PRINTING PROFILES

You may wonder why this 3D model is exclusive to CURA?

The most important thing with small RC model airplanes is always the **size to weight ratio**. The lighter a model is, the better its flight characteristics and also the flight time is significantly increased.

With our **unique design process**, we manage to offer weight-relevant parts in a **true 1-wall printing** process for both the outer skin and the filling. This allows us to save weight while maintaining the necessary stability.

Here we show you how to make adjustments from a standard CURA profile. For this model we need only 4, easy to create profiles.

It is important to follow the instructions from PLANEPRINT.com to slice the part correctly. However, it can be useful to perfect your 3D printing by making some additional settings depending on the printer and filament used.

For slicing all Planeprint models, four profiles have to be created in Cura:

PROFILE P1_fullbody PROFILE P2_hollowbody PROFILE P3_surface PROFILE P4_flex

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

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IMPORTANT FOR THE 1-WALL-PRINT!

In order to print airfoils of the lowest possible weight with high stability, it is necessary to print with only one wall line (Nozzle 0.4 mm). Decisive here is the adhesion between the layers! To achieve this, you must print at a much higher temperature than normal. As a **guideline**, 230 ° C is a good starting point. The parts-cooling fan should be set to 0% or a maximum of 20%. Since not every printer works the same, it may be necessary to make small adjustments to these settings.



The development of a complex, airworthy RC flight model to express on any standard 3D printer is a very complex and extensive process. Therefore, we appeal to your fairness not to forward the STL data you have acquired to third parties. Our STL files are provided with indelible copyright watermarks that can be verified at any time.

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



The following parts must be sliced with the PROFILE P1_FULLBODY. Please note the additional settings for the individual parts!

Winglet-left_LW_profile1_fb.stl Winglet-right_LW_profile1_fb.stl

MATERIAL LW-PLA, Weight: ~ 1 g

ADDITIONAL SETTINGS

None required

Gear front_profile1_fb.stl

MATERIAL PLA, ~ 4 g

ADDITIONAL SETTINGS

None required





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The following parts must be sliced with the PROFILE P1_FULLBODY. Please note the additional settings for the individual parts!

Gear main_profile1_fb.stl

MATERIAL PLA, ~ 6 g

ADDITIONAL SETTINGS

None required

Interconnects-profile1_fb.stl

MATERIAL PLA or LW-PLA, ~ 2 g

ADDITIONAL SETTINGS

None required

NOTE You can also print the interconnects with LW-PLA, then they are less visible.

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The following parts must be sliced with the PROFILE P1_FULLBODY. Please note the additional settings for the individual parts!

Linkages_profile1_fb.stl

MATERIAL PLA, ~ 2 g

ADDITIONAL SETTINGS

None required



MATERIAL PLA, ~ 2 g

ADDITIONAL SETTINGS

None required

NOTE If your motor has other drilling distances than 31 mm, use the undrilled motor mount.

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The following parts must be sliced with the PROFILE P1_FULLBODY. Please note the additional settings for the individual parts!

Servo mount_profile1_fb.stl

MATERIAL PLA or LW-PLA, ~ 2 g

ADDITIONAL SETTINGS

None required

Wheel_profile1_fb.stl

MATERIAL PLA, ~ 2 g

ADDITIONAL SETTINGS

None required

NOTE Use transparent PLA, then the wheels are less visible.

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The following parts must be sliced with the PROFILE P1_FULLBODY. **Please note the additional settings for the individual parts!**

Wingmount_profile1_fb.stl

MATERIAL PLA or LW-PLA, ~ 3 g

ADDITIONAL SETTINGS

None required





The following parts must be sliced with the PROFILE P3_SURFACE (1-wall-print). **Please note the additional settings for the individual parts!**

PLEASE NOTE In profile P3_SURFACE, there should not be more than one STL on the buildplate at the same time, otherwise slicing errors can occur! Depending on your printer, a brim may not be required.

Aileron1-left_LW_profile3_fb.stl Aileron1-right_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 8 g* ***Display in Cura**. The actual weight is 4,5 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).

Aileron2-left_LW_profile3_fb.stl Aileron2-right_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 6 g*

*Display in Cura. The actual weight is 3 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).

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The following parts must be sliced with the PROFILE P3_SURFACE (1-wall-print). **Please note the additional settings for the individual parts!**

PLEASE NOTE In profile P3_SURFACE, there should not be more than one STL on the buildplate at the same time, otherwise slicing errors can occur! Depending on your printer, a brim may not be required.

Elevator-left_LW_profile3_fb.stl Elevator-right_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 7 g* ***Display in Cura**. The actual weight is 4 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).



Fuselage1_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 46 g* ***Display in Cura**. The actual weight is 26 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).

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The following parts must be sliced with the PROFILE P3_SURFACE (1-wall-print). **Please note the additional settings for the individual parts!**

PLEASE NOTE In profile P3_SURFACE, there should not be more than one STL on the buildplate at the same time, otherwise slicing errors can occur! Depending on your printer, a brim may not be required.

Fuselage2_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 40 g* *Display in Cura. The actual weight is 22 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).



Fuselage3_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 51 g* ***Display in Cura**. The actual weight is 28 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).



The following parts must be sliced with the PROFILE P3_SURFACE (1-wall-print). **Please note the additional settings for the individual parts!**

PLEASE NOTE In profile P3_SURFACE, there should not be more than one STL on the buildplate at the same time, otherwise slicing errors can occur! Depending on your printer, a brim may not be required.

Fuselage4_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 38 g* *Display in Cura. The actual weight is 20 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).

Fuselage5_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 4 g* ***Display in Cura**. The actual weight is 2 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).





The following parts must be sliced with the PROFILE P3_SURFACE (1-wall-print). **Please note the additional settings for the individual parts!**

PLEASE NOTE In profile P3_SURFACE, there should not be more than one STL on the buildplate at the same time, otherwise slicing errors can occur! Depending on your printer, a brim may not be required.

HS-left_LW_profile3_fb.stl HS-right_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 11 g* ***Display in Cura**. The actual weight is 6 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).



Rudder_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 8 g*

*Display in Cura. The actual weight is 4,5 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).



The following parts must be sliced with the PROFILE P3_SURFACE (1-wall-print). **Please note the additional settings for the individual parts!**

PLEASE NOTE In profile P3_SURFACE, there should not be more than one STL on the buildplate at the same time, otherwise slicing errors can occur! Depending on your printer, a brim may not be required.

Turbine blade_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 1 g* ***Display in Cura**. The actual weight is 0,5 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).

NOTE Stringing is unavoidable here, please just clean it a bit with the cutter knife.



turbine inside-left_LW_profile3_fb.stl turbine inside-right_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 11 g*

*Display in Cura. The actual weight is 6 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).

NOTE Stringing is unavoidable here, please just clean it a bit with the cutter knife.



The following parts must be sliced with the PROFILE P3_SURFACE (1-wall-print). **Please note the additional settings for the individual parts!**

PLEASE NOTE In profile P3_SURFACE, there should not be more than one STL on the buildplate at the same time, otherwise slicing errors can occur! Depending on your printer, a brim may not be required.

turbine outside-left_LW_profile3_fb.stl turbine outside-right_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 11 g*

*Display in Cura. The actual weight is 6 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).

NOTE Stringing is unavoidable here, please just clean it a bit with the cutter knife.



VS_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 14 g* *Display in Cura. The actual weight is 8 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).





The following parts must be sliced with the PROFILE P3_SURFACE (1-wall-print). Please note the additional settings for the individual parts!

PLEASE NOTE In profile P3_SURFACE, there should not be more than one STL on the buildplate at the same time, otherwise slicing errors can occur! Depending on your printer, a brim may not be required.



Wing-middle-front_LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 56 g* *Display in Cura. The actual weight is 30 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less

- Flow 60 % or less

- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).





The following parts must be sliced with the PROFILE P3_SURFACE (1-wall-print). **Please note the additional settings for the individual parts!**

PLEASE NOTE In profile P3_SURFACE, there should not be more than one STL on the buildplate at the same time, otherwise slicing errors can occur! Depending on your printer, a brim may not be required.

Wing1-left-LW_profile3_fb.stl Wing1-right-LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 36 g* *Display in Cura. The actual weight is 19 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).



Wing2-left-LW_profile3_fb.stl Wing2-right-LW_profile3_fb.stl

MATERIAL LW-PLA, ~ 16 g*

*Display in Cura. The actual weight is 8 grams

ADDITIONAL SETTINGS

- Setting Profile3_Surface
- Flow 60 % or less
- Higher nozzle temperature

The optimal weight and sufficient strength is achieved with 60 % flow. Increase the temperature until the wall thickness is 0.4 to 0.5 mm. (We print at 235° and 60% flow).





PROFILE P4_FLEX TPU A95

The following parts must be sliced with the PROFILE P4_FLEX. **Please note the additional settings for the individual parts!**

Hinges_profile4_fb.stl

MATERIAL TPU ~ A95, Weight: ~ 1 g

ADDITIONAL SETTINGS

None required





REQUIRED ACCESSOIRES

Filament

- normal PLA about 50 grams
- LW-PLA about 400 grams (ABSOLUTELY NECESSARY) We recommend using white (natural) LW-PLA, which heats up much less in direct sunlight.
- TPU (A95) about 5 grams

Materials

- some tapping screws Ø2*8 mm (simply search for: M2 flat head tapping screw assortment)
- CA super glue (liquid and liquid medium)
- CA activator
- Carbon rod Ø2mm about 500mm
- Steel wire Ø0.6mm*1000mm, 2 pieces (or Ø0.8mm, max. Ø1mm for the servo linkages)
- small Rod connection, 4 pieces



Tools

- Cutter knife
- small Philips screwdriver
- needle-nose pliers





RC COMPONENTS

2S-Setting (Like our Funbus from the official Planeprint video)

ENGINE AXI 2203/40 VPP

PROP APC 9x3.7

But you can also use other motors. It is important that the motor should have a weight of about 20 grams.

BEC-CONTROLLER one matching the motor

RECEIVER 5 Channel

BATTERY 2S Lipo, from 350 to 650 MaH

- **SERVOS** PLANET-HOBBY ECO PLUS
 - PICCO 8 DIGITAL SERVO
 - Diamond D47
 - Hitec HS 40 Eco Servo 4,8g

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or similar in the same size, 4 pieces











ASSEMBLING MANUAL – Basic information

Gluing the parts

To glue the fuselage and wing parts well, **use medium-liquid CA** adhesive.

First check whether the parts go well together. Then apply a lot of CA glue to the part with the connections and all surfaces that will touch later (except the bowden tubes). Put the parts together and align the parts perfectly. If glue comes out, wipe with a cloth. Then spray activator spray on the glue points.

IMPORTANT For a strong connection, the adhesive surfaces should be sanded. Please only use fresh CA glue and activator spray for curing! The adhesive connections must hold perfectly!



Installation of the TPU hinges

First insert the hinge into the movable flap and add a drop of liquid CA adhesive into the gap. Wait for the glue to drain completely, then spray the activator on it.

Then put the flap in the wing until the flap touches the spacers and put a drop of CA glue on the hinge. Wait again for the glue to run in, and then spray the activator on it. **Do not use too much glue, the flap must move easily!**





Winglet-right_LW_profile1_fb.stl

















1 Insert the long wire into the bowden and position the linkage as shown in the photo.

2 The carbon rod of the vertical stabilizer must run in the gap of the linkage!

3 The short wires are simply inserted into the holes and do not need to be secured.





Tailplane assembly

Make sure the elevators move easily and accurately. Remove the support from fuselage 5 and alwa it to fuselage 4





Wing mount









Carbon rod Ø2*20mm



Fuselage servo mounting



Motor mounting



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SAFETY FIRST Use appropriate screws for motor mounting to ensure safe operation! Make sure the prop runs smoothly and does not generate vibrations. **Check regularly that the motor mounting is absolutely tight!**

First screw the motor to the matching motor mount and then insert it into the fuselage 1. Then align the motor so that it points approx. 1.5 degrees **downwards** and 1.5 degrees to the **right** (viewed from above). If your prop turns to the left, the motor must point to the left. Then glue the motor mount well to the fuselage 1.





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RC components









SETTINGS FOR FLYING

After installing the electronics and setting up the transmitter, check that the control surfaces are aligned correctly. Set the transmitter trim to zero. Align all rudders to zero position. Before switching on for the first time, reduce the maximum travel significantly so that the rudders cannot touch anything.

Setting the servo travel

ELEVATOR up: 12 mm, down: 12 mm

AILERON up: 12 mm, down: 10 mm

Expo setting

ELEVATOR	20 %	RUDDER	0 %

AILERON 20%

RUDDER left/right: 16 mm

(for some remote controls a minus has to be in front of the number)

Flight timer

Flight time will vary depending on the battery size. Expect 3 minutes under normal circumstances; however, it may be possible to fly for much longer. It is a good idea to be conservative with the flight timer until you gain experience with your airplane.

TECHNICAL SPECIFICATIONS

WINGSPAN 1000 mm/39.3 inches

LENGHT 850 mm/33.4 inches

FLIGHT WEIGHT 390 grams (with 2S/350MaH-Battery)





AGE RECOMMENDATION 14+

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

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. **Please be careful when handling motors, batteries and propellers** and only move your model with insurance and in approved places!

