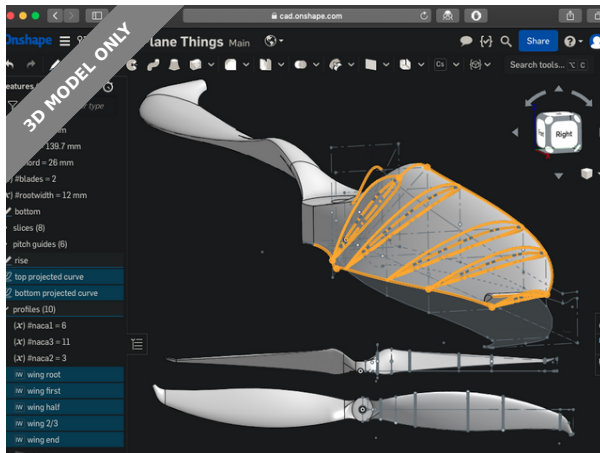




Drone/Plane Propellers- generative design, any size



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updated 12. 4. 2022 | published 1. 3. 2022

Summary

Print your own propeller, open source CAD- so modify and design your own!

[Hobby & Makers](#) > [RC & Robotics](#)

Tags: [quadcopter](#) [drone](#) [propeller](#) [prop](#) [airplane](#)
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In 3d printing a RC Stearman model I needed an 11x5.5 prop. Instead of paying \$3 for one I spent thousands of person-hours using high-expertise design skills to build this!

It's a procedurally generated propeller design that's **variable-enabled**. You can enter your dimensions and get a prop or customize and tailor to your hearts content. Don't like my vortex generators? Remove 'em or change them.

I'd like to build this document up with different sizes that people can just download- so if you'd like a size or variation that's not here ping me and I'll get you the STL and upload it here. Leave a comment or message me on [discord/telegram](#)

Printing

Needs to be printed **with supports** then sanded.

I use (and recommend) high-temperature PLA+ to print. It anneals when oven heated and becomes even stronger.

Here's my process:

- Print:
 - I prefer upside down to make the thin trailing edge come out great.
 - with support! I use ~55-deg overhang angle
- I use 3 wall perimeters with super thin 0.1mm layers and a high infill of 'lines' or 'grid' to keep it symmetric and balanced.
- Optional annealing:
 - after printing LEAVE SUPPORTS ATTACHED
 - Bake in oven for ~10-15 minutes. I used 220F for my HTPLA+ from fusion filaments.
 - Carefully remove supports. They're stronger now so go slow.
- Sand sand sand. I:
 - start by using a combination of a dremel sander and 80-120 grit to get all the layer lines out on the top and bottom surfaces (bottom is more important).
 - Then I wet sand with ~200 grit, ~300 grit, ~400 grit, and ~800 grit.

That's it! My 11x5.5 prop takes ~5h of printing, 15m to bake, and 1h to sand/finish.

Source / Design File

Designed in onshape, effectively next-generation solidworks in the web (an mobile apps) [Here's the public document](#). Anyone can fork and extend the design for free.

Also [here's the page](#) to get a free account, they keep a little it hidden from their main site

Message me!

If you use the CAD, print a prop, or even go with an alternative: Message me on [discord](#)/[telegram](#)! I want to hear how it went!

Post your make!

Please post 'em! Really! Take a quick cameraphone photo of your print in all its glory and show it off! Plus it really helps get this design out there to the world.

Message me on [discord](#)/[telegram](#) for

- customizations
- different engravings
- different variation ideas
- any issues: printing, design, fit, etc
- to show off / geek out about your result
- say howdy

Designing stuff is fun but interacting with cool people and hearing about their adventures is better. I can generate any variation / engraving easily, message me on [discord](#)/[telegram](#) and/or leave a comment and let's make your perfect version. I only ask that you post a make!

If you'd like the CAD or STEP file too, no problem. I've already helped a bunch of great folks! Send me a ping

Model files

7x5r.stl



folding_prop_-_10x5in-45mmfold7mmospace.stl



folding_prop_-_8x6in-45mmfold7mmospace.stl



8x5r.stl





folding_prop_-_8x5in-45mmfold7mmospace.stl



9x55r.stl



11x55r.stl



9x45r.stl



9x5r.stl

[Find source .stl files on Thingiverse.com](https://www.thingiverse.com)

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