



GIAW - Pull Copter - No Gluing



ICantBeBothered

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Summary

A self-resetting Pull Copter

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This is my variation of the Pull Copter. It functions similarly to other Pull Copters available for printing, but with one important difference that I haven't seen on any I've seen yet. Instead of being driven by a gear and an accompanying 'toothed' key, this version relies on a combination of string and tension provided by rubber bands. Pull the string to make the rotor fly and the tension from the rubber bands rewinds the string automatically, resetting things for the next flight.

Depending on the material you use, all of the parts can be printed without supports, with one exception. I've found the thin sections of the shaft to be too brittle when using PLA. The repeated twisting/tension quickly snaps the shaft in half. When I've used PETG for this part, it holds up fine when printed vertically. If using PLA, I recommend printing the shaft horizontally, with supports.

The rotors fly really well, but I don't recommend using it indoors. It will work fine, but I found bits of paint from our ceiling on the edges of the

blades. I successfully printed the rotor in TPU without supports. It is a better option for indoor use, but they are more challenging to use.

Needed Parts and Materials

- 1x Body
- 1x Shaft
- 1x Barrel
- 1x Key
- 1x Pull Handle
- 1x Rotor
- 1x String or Twine
- 1-3x Rubber bands (depending on the size)
- 1x Crayon

Assembly is fairly easy, but I created a video to make the process crystal clear.

Model files



giaw-body.stl



giaw-shaft.stl



giaw-barrel.stl



giaw-key.stl



giaw-pullhandle.stl



giaw-rotor.stl

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