



Mobula7 "indestructible" frame / crazybee F3 / Modular design



fab

[VIEW IN BROWSER](#)

updated 12. 4. 2022 | published 6. 2. 2022

Summary

Improved previous concept, made it lighter and made a lot of small improvements. It is meant to replace the mobula7...

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

Tags: [drone](#) [mobula7](#) [quadcopterframe](#) [crazybee](#) [0802](#)
[motor0802](#)

Improved previous concept, made it lighter and made a lot of small improvements.

It is meant to replace the mobula7 frame, but can probably replace most crazybees of this size.

It is intentionally multi-part to enable two different kind of usages:

Single plastic material

- the protection frame is the one likely to break
- only print the needed part
- clips in place, easy to detach too

- the 0.4mm frame is recommended for this usage, will break easily but is also very light

TPU + plastic of choice

This is my recommended setup, for an almost unbreakable frame

- Inner body in stiff plastic (eg. PLA, ABS or even PET)
- outer frame and clips in TPU, for an infinite lifetime!
- the 0.8mm frame is recommended for this usage, a bit heavy but needed to add some stiffness to the TPU

Printing

I recommend 0.4mm to 0.8mm nozzles

The thinnest layer height you can reliably print + print slow, to make it strong

No support is needed, your setup needs to handle ~1cm bridges

Editing

You will need blender 2.8 to open the file (free software). Press "s" after selecting the text on screen to increase or decrease the clearance for the parts clipping together.

Updates

5-13-2019 : larger holes to avoid motor shaft friction + slightly stronger arms (was already OK)

Print Settings

Printer Brand:

Wanhao

Printer:

Wanhao Duplicator i3 V2

Rafts:

Doesn't Matter

Supports:

No

Resolution:

nozzle: 0.4-0.8 , height: 0.1-0.4

Infill:

any

Category: R/C Vehicles

Model files



frame_04mm.stl



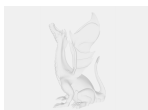
x-frame.stl



clips.stl



mobula7.blend



mobula7-larger.blend



frame_08mm.stl

[Find source .stl files on Thingiverse.com](#)

License ©

This work is licensed under a
Creative Commons (4.0 International License)



Attribution

- ✗ | Sharing without ATTRIBUTION
- ✓ | Remix Culture allowed
- ✓ | Commercial Use
- ✓ | Free Cultural Works
- ✓ | Meets Open Definition