

Mini DVD Motor 3D Printer



TheBasedDoge

[VIEW IN BROWSER](#)

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Summary

Mini DVD Motor 3D Printer! Now even more compact, more reliable and featuring a dual Z axis upgrade.

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Mini DVD Motor 3D Printer

Inspired and based on the original mini DVD motor printer, by MegaAndy (which seems to be gone now?). However, most of the original has been changed.

Improvements made upon the original:

- Everything is now integrated into one base, cooling fan, extruder, spool holder, etc. Entire printer fits in the palm of your hand while printing.
- All axis feature real bushings to reduce slop and increase print quality and reliability.
- Optional Dual Z axis. (Thank you to [Icesythe7](#) for that idea!)

- Optional Raspberry Pi Mounts for either Pi 0 or Pi 2,3,4 for OctoPrint server.
- Utilizes a creality style hotend for greatly reduced weight (almost half vs V6 style)

Parts required

- 3x CD Drive stepper motors OR 4x if going optional DualZ (highly suggested) This gets tricky because some of them have different hole spacing. I have noticed LG or LITE-ON drives seem to have the correct ones.
- 12x 3mm ID 5mm OD bushings - Link here: https://www.amazon.com/Acoeitl-Bushing-Bearing-Friction-Tolerances/dp/B0BGMCDHLT/ref=sr_1_1?crid=379SO57RB3YRY&keywords=3mm+x+5mm+bushing&qid=1680888377&sp
- 1x Nema17 for extruder setup. I am using this bowden extruder, any would work: <https://www.thingiverse.com/thing:275593/files>
- Lots of 3M screws for assembly, some button head, some countersunk
- 6x 3mm rods, recycled from CD drive
- 3x microswitch for endstops
- Controller board of choice. I am using SKR 1.3.
- Creality ender 3 style hotend.
- 2x 40mm fans for cooling. Suggested one thick and one thin. Hotend fan is simply held with zipties to the hotend.
- 50x50mm acrylic for print bed. Suggested PEI on top.
- Machine oil (sewing machine oil works) for rods and leadscrews.
- Optional, USB C 12v PD board.

I printed base and tower out of PETG, all moving parts are ASA but PETG would be fine as well. the motors get very hot so PLA will deform.

Assembly is fairly straightforward as shown in photos and fusion model. Take extra care to ensure your bearings are straight and parallel when pressed into the carriage or you will run into issues with loosing steps (motors are not very strong) You can create a mini bearing press with a long M3 nut, bolt and washer as show in the photos.

Model files





x-endstop.stl



z-base.stl



z-carriage.stl



miniprinterspoolholder.stl



carriage_teeth_curved.stl



carriage_teeth_curved_tighter.stl



bed50mm.stl



miniprinterpi-0-bracket.stl



base.stl



pi-4-mount.stl



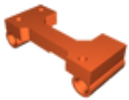
z-base.stl



y-endstop-mount.stl



print-cooling-fan.stl



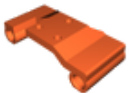
x-carriage.stl



x-endstop-block.stl



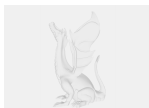
tower.stl



y-carriage.stl



z-carriage.stl



cd-motor-printer.step

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