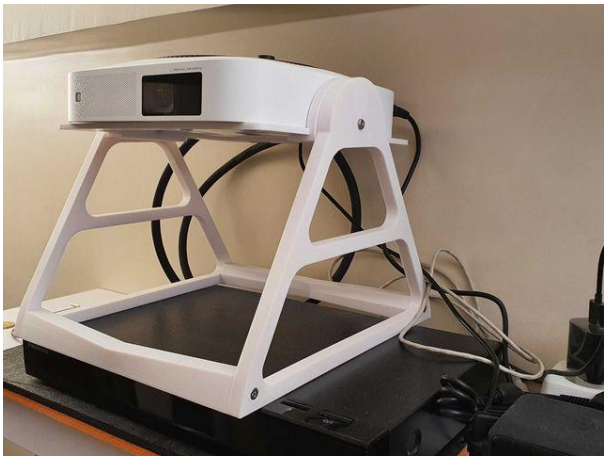

Orientable stand for video projector

reivax

VIEW IN BROWSER

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Summary

I've been orienting my video projectors with coins, boxes, books, ... for years. Now is the time for a fancier solution.

11.60 hrs	5 pcs	0.15 mm 0.20 mm	0.40 mm	PLA	143 g	Prusa MK3S/S+ & MMU2S/3

Gadgets > Photo & Video

Tags: adjustable positioning videoprojector

Designed as a stand for the awesome XGIMI Elfin Portable Videoprojector whose size is 19.2 x 19.4 x 4.8 centimeters and weights less than 1kg, but the stand can surely bear heavier devices, just not sure how heavier.

[edit] I added the .step file to make size adjustments easier, thanks to @LeopoldD_1284797 for the suggestion.

Since I set it on a shelve near the ceiling, I set the projector upside down (as if it were attached to the ceiling), I designed the “tray” for the top (flat) surface of the projector. Not sure how it would fit the bottom side that

features small feet, but you can just easily fill the void in the middle to accommodate anything.

The most difficult part when designing this was naming the parts because I lack the vocabulary :) so bear with these silly names:

You will need to print two “baseRod.stl”, two “flank.stl”, two “sidePole.stl”, two "pivot.stl" and two “pivot(1).stl”, one “tray.stl”

The pivot is a big printed screw, printed in two halves horizontally rather than one vertical print, so that the layer orientation make it sturdier (much sturdier actually)

You need not even glue them to use them. Just put one “pivot.stl” along with one “pivot(1).st”, add a drop of oil, and screw in the “sidePole.stl” threaded hole.

Caution: Do not tighten too much, you may be unable to unscrew it if needed without breaking all.

Assembling using hex 4mm nuts and bolts:

Two M4*8mm to block the position

Four M4*20mm to assemble to bottom rods to the side poles.

Six M4 nuts.

And 2 to 6 self tapping M2*8 screws to assemble the tray and the flanks (I designed 3 holes on each flank, but used just one screw and it was enough)

Model files

sidepole.stl

baserod.stl

flank.stl

tray.stl

pivot.stl

pivot-1.stl

videoprojectorstand.step

tray.step

Print files

pivot_015mm_pla_mk3smmu2s_29m.gcode

PLA 0.40 mm 0.15 mm 0.48 hrs 2 g

Prusa MK3S/S+ & MMU2S/3

baserod_015mm_pla_mk3smmu2s_2h41m.gcode

PLA 0.40 mm 0.15 mm 2.68 hrs 32 g

Prusa MK3S/S+ & MMU2S/3

tray_02mm_pla_mk3smmu2s_2h55m.gcode

PLA 0.40 mm 0.20 mm 2.92 hrs 40 g

Prusa MK3S/S+ & MMU2S/3

flank_02mm_pla_mk3smmu2s_1h5m.gcode

PLA 0.40 mm 0.20 mm 1.09 hrs 12 g

Prusa MK3S/S+ & MMU2S/3

sidepole_015mm_pla_mk3smmu2s_4h26m.gcode

PLA 0.40 mm 0.15 mm 4.43 hrs 57 g

Prusa MK3S/S+ & MMU2S/3

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