Vertical Camera Slider tripod base- Digital Bird Motion Control System

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VIEW IN BROWSER

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Summary

Digital Bird camera slider vertical base support. This base allows the digital bird camera slider to be used...

Gadgets > Photo & Video

Tags: camera mount slider cameramount tripod motorized cameraslider linearmotion motioncontrol

Digital Bird camera slider vertical base support.

This base allows the digital bird camera slider to be used vertically. There is no kit for this item since there are relatively few parts required and all the component are readily available online.

The design makes full use of the Digital Bird sliders two gantry sleds with the bottom sled being used to support counter weights. This enable us to lift heavy payloads with exactly the same small nema17 we use for horizontal moves. Because the resultant payload is balanced we remove the risk of the camera suddenly dropping down the rail if for example a battery should fail and we loose power.

There have been a number of small modifications to the slider parts to facilitate this setup.

The belt ends should be super glued into the magnetic belt ends as well as using the small screws to secure the belt. This is added security since the loads on the belt ends are much higher.

The rail support at the control end has been re-designed to better grip the rail and provide more support to the rail when in a vertical position.

The top carriage has an additional small hole for the new 90Deg bracket to prevent it from swivelling around on the gantry.

The battery end centre divider has an additional hole in it enabling us to add additional wire supports if required.

The shelf has been removed from the control box door and the new door parts included here. This has been done to simplify the shape at the base.

Happy vertical sliding!

Links:

Print Settings

Printer Brand:

Rafts:

No

Supports:

Yes

Resolution:

0.2 layer height

Infill:

25- 100% depending part

Filament: Matt Black PLA and a colour

Notes:

I printed the rail end stops at 100% fill
The Large triangle takes a lot of load and needs to be printed at least

60%fill to avoid over flexing. Other parts can be printed solid or with fill at your discretion.

Bill of Materials

Additional parts required

Legs 1000mm long 20x20mm Vslot aluminium section cut to provide:

- 3No. 20x20mm Vslot aluminium section 264mm long
- 1No. 20x20mm Vslot aluminium section 208mm long

(Centre holes at ends taped to M5. Note the aluminium section should have a circular centre hole. Some cheaper sections have less material in the section and a square centre hole avoid those!)

3No. sourcing map Straight Line Connector, 3.9 Inch Joint Bracket for 2020 Series T Slot 6mm Aluminium Extrusion Profile (with M5 grub screws 12 required) Available together on Amazon.

End cap bolts

- 8No. M5 Low profile bolts 10mm long

Cable support: (only for additional stability if required)

- 1No M6 Hex head bolt 40mm long
- 3No. M6 Female brass plastics inserts
- 2No M6 threaded lamp nipples 35mm long
- 2No. M6 Nuts
- 2No Bicycle gear cables (Small cap ends for gears not the larger cap ends for breaks)
- 1No. 3/8th Camera screw Lever type

Feet:

- 3No M6 Hex head Bolts 55mm long
- 3No M6 Nuts
- 3No M6 washers

Counter weight support

- 1No. 120mm long Swiss plate clamp
- 2No. M6 low profile bolts 90mm long to pass through counter weights
- 2 No. M6 nuts

Counter weights:

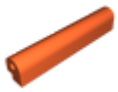
Counter weights required depend on your payload but I would suggest:

- 2No. 60x20x120mm long mild steel bar stock (approx. 1kg each)
- 3No. 60x10x120mm long mild steel bar stock approx. 500g each)

System Links:

- **Component Kits**: https://digital-bird-motion-control.myshopify.com
- **Software**: https://github.com/digitalbird01/DigitalBird-Camera-Slider
- **Pan Tilt Head**: https://www.printables.com/model/326746-camera-pan-tilt-head-digital-bird
- **Duel action Camera Slider**: https://www.printables.com/model/326752-digital-bird-motorized-duel-action-camera-slider
- **Focus/ Zoom motor**: https://www.printables.com/model/326749-focus-motor-digital-bird-motion-control
- **Digital Pan Head / Turntable:** https://www.printables.com/model/326745-digital-bird-video-turntable-pan-head
- **Compact WIFI controller:** https://www.printables.com/model/326750-digital-bird-wifi-remote
- **Digital Bird Mini Jib: (coming soon)**

Model files



ctrlboxhinge.stl

100% Fill Hinge for Slider control box door

ctrlboxdoor.stl

25% Fill. Alternative slider control box door for use with vertical base

base01.stl

60% Fill

tensionbarendcap.stl

100% Fill

endcap.stl

100% Fill

footcap.stl

100% Fill

base02.stl

35% Fill

large_foot.stl

100% Fill

hanger.stl

100% Fill

counterweightthumb.stl

100% Fill

Find source .stl files on Thingiverse.com

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