Focus / Zoom Motor - Digital Bird Camera Motion Control

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VIEW IN BROWSER

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Summary

This is the Digital Bird Focus/ Zoom motor part of the Digital Bird motion control system.

Gadgets > Photo & Video

Tags: camera motor video remote thingiverse zoom autofocus motioncontrol pantilthead

Design know superseded March 2024

This design has now been superseded by the Digital Bird Mark III design which can be found here: Mark III

Latest Update 3rd Oct 23

- Fixed a stupid error to parts **001_30_20mm Mot_RightH** and **001_30_12mm Mot_RightH** where the RJ45 port hole was on the wrong side of the parts!! part **004_60** has also been updated for the same reason

Update 15th Sept 23

- Left and right hand variants are now provided. The picture above shows a Left Hand build.
- Gear orientation has been changed. By turning the gears around 180 deg I have been able to reduce the casing depth by 10mm. So the small gear on motor know has its teeth down close to the motor body. This means that the gear shaft for the larger gear supplied in the kit has also been reduced to 17mm long. This allows more space for two drive motors side by side on the lense. The small magnet at the top of the large gear shaft used as a waring point is no longer required.

This is the Digital Bird focus motor part of the Digital Bird motion control system.This focus motor is designed to work only as part of the Digital Bird motion control system.

The device is designed to work with industry standard 0.8Mod lens gears and belts and can be used mounted either left or right hand mounted depending on the Pan Tilt you select.As always parts kits can be found here: https://digital-bird-motion-control.myshopify.com

Note: As with all other focus motors of this type they will only work with manual focus lenses such as cinema lens or legacy 35mm lens. This is because modern wired lenses designed specifically for stills photography do not offer a specific position on the ring for a specific focus point since they interpolate not only the rings position but the speed at which you turn the ring. Such lenses are not compatible with motorised focus pullers such as this one or any other.

The device can be built with a choice of two sizes of circular Nema 14. 12mm long or 20mm long.

The choice of motor 12 or 20mm long is your own however I would advice 20mm for stiffer zoom lens rings. The 12mm should be fine for most focus/ Iris rings.

Parts kits including everything except the Nema14 can be purchased here:

I purchased my motors from here for around $20:

https://www.omc-stepperonline.com/nema-14-stepper-motor/round-nema-14-bipolar-0-9deg-7ncm-9-91oz-in-0-5a-8-5v-f36x12mm-4-wires.html

or https://www.omc-stepperonline.com/nema-14-stepper-motor/round-nema-14-bipolar-0-9deg-12ncm-17oz-in-0-65a-4-6v-f36x20mm-4-wires.html

Print Settings

Rafts:

No

Supports:

Yes

Infill:

35-100% depending on part

Filament:

Matt Black PLA

Notes:

I printed all my parts with 35% fill except the small motor clamp which I printed at 100% fill.

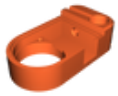
This remix is based on

Focus Motor - Digital Bird Motion Control

by colinh3D

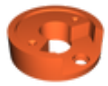
Model files

Left Hand 12mm motor 5 files



001-30-12mm-mot-lefth.stl

updated 12-10-23

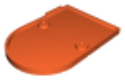


002-30.stl

Updated 12-10-23

003-lefth.stl

updated 12-10-23

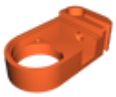


004_60.stl

005_100_12mm.stl

Right Hand 12mm motor

5 files



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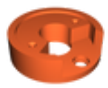
updated 12-10-23



002-30.stl

updated 12-10-23

003-righth.stl

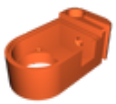
updated 12-10-23

004_60.stl

005_100_12mm.stl

Left Hand 20mm motor

5 files



001-30-20mm-mot-lefth.stl

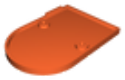
updated 12-10-23

002-30.stl

updated 12-10-23

003-lefth.stl

Updated 12-10-23

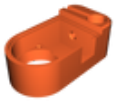


004_60.stl

005_100_20mm.stl

Right Hand 20mm motor

5 files



001-30-20mm-mot-righth.stl

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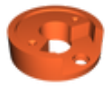

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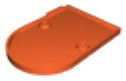

004_60.stl

005_100_20mm.stl

Find source .stl files on Thingiverse.com

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