



Squirrelinator Trap Latch Gate



Kisssys

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Summary

This is a simpler version of the Squirrelinator Daylight Door which I posted earlier this year. It is much easier to...

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This is a simpler version of the Squirrelinator Daylight Door which I posted earlier this year. It is much easier to make and should be very reliable. It also allows the electronics to be removed easily and replaced if you need to wash the trap.

It uses an inexpensive ESP32 board by EZSBC.com which can handle being powered by 4 AAA batteries and draws less than 15 microamps when put in the sleep mode with the RC servo attached. It uses a MG995 servo with a coupler pressed on the metal drive gear. I take the gear out and use it to form the spline on the coupler as shown in the pictures.

The servo drives 2 push rods that rotate a hook over the end of a cross piece on each trap door. Adjust the linkages to get necessary movement. If the hook is set correctly upward force placed on the door will not move the unpowered servo arm.

I read the voltage on an analog pin of a voltage divider made from a 100K resistor and a common photoresistor to ground. Power to the 100K resistor

comes from a GPIO pin that is turned on when it's not in sleep mode. This has proved to be a very reliable daylight sensor. I take a look at the sensor every 10 minutes to decide if the cage should be locked or unlocked.

Look at comments on the photos, schematic and the included Arduino code for further explanation.

I hope you find this useful or maybe you might find a few useful things here to be used on some other project if you don't have a Squirrelinator trap,

Cheers

Kissys

Category: Outdoor & Garden

Model files



case.stl



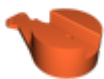
rodsupport.stl



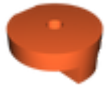
latcharm.stl



bottom.stl



latcharm2hole.stl



servocoupling.stl

Other files



squirrelcagelatch.ino

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

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