Arduino-based Electronic Lock

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VIEW IN BROWSER

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Summary

This is servo-based door lock controlled by Arduino Nano and powered by standard SG90 servo.

Hobby & Makers   >   Electronics

Tags: arduino   lock   servo

This is servo-based door lock controlled by Arduino Nano and powered by standard SG90 servo. The means to open the lock can be anything, from simple keypad trough magnetic hall sensors to Bluetooth or RFID.

This project contains complete material from Arduino Workshop SIG I did at ZodiaCon 2017.

In addition to STLs, there are the following files available:

- Slides.pdf - presentation slides from my talk
- Handbook-CS.pdf - lab handbook in Czech language
- Handbook-EN.pdf - lab handbook in English language
- Code.zip - source code for all labs
  The following labs are included:
    1. Testing the environment (blinking the LED)
    2. Using the OH3144 Hall Sensor
    3. Using the 4x4 matrix keyboard
    4. Using the SG90 servo

5. Simple lock controlled by magnetic sensor
6. Simple lock controlled by keyboard
7. Finished project - lock with changeable code stored in EEPROM.
   The following electronic components are required:
- Arduino Nano (or basically any Arduino, but the holder is designed for Nano)
- OH3144 Hall Sensor
- SG90 servo
- 4x4 matrix keyboard

Print instructions Category: Electronics Print Settings

Printer Brand: Prusa

Printer: Prusa Mk2

Rafts: No

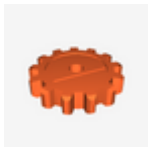**Supports:** No

Resolution: 0.2 mm

Notes:

Some parts have 'light' variants (*_LT.stl). These are less robust, but print faster.

How I Designed This

The rack and gear were inspired by Motorized Door Lock, but the other parts were created from scratch and designed for easy print.

Model files

ual_gear.stl

ual_servo_holder.stl

ual_rack.stl

ual_rack_cover_lt.stl
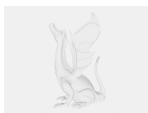
ual_baseplate_lt.stl

ual_servo_cover.stl

ual_all.stl

ual_all_lt.stl

universal_arduino_lock.skp

ual_servo_cover_lt.stl

ual_baseplate.stl

ual_rack_cover.stl

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