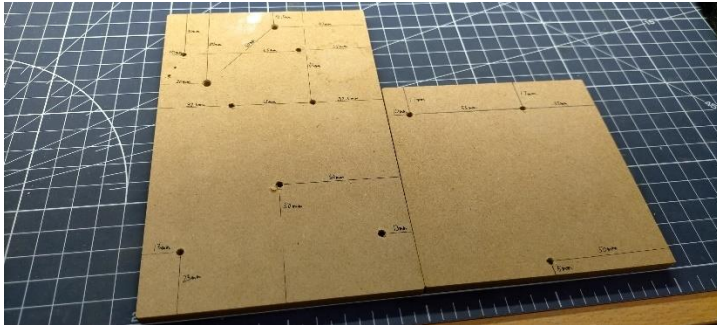


Egg cracker by nefastudio

Items Needed:

16cm x 10cm MDF board

10cm x 10cm MDF board



[3D part] move pusher

[3D part] 2x 2 hole stand

[3D part] 2x 1 hole stand

3x 8mm aluminum pipe 10cm (or favorite height)

2 x 625zz bearing w/ 5mm aluminum pipe



[3D part] Move end egg side

[3D part] Move end

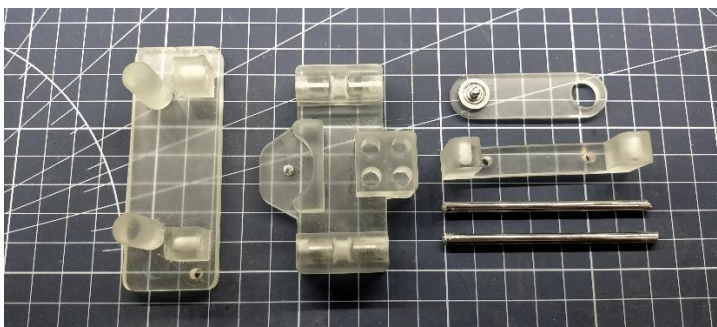
[3D part] Move base

[3D part] Servo bridge

2x 3x10x4mm flanged bearing w/ 3mm aluminum pipe

4x LM4UU 4mm linear bearing (one for servo arm)

2x 4mm x 7cm stainless steel pole



[3D part] Servo base

25Kg digital servo

M3 screw



[3D part] cracker left side

[3D part] cracker right side

[3D part] cracker base

[3D part] push egg

[3D part] push end

4x 4mm x 7cm aluminum pole



12x M3 x 15mm screw and nuts

Cable holder (optional)

Rubber legs (optional)



1x9x9mm L angle aluminum, cut in 1cm x 2 to blade shape

2x small screw (about 2mm x 1cm)



[3D part] Controller case

[3D part] Controller cover



Arduino nano

12 x 12 x 5mm tact switch

1000uF capacitor

Jumper pins

21 x 15 x 25mm Rocker switch

USB cable (for power supply)

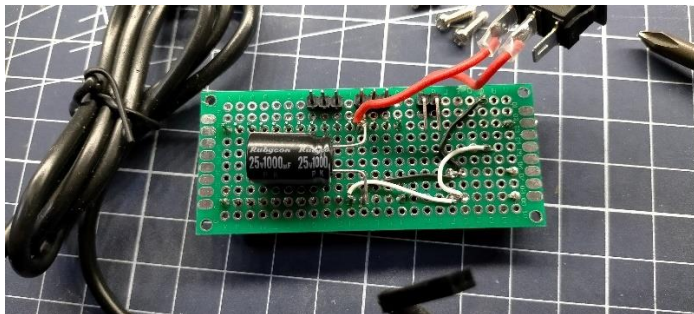
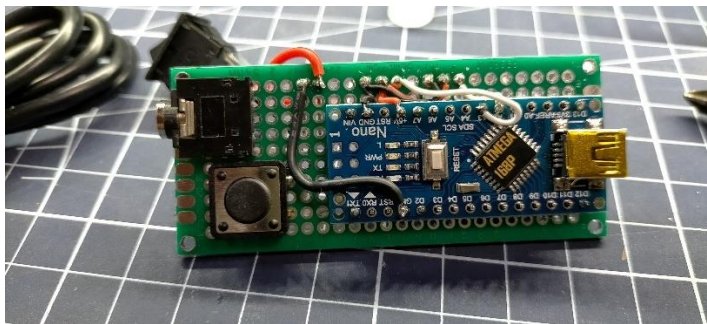
Phone Jack (optional, for use with external switch)

Wires (as needed)

Universal PCB print board

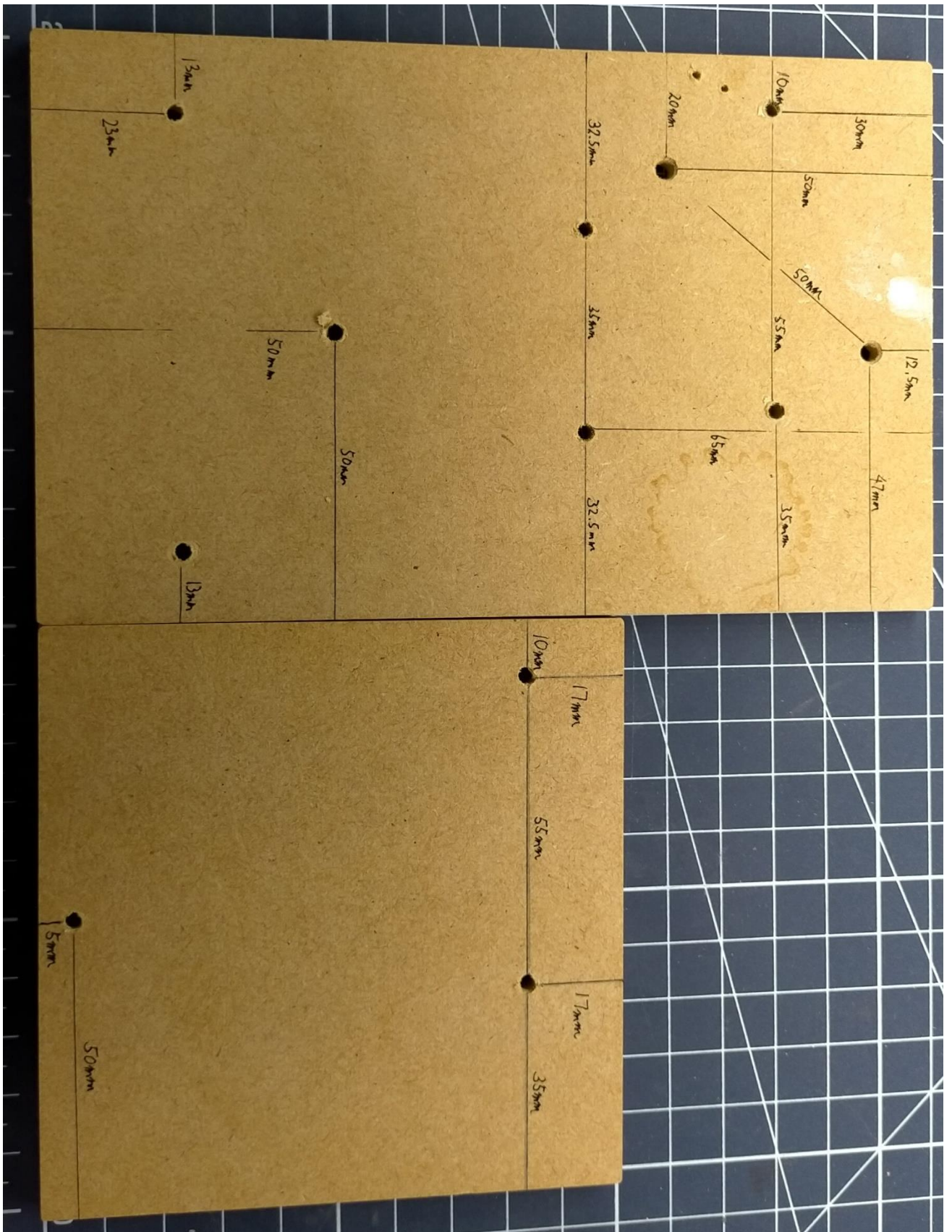
4x M2x10mm screw

4x M2.5x10mm screw (for case)

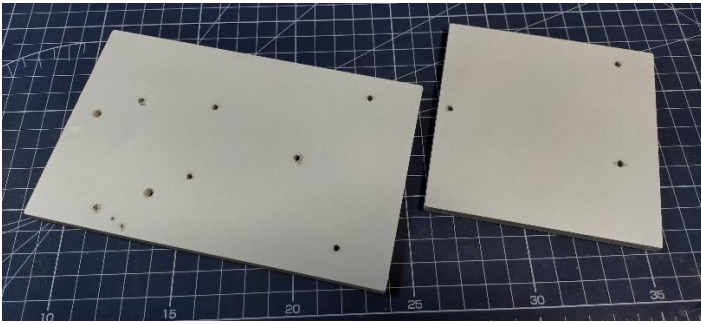


Preparation:

Screw hole to MDF board



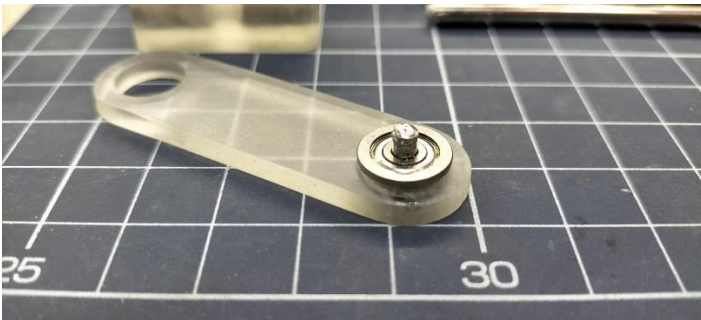
Paint to favorite color



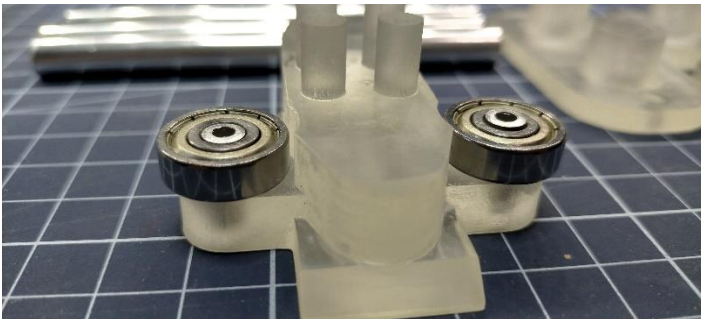
cut servo arm and screw flanged bearing.



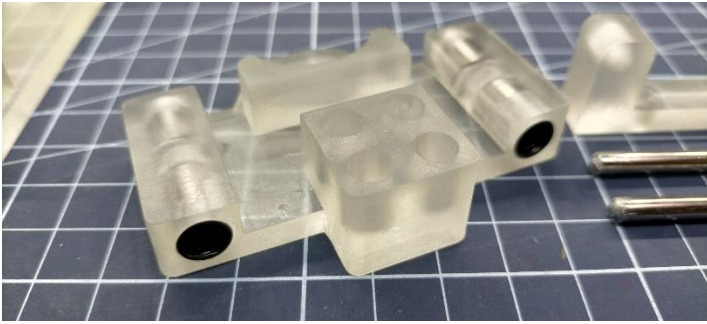
Attach flanged bearing



Attach bearing

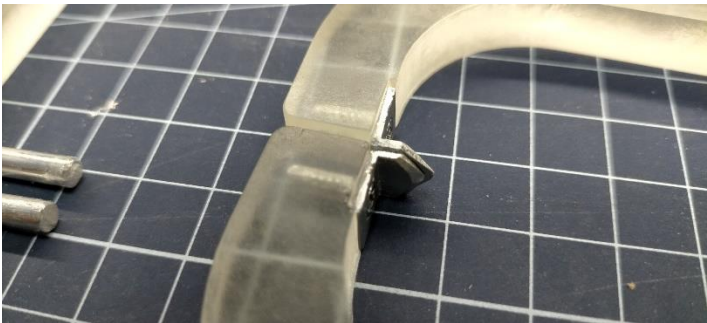


Insert linear bearing



Create blade and screw to arm.

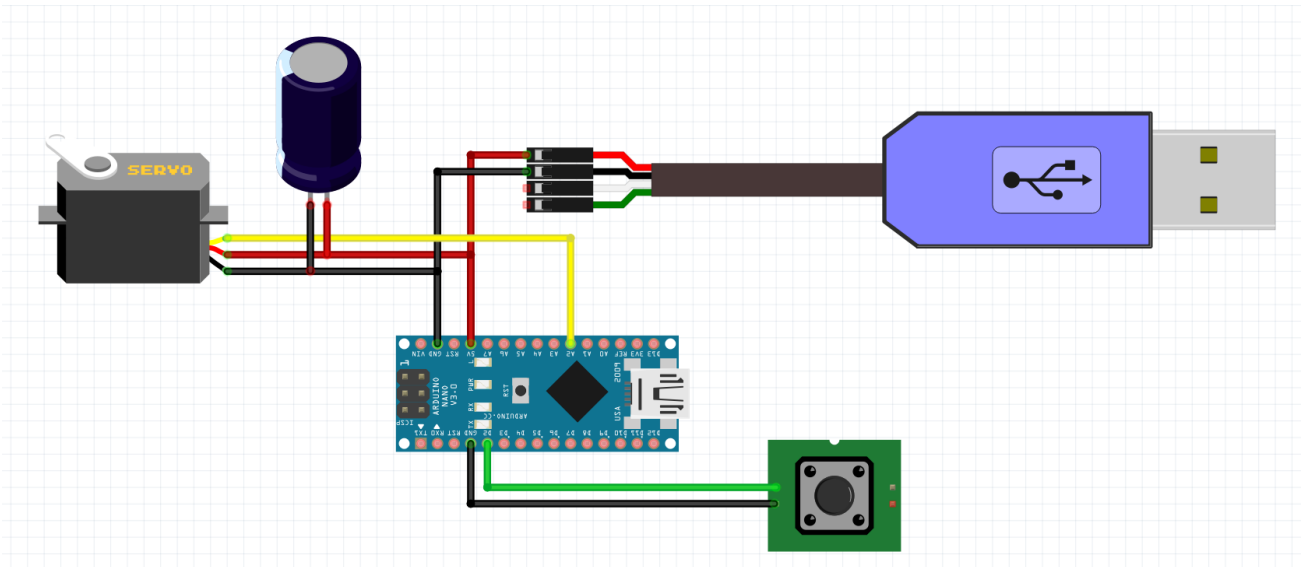
Make one side bit shorter.



Create control board, write Arduino sketch to Arduino nano.



Wiring diagram



Sketch

```
#define SERVO1_PIN    A2
#define BUTTON_PIN    2        //button

#define SERVO1_DEG    65
#define STATUS_LED    13

#include <Servo.h>
Servo servol;

void moveservo() {
    Serial.println("move servo");
    servol.attach(SERVO1_PIN);
    servol.write(SERVO1_DEG);
    delay(3000);
    Serial.println("return servo");
    servol.write(0);
    delay(1200);
    servol.detach();
}

#define BTN_NONE      0
int lastbutton = 0;
int currentbutton = 0;
unsigned long last_button_read = 0;
```



```

int checkbutton() {
    if (digitalRead(BUTTON_PIN) == LOW)
        currentbutton = BUTTON_PIN;
    else
        currentbutton = BTN_NONE;

    if (millis() - last_button_read < 50)
        return 0;

    if (currentbutton != BTN_NONE) {
        last_button_read = millis();
        lastbutton = currentbutton;
    }
    else {
        if (lastbutton != BTN_NONE) {
            currentbutton = lastbutton;
            lastbutton = BTN_NONE;
            return currentbutton;
        }
        lastbutton = BTN_NONE;
    }
    return BTN_NONE;
}

void setup() {
    Serial.begin(115200);
    pinMode(BUTTON_PIN, INPUT_PULLUP);

    pinMode(STATUS_LED, OUTPUT);
    digitalWrite(STATUS_LED, LOW);

    Serial.println("init servo");
    serv01.attach(SERVO1_PIN);
    serv01.write(0);
    delay(2000);
    serv01.detach();

    Serial.println("ready");
    digitalWrite(STATUS_LED, HIGH);
}

void loop() {
    int btnpress = checkbutton();
    if (btnpress == BUTTON_PIN){
        digitalWrite(STATUS_LED, LOW);
        moveservo();
        digitalWrite(STATUS_LED, HIGH);
    }
}

```

Building parts:

Youtube video uploaded at

<https://youtu.be/ILI5h3b6TkQ>

