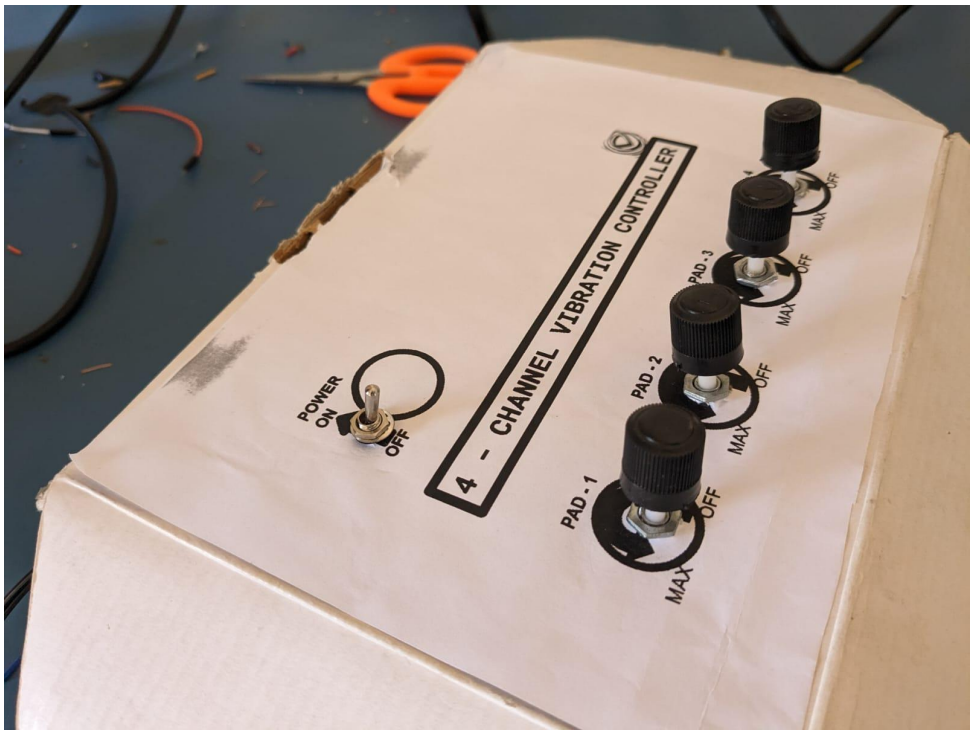
Coin Vibrator Massager

Working of coin vibrator by controlling the speed in potentiometer.



Code

```
// Define the pin numbers for coin vibration motors and potentiometers
int cvm1 = 5;  // Coin vibration motor 1 is connected to pin 5, which is a PWM pin
int P_resistor1 = A0;  // Potentiometer 1 is connected to analog pin A0
int P_value1 = 0;  // Variable to store the value of potentiometer 1
```

```
int cvm2 = 6;  // Coin vibration motor 2 is connected to pin 6, which is a
PWM pin
int P_resistor2 = A1;  // Potentiometer 2 is connected to analog pin A1
int P_value2 = 0;  // Variable to store the value of potentiometer 2

int cvm3 = 10;  // Coin vibration motor 3 is connected to pin 10, which is
a PWM pin
int P_resistor3 = A2;  // Potentiometer 3 is connected to analog pin A2
int P_value3 = 0;  // Variable to store the value of potentiometer 3

int cvm4 = 11;  // Coin vibration motor 4 is connected to pin 11, which is
a PWM pin
int P_resistor4 = A3;  // Potentiometer 4 is connected to analog pin A3
int P_value4 = 0;  // Variable to store the value of potentiometer 4

int LED_PIN = 13;

void setup() {
  // Put your setup code here

  pinMode(cvm1, OUTPUT);  // Set coin vibration motor 1 pin as OUTPUT
  pinMode(P_resistor1, INPUT);  // Set potentiometer 1 pin as INPUT

  pinMode(cvm2, OUTPUT);  // Set coin vibration motor 2 pin as OUTPUT
  pinMode(P_resistor2, INPUT);  // Set potentiometer 2 pin as INPUT

  pinMode(cvm3, OUTPUT);  // Set coin vibration motor 3 pin as OUTPUT
  pinMode(P_resistor3, INPUT);  // Set potentiometer 3 pin as INPUT

  pinMode(cvm4, OUTPUT);  // Set coin vibration motor 4 pin as OUTPUT
  pinMode(P_resistor4, INPUT);  // Set potentiometer 4 pin as INPUT

  pinMode(LED_PIN, OUTPUT);
  digitalWrite(LED_PIN, HIGH);
}



void loop() {
```

```
  // Put your main code here, to run repeatedly

  // Read the value from potentiometer 1 and map it to 0-255 range for
analog output
  P_value1 = analogRead(P_resistor1);
  P_value1 = map(P_value1, 0, 1023, 200, 0);
  analogWrite(cvm1, P_value1);


  // Read the value from potentiometer 2 and map it to 0-255 range for
analog output
  P_value2 = analogRead(P_resistor2);
  P_value2 = map(P_value2, 0, 1023, 200, 0);
  analogWrite(cvm2, P_value2);  // Set the analog output for coin
vibration motor 2

  // Read the value from potentiometer 3 and map it to 0-255 range for
analog output
  P_value3 = analogRead(P_resistor3);
  P_value3 = map(P_value3, 0, 1023, 200, 0);
  analogWrite(cvm3, P_value3);  // Set the analog output for coin
vibration motor 3

  // Read the value from potentiometer 4 and map it to 0-255 range for
analog output
  P_value4 = analogRead(P_resistor4);
  P_value4 = map(P_value4, 0, 1023, 200, 0);
  analogWrite(cvm4, P_value4);  // Set the analog output for coin
vibration motor 4
}
```

Working of coin vibrator in different patterns

```
// Define the pin numbers for the potentiometers and coin vibrator motors
const int potPin1 = A0;
const int potPin2 = A1;
const int potPin3 = A2;
const int potPin4 = A3;

const int motorPin1 = 5;
```

```
const int motorPin2 = 6;
const int motorPin3 = 10;
const int motorPin4 = 11;

// Variables to store previous potentiometer values and motor states
int prevPotValue1 = 0;
int prevPotValue2 = 0;
int prevPotValue3 = 0;
int prevPotValue4 = 0;

boolean motorState1 = false;
boolean motorState2 = false;
boolean motorState3 = false;
boolean motorState4 = false;

// blinking the led
int LED_PIN = 13;

void setup() {
  // Set the motor pins as OUTPUT
  pinMode(motorPin1, OUTPUT);
  pinMode(motorPin2, OUTPUT);
  pinMode(motorPin3, OUTPUT);
  pinMode(motorPin4, OUTPUT);

  // Initialize the serial communication
  Serial.begin(9600);

  pinMode(LED_PIN, OUTPUT);
  digitalWrite(LED_PIN, HIGH);
}

void loop() {
  // Read the values of the potentiometers
  int potValue1 = analogRead(potPin1);
  int potValue2 = analogRead(potPin2);
  int potValue3 = analogRead(potPin3);
  int potValue4 = analogRead(potPin4);

  // Map the potentiometer values to motor states (ON/OFF)
```

```
  motorState1 = (potValue1 > 512);
  motorState2 = (potValue2 > 512);
  motorState3 = (potValue3 > 512);
  motorState4 = (potValue4 > 512);

  // Control the motors based on the potentiometer values
  digitalWrite(motorPin1, motorState1 ? HIGH : LOW);  // Turn ON/OFF motor
1
  digitalWrite(motorPin2, motorState2 ? HIGH : LOW);  // Turn ON/OFF motor
2
  digitalWrite(motorPin3, motorState3 ? HIGH : LOW);  // Turn ON/OFF motor
3
  digitalWrite(motorPin4, motorState4 ? HIGH : LOW);  // Turn ON/OFF motor
4

  // Check if any potentiometer values have changed
  if (potValue1 != prevPotValue1 || potValue2 != prevPotValue2 ||
potValue3 != prevPotValue3 || potValue4 != prevPotValue4) {
    if (motorState1) {
      for (int i = 0; i < 255; i++) {
        analogWrite(motorPin1, i);  // Set motor 1 speed from 0 to 255
        delay(10);                  // Delay for 20 ms
      }
      analogWrite(motorPin1, 0);  // Turn OFF motor 1
      Serial.println("Motor 1 is ON");
    } else {
      analogWrite(motorPin1, 0);  // Turn OFF motor 1
      Serial.println("Motor 1 is OFF");
    }

    if (motorState2) {
      for (int i = 255; i > 0; i--) {
        analogWrite(motorPin2, i);  // Set motor 2 speed from 255 to 0
        delay(10);                  // Delay for 20 ms
      }
      analogWrite(motorPin2, 0);  // Turn OFF motor 2
      Serial.println("Motor 2 is ON");
    } else {
      analogWrite(motorPin2, 0);  // Turn OFF motor 2
      Serial.println("Motor 2 is OFF");
```

```
    }
    if (motorState3) {
      analogWrite(motorPin3, 255);  // Set motor 3 speed to maximum (255)
      delay(1000);                  // Delay for 1000 ms (1 second) for
long vibration

      analogWrite(motorPin3, 0);  // Turn OFF motor 3
      delay(200);                 // Delay for 200 ms (0.2 seconds) for
short stop

      analogWrite(motorPin3, 255);  // Set motor 3 speed to maximum (255)
      delay(200);                   // Delay for 200 ms (0.2 seconds) for
short vibration

      analogWrite(motorPin3, 0);  // Turn OFF motor 3
      delay(200);                 // Delay for 200 ms (0.2 seconds) for
short stop

      analogWrite(motorPin3, 255);  // Set motor 3 speed to maximum (255)
      delay(1000);                  // Delay for 1000 ms (1 second) for
long vibration

      analogWrite(motorPin3, 0);  // Turn OFF motor 3
      Serial.println("Motor 3 is ON");
    } else {
      analogWrite(motorPin3, 0);  // Turn OFF motor 3
      Serial.println("Motor 3 is OFF");
    }

    if (motorState4) {
      analogWrite(motorPin4, 255);  // Set motor 4 speed to maximum (255)
      delay(1000);                  // Delay for 1000 ms (1 second) for
first long vibration

      analogWrite(motorPin4, 0);  // Turn OFF motor 4
      delay(200);                 // Delay for 200 ms (0.2 seconds) for
short stop

      analogWrite(motorPin4, 255);  // Set motor 4 speed to maximum (255)
```

```
      delay(200);                    // Delay for 200 ms (0.2 seconds) for
short vibration

      analogWrite(motorPin4, 0);   // Turn OFF motor 4
      delay(200);                  // Delay for 200 ms (0.2 seconds) for
short stop

      analogWrite(motorPin4, 255);  // Set motor 4 speed to maximum (255)
      delay(1000);                   // Delay for 1000 ms (1 second) for
second long vibration

      analogWrite(motorPin4, 0);   // Turn OFF motor 4
      Serial.println("Motor 4 is ON");
    } else {
      analogWrite(motorPin4, 0);   // Turn OFF motor 4
      Serial.println("Motor 4 is OFF");
    }

    prevPotValue1 = potValue1;
    prevPotValue2 = potValue2;
    prevPotValue3 = potValue3;
    prevPotValue4 = potValue4;
  }
}
```

Images