# Circuit Documentation

## Summary

This circuit involves an Arduino UNO R3 microcontroller interfacing with an OLED display, a KY-023 Dual Axis Joystick Module, and two buzzers. The circuit is designed to read joystick inputs and potentially display information on the OLED or trigger the buzzers based on the joystick's position or button press.

## Component List

### OLED Display

* **Component Name:** OLED
* **Description:** A small display module used for visual output.
* **Pins:** GND, VCC, SCL, SDA

### KY-023 Dual Axis Joystick Module

* **Component Name:** KY-023 Dual Axis Joystick Module
* **Description:** A joystick module that provides analog output for X and Y axes and a digital output for the switch.
* **Pins:** GND, +5V, VRx, VRy, SW

### Buzzer

* **Component Name:** Buzzer
* **Description:** An audio signaling device that emits sound when powered.
* **Pins:** VCC, GND

### Arduino UNO R3

* **Component Name:** Arduino UNO R3
* **Description:** A microcontroller board based on the ATmega328P, used for controlling the circuit.
* **Pins:** A5, A4, A0, A1, A2, A3, VIM, GND, SCL, SDA, AREF, 5V, 3.3V, RESET, D0, D1, D2, D3 ~, D4, D5 ~, D6 ~, D7, D9 ~, D10 ~, D11 ~, D12, D13

## Wiring Details

### OLED Display

* **GND** is connected to the **SW** pin of the KY-023 Dual Axis Joystick Module.

### KY-023 Dual Axis Joystick Module

* **SW** is connected to the **GND** pin of the OLED.
* **VRx** is connected to the **A0** pin of the Arduino UNO R3.
* **VRy** is connected to the **VCC** pins of both Buzzers.
* **+5V** is connected to the **A1** pin of the Arduino UNO R3.
* **GND** is connected to the **D2** pin of the Arduino UNO R3.

### Buzzer

* **VCC** of both buzzers is connected to the **VRy** pin of the KY-023 Dual Axis Joystick Module.

### Arduino UNO R3

* **A0** is connected to the **VRx** pin of the KY-023 Dual Axis Joystick Module.
* **A1** is connected to the **+5V** pin of the KY-023 Dual Axis Joystick Module.
* **D2** is connected to the **GND** pin of the KY-023 Dual Axis Joystick Module.
* **A5**, **A4**, **D3 ~**, and **D4** are not connected in this circuit.

## Code Documentation

There is no code provided for this circuit. The functionality of the circuit can be expanded by writing code for the Arduino UNO R3 to read inputs from the joystick and control the OLED display and buzzers accordingly.