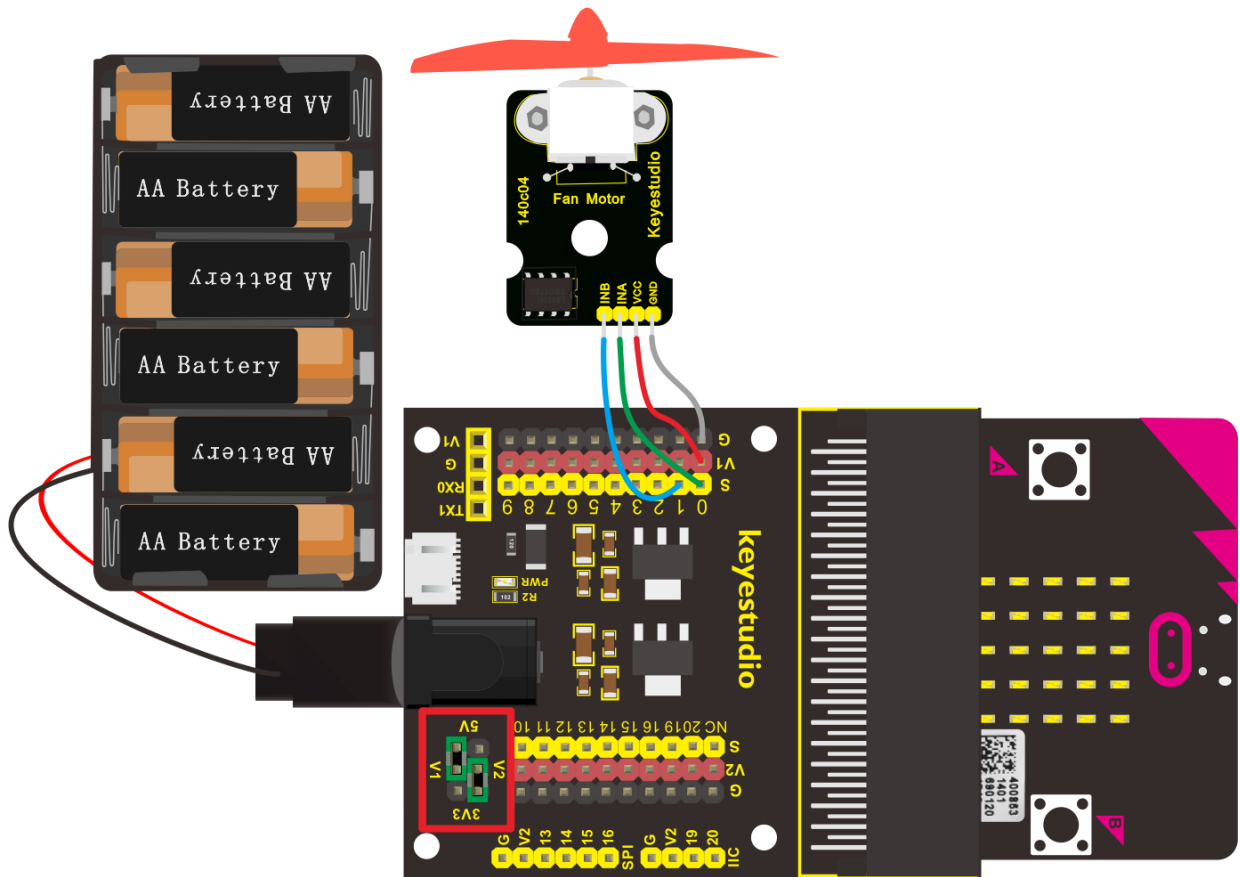## Project 55: Fan Module

Overview

A Keyestudio L9110 fan module is included in the kit. Connect the INA INB interface of the fan module to the control terminal of the micro bit (with ANALOG IN function). We can control the direction and speed of the fan on the module by two interfaces. In the experiment, we control the fan on the module to rotate clockwise, stop, and counterclockwise.
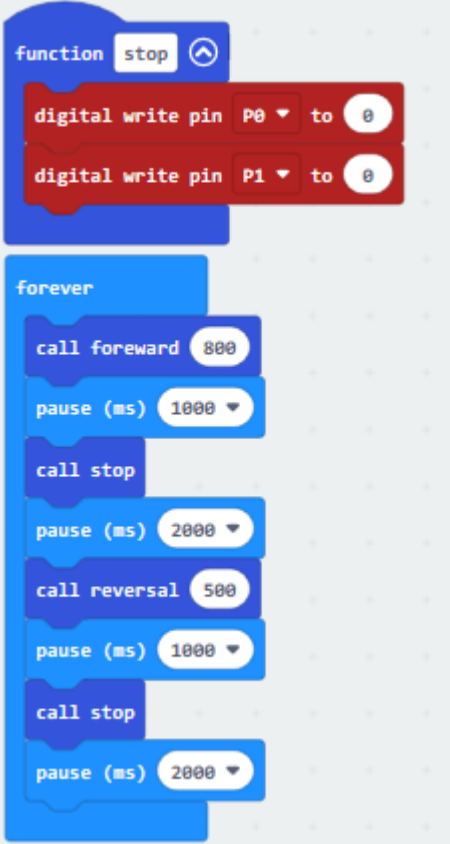
Components Needed:

- ➢ micro: bit motherboard * 1
- ➢ Keyestudio Micro bit sensor V2 expansion board * 1
- ➢ USB cable * 1
- ➢ Keyestudio L9110 fan module * 1
- ➢ Dupont jumper wire*4
- ➢ Premium Battery Holder 6-cell AA*1
- ➢ 1.5V AA Battery*6

Connection Diagram

Test Code

"on start": command block only runs once to start program.

Turn off LED dot matrix on micro:bit

Subfunction forward speed1

Set P0 to low level(0)

Set the analog value of P1 to speed1

Subfunction reversal speed2

Set P1 to low level(0)

Set the analog value of P0 to speed2

Subfunction stop

Set P0 to low level(00

Set P1 to low level(00

The program under the block "forever" runs cyclically.

Call subfunction foreward and set to 800

Delay in 1000ms

Set subfunction stop , stop

delay in 2000ms

Call subfunction reversal and set to 500

delay in 1000ms

Set subfunction stop , stop

delay in 2000ms

Test Results

Wire according to connection diagram, plug in external power and upload code to micro:bit. The fan on the module rotates clockwise (relatively faster) for 1s; stops for 2s; rotates counterclockwise (relatively slower) for 1s, stops for 2s, and alternately.