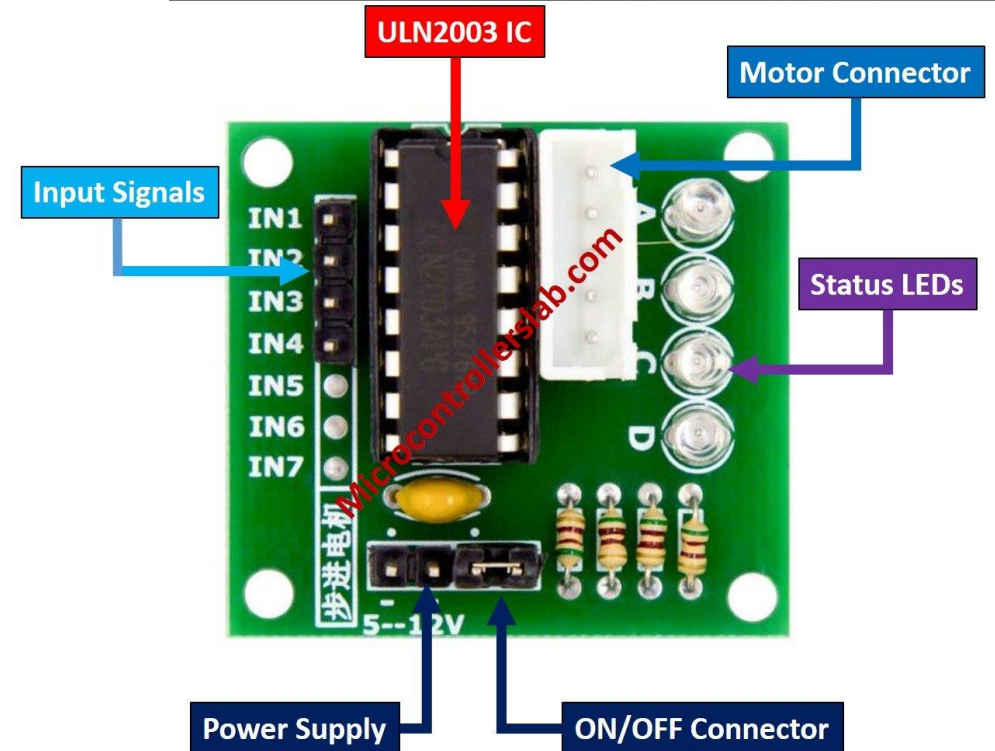
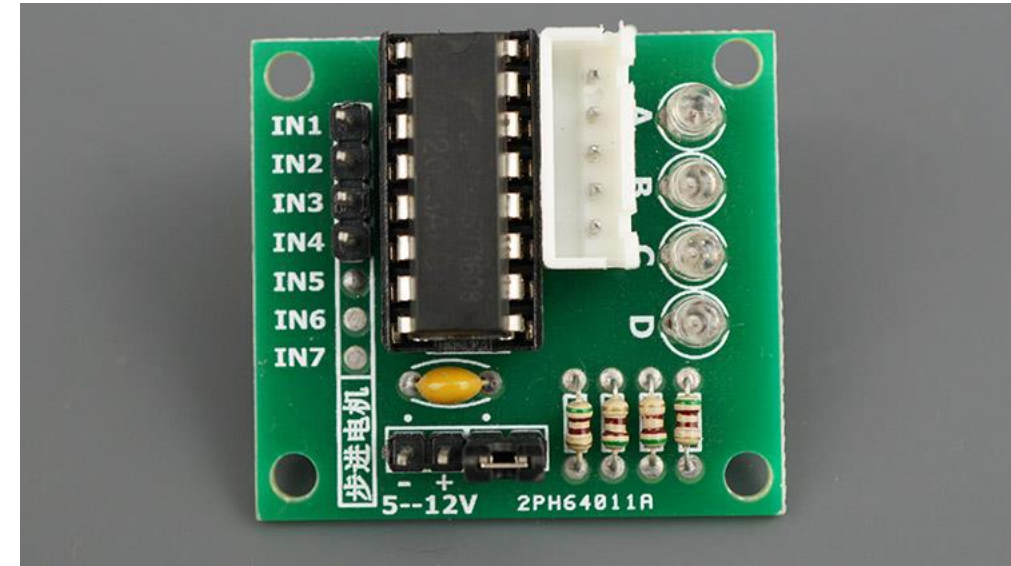
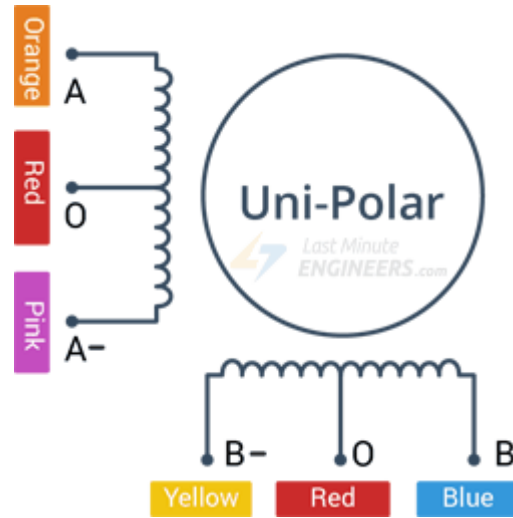
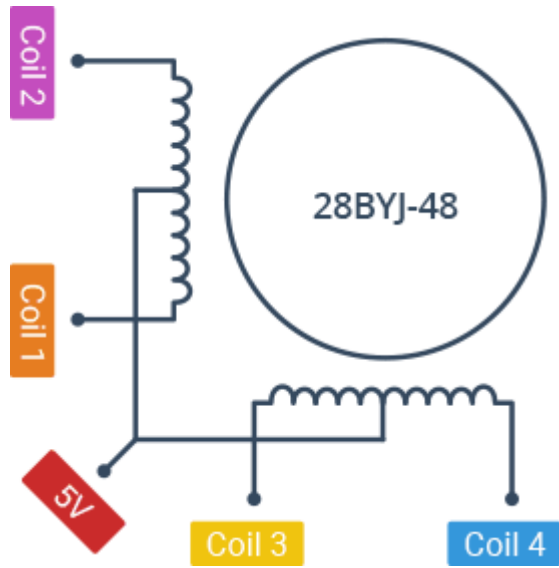
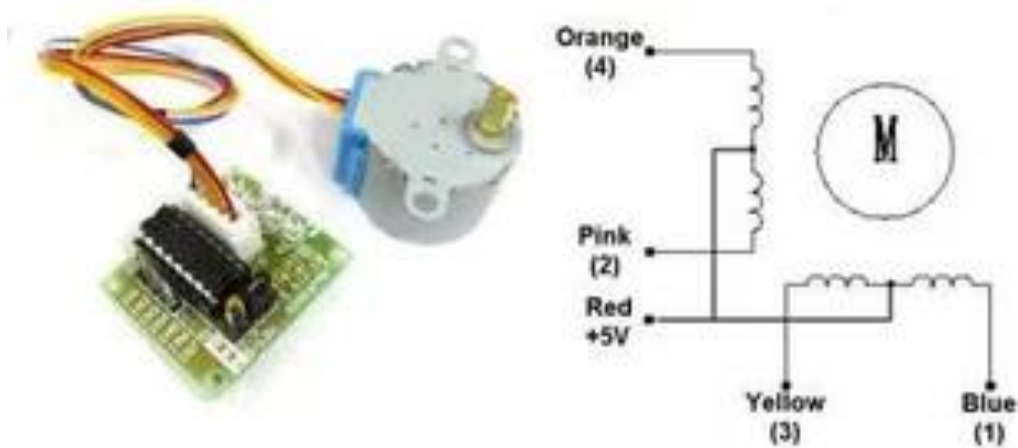


Stepper Motor 28BYJ-48 Rotation Clockwise and Anticlockwise

Dinesh Kumar
ISRO Satellite Center
Bangalore

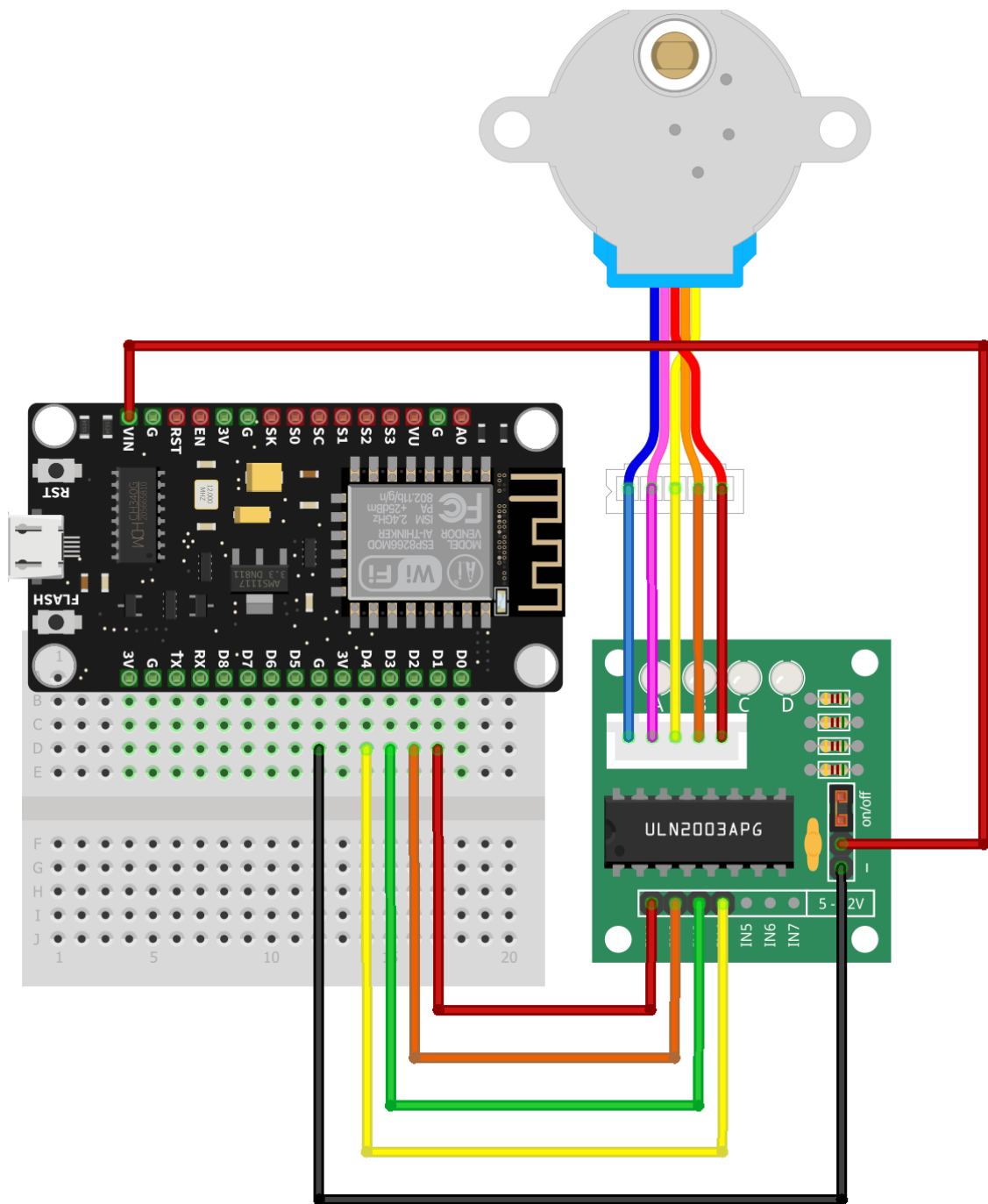


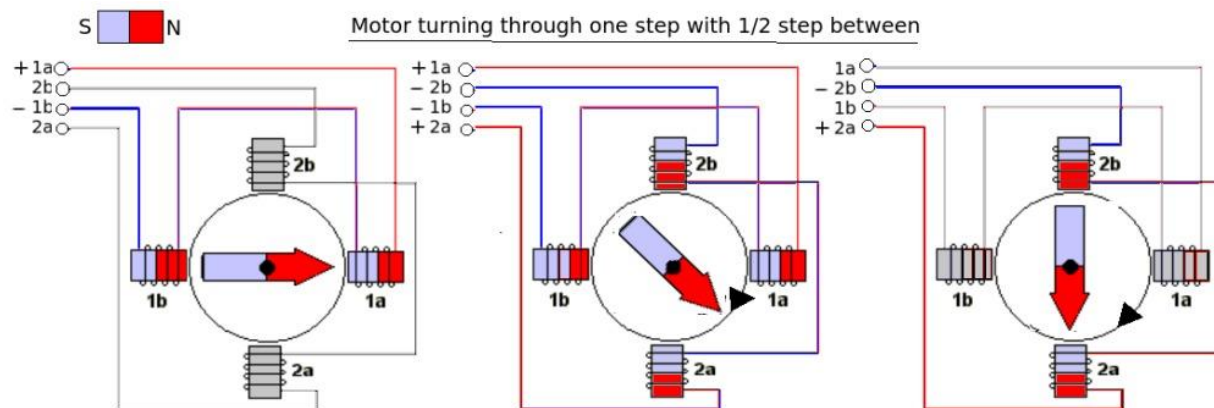


Half-Step Switching Sequence

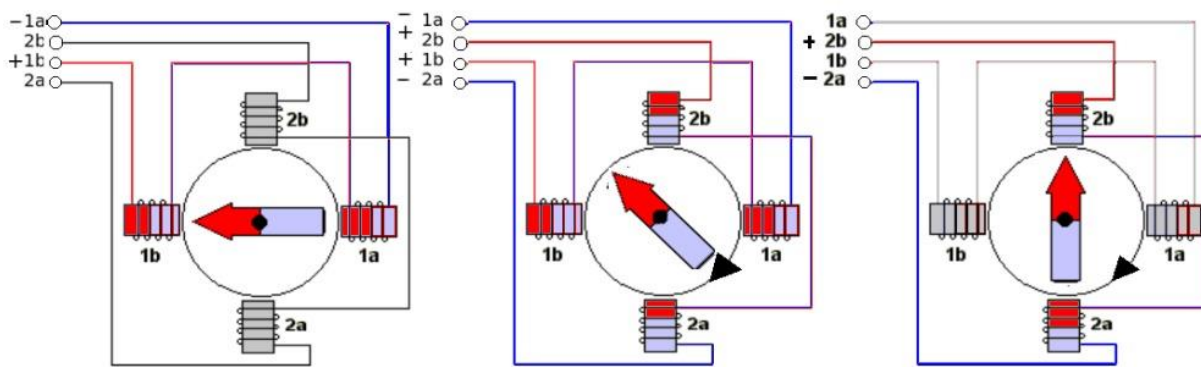
Lead Wire Color	---> CW Direction (1-2 Phase)							
	1	2	3	4	5	6	7	8
4 Orange	-	-						-
3 Yellow		-	-	-				
2 Pink				-	-	-		
1 Blue						-	-	-



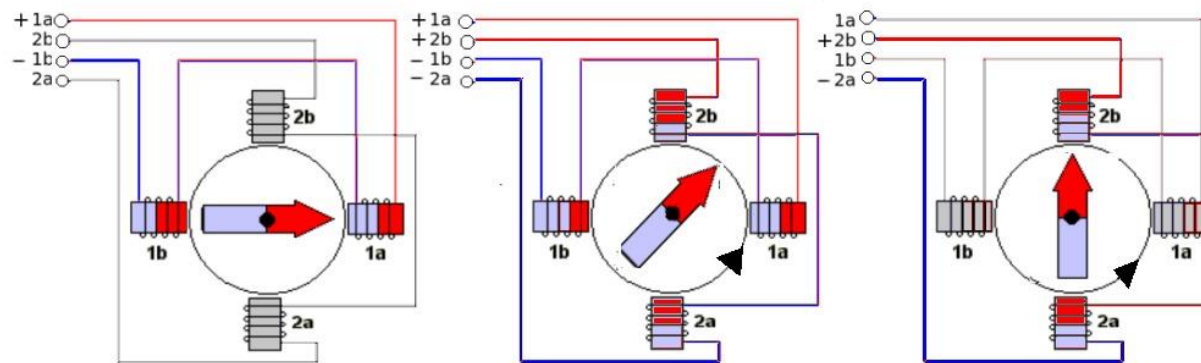




current in 'forward' direction producing a clockwise rotation



Reversing current in both coils does not change the direction of rotation



Reversing current in one pair of coils reverses direction

```
#include <AccelStepper.h>
#define HALFSTEP 8 //Half-step mode (8 step control signal sequence)

// Motor pin definitions
#define mtrPin1 D5 // IN1 on the ULN2003 driver 1
#define mtrPin2 D6 // IN2 on the ULN2003 driver 1
#define mtrPin3 D7 // IN3 on the ULN2003 driver 1
#define mtrPin4 D8 // IN4 on the ULN2003 driver 1

AccelStepper stepper1(HALFSTEP, mtrPin1, mtrPin3, mtrPin2, mtrPin4);

void setup() {
  stepper1.setMaxSpeed(1000.0);
  stepper1.setAcceleration(100.0); //Make the acc quick
  stepper1.setSpeed(300);
  stepper1.moveTo(4096/2); //Rotate 1 revolution
}

void loop() {

  //Change direction when the stepper reaches the target position
  if (stepper1.distanceToGo() == 0) {
    stepper1.moveTo(-stepper1.currentPosition()); //Reverse motor
  }
  stepper1.run(); //Start
}
```