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SparkFun Tinker Kit

Circuit 10: Motor Basics

Learn how to control one motor with the motor driver.

This sketch was written by SparkFun Electronics, with lots of help from the Arduino community.

This code is completely free for any use.

View circuit diagram and instructions at: https://learn.sparkfun.com/tutorials/activity-guide-for-sparkfun-tinker-kit/circuit-10-motor-basics

Download drawings and code at: https://github.com/sparkfun/SparkFun\_Tinker\_Kit\_Code/

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//PIN VARIABLES

//the motor will be controlled by the motor A pins on the motor driver

const int AIN1 = 13; //control pin 1 on the motor driver for the right motor

const int AIN2 = 12; //control pin 2 on the motor driver for the right motor

const int PWMA = 11; //speed control pin on the motor driver for the right motor

//VARIABLES

int motorSpeed = 0; //starting speed for the motor

void setup() {

//set the motor contro pins as outputs

pinMode(AIN1, OUTPUT);

pinMode(AIN2, OUTPUT);

pinMode(PWMA, OUTPUT);

}

void loop() {

//drive motor forward (positive speed)

digitalWrite(AIN1, HIGH); //set pin 1 to high

digitalWrite(AIN2, LOW); //set pin 2 to low

analogWrite(PWMA, 255); //now that the motor direction is set, drive it at max speed

delay(3000);

//drive motor backward (negative speed)

digitalWrite(AIN1, LOW); //set pin 1 to low

digitalWrite(AIN2, HIGH); //set pin 2 to high

analogWrite(PWMA, 255); //now that the motor direction is set, drive it at max speed

delay(3000);

//stop motor

digitalWrite(AIN1, LOW); //set pin 1 to low

digitalWrite(AIN2, LOW); //set pin 2 to low

analogWrite(PWMA, 0); //now that the motor direction is set, stop motor

delay(3000);

}