



Wiring

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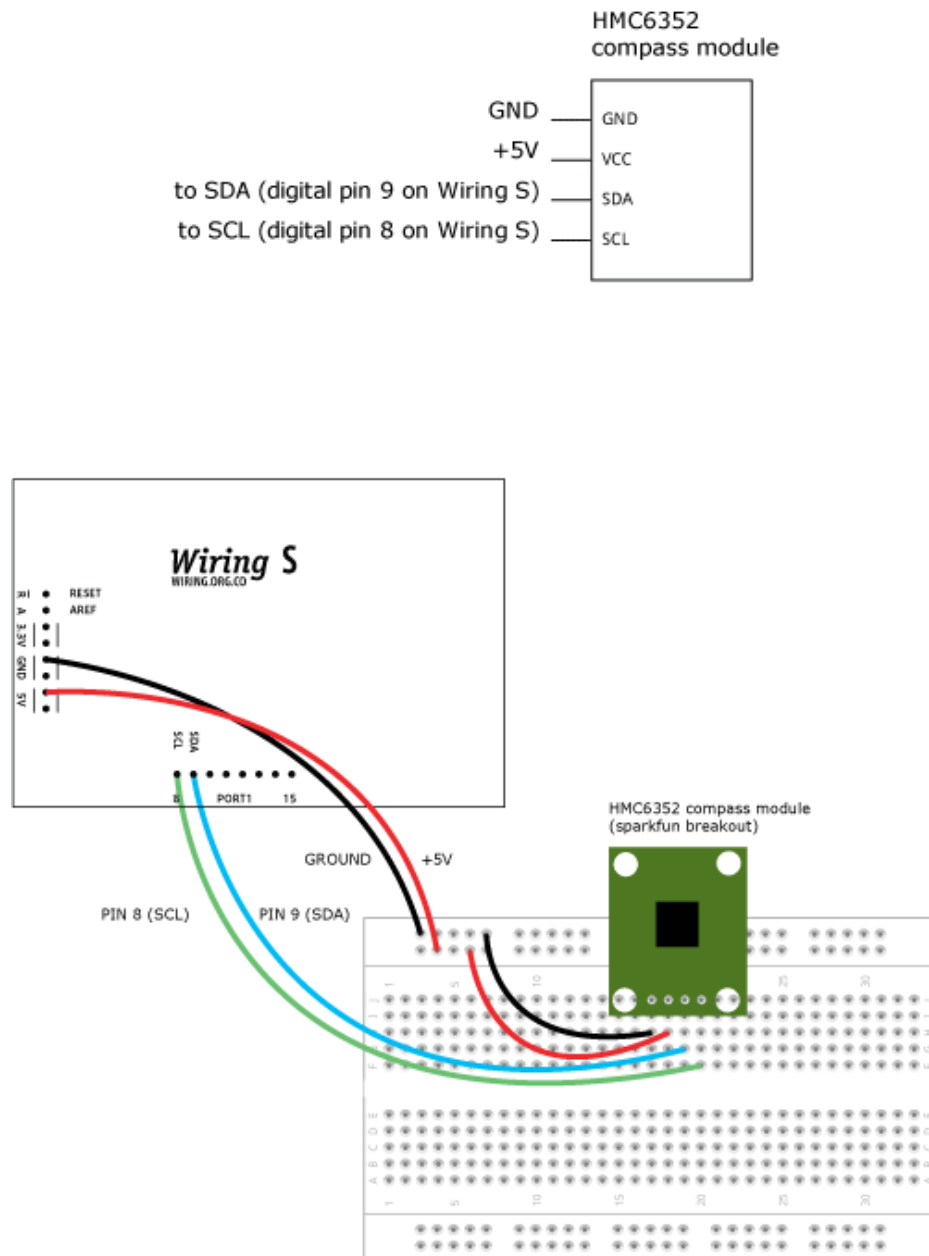

Compass heading: HMC6352 sparkfun



This example is for Wiring version 1.0 build 0100+. If you have a previous version, use the examples included with your software. If you see any errors or have comments, please [let us know](#).

I2C HMC6352 compass heading (sparkfun breakout) by BARRAGAN (<http://barraganstudio.com>)

Demonstrates use of the Wire library reading data from the HMC6352 compass heading On Wiring v1 boards the SCL and SDA pins are: 0 and 1 On Wiring S board the SCL and SDA pins are: 8 and 9



```

#include <Wire.h>

int compassAddress = 0x42 >> 1; // From datasheet compass address is 0x42
// shift the address 1 bit right, the Wire library only needs the 7
// most significant bits for the address
int reading = 0;

void setup()
{
  Wire.begin(); // join i2c bus (address optional for master)
  Serial.begin(9600); // start serial communication at 9600bps
  pinMode(WLED, OUTPUT);
  digitalWrite(WLED, HIGH);
}

void loop()
{
  // step 1: instruct sensor to read echoes
  Wire.beginTransmission(compassAddress); // transmit to device
  // the address specified in the datasheet is 66 (0x42)
  // but i2c addressing uses the high 7 bits so it's 33
  Wire.write('A'); // command sensor to measure angle
  Wire.endTransmission(); // stop transmitting

  // step 2: wait for readings to happen
  delay(10); // datasheet suggests at least 6000 microseconds

  // step 3: request reading from sensor
  Wire.requestFrom(compassAddress, 2); // request 2 bytes from slave device #33

  // step 4: receive reading from sensor
  if (2 <= Wire.available()) // if two bytes were received
  {
    reading = Wire.read(); // receive high byte (overwrites previous reading)
    reading = reading << 8; // shift high byte to be high 8 bits
    reading += Wire.read(); // receive low byte as lower 8 bits
    reading /= 10;
    Serial.println(reading); // print the reading
  }

  delay(500); // wait for half a second
}

```

Wiring is an open project initiated by [Hernando Barragán](#). It is developed by a [small team of volunteers](#).

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