20151030 Compass Code and Connections for Uno and Mega 2560

1. The code
2. Photo of wiring for UNO and Connections for the Mega 2650

// This code works and gives degrees!!! UNO A4/A5 - 2560 A20/21 connections photo below

// SDA A4 , SCL A5

#include <Wire.h>

#define Addr 0x1E // 7-bit address of HMC5883 compass

void setup() {

Serial.begin(9600);

Serial.println();

Wire.begin();

// Set operating mode to continuous

Wire.beginTransmission(Addr);

Wire.write(byte(0x02));

Wire.write(byte(0x00));

Wire.endTransmission();

}

void loop() {

int x, y, z;

// Initiate communications with compass

Wire.beginTransmission(Addr);

Wire.write(byte(0x03)); // Send request to X MSB register

Wire.endTransmission();

Wire.requestFrom(Addr, 6); // Request 6 bytes; 2 bytes per axis

if(Wire.available() <=6) { // If 6 bytes available

x = Wire.read() << 8 | Wire.read();

z = Wire.read() << 8 | Wire.read();

y = Wire.read() << 8 | Wire.read();

}

// If compass module lies flat on the ground with no tilt,

// just x and y are needed for calculation

float heading=atan2(x, y)/0.0174532925;

if(heading < 0) heading+=360;

heading=360-heading; // N=0/360, E=90, S=180, W=270

Serial.println(heading);

delay(500);

}

