



## DIY | RGB Goggles



by mukeshdiy1

Hey! I have made a RGB Goggles using WS2812B LEDs and Arduino Nano. The Goggles have many animations they can be controlled using a mobile app. The app can communicate with arduino through Bluetooth Module.

### Supplies:

- Arduino Nano (1)
- WS2812B LEDs (88)
- HC06 Bluetooth Module (1)
- 3.7V Battery (1)
- On/Off Switch (1)
- Pair Of Goggles

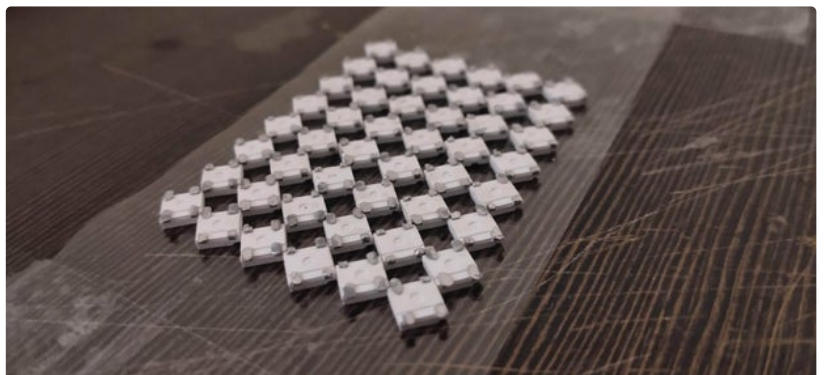
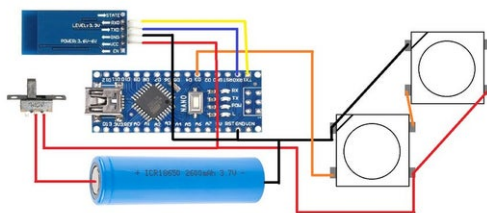
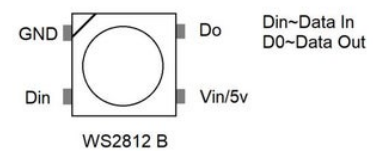
<https://www.youtube.com/watch?v=yMi15hjzdFM&t=1s>

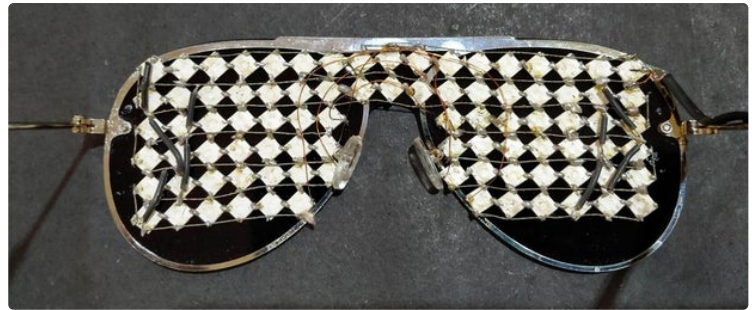
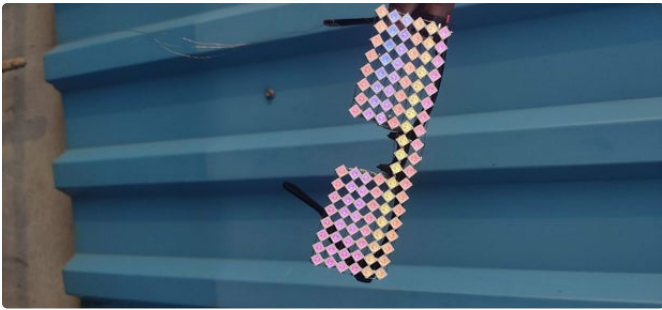
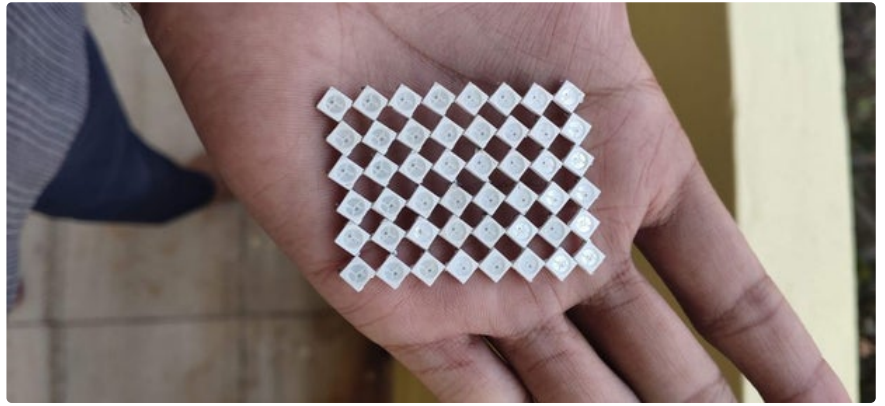
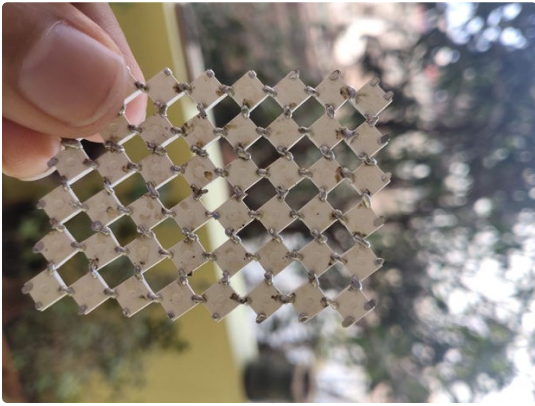




## Step 1: Circuit Connections

- Take 88 WS2812b LEDs and arrange them on a cello tape or Double sided tape.
- The LEDs should be arranged in such a way that all the grounds and Vcc should be in same respective lines.
- The alternate LEDs lines should be inverted so that the GND/Vcc becomes common for two LEDs lines.
- Make all the LEDs Data in and Data out connections.
- After all the LEDs connections now connect Arduino as shown in circuit diagram.
- GND~GND
- 5v/3v ~Vin/5v
- Data pin ~ Pin 3





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## Step 2: Code

- Before Uploading code make sure that RXD and TXD pins are disconnected.
- Open the code in Arduino IDE.
- Include all the libraries that are in the code.
- Select Board Type and Port.
- Upload The Code.
- After Uploading code connect them back.
- Code and App Link: <https://drive.google.com/drive/u/1/folders/1klGv8...>



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My Code (Arduino 1.8.12)
File Edit Sketch Tools Help

My Code

#include <FastLED.h>
#define LED_PIN 3
#define NUM_LEDS 68
#define LED_TYPE WS2812B
#define COLOR_ORDER RGB
#define BRIGHTNESS 255
#define UPDATE_FREQ_SECONDS 100

#define kMatrixWidth 17
#define kMatrixHeight 4
#define kMatrixSegmentLayout 1row

CHIBIKAWAY:WEM_LEDS> ledc:
uint32_t x,y,v,time,hue,time,hue;
uint8_t octave=1;
uint8_t hue_octave=3;
int xscale=57771;
int yscale=57771;
int hue_scale=1;
int time_speed=1111;
int hue_speed=11;
```

### Step 3: App Setup

- Install The app give in the above link.
- Open Bluetooth settings.
- Turn on the Goggles.
- Search for HC06 In Bluetooth Settings and pair it by entering password as 1234.
- Open the app click on Bluetooth Icon Select HC06.
- And You are Ready!
- Click on any animation you want.
- Place all the electronics in a container.

