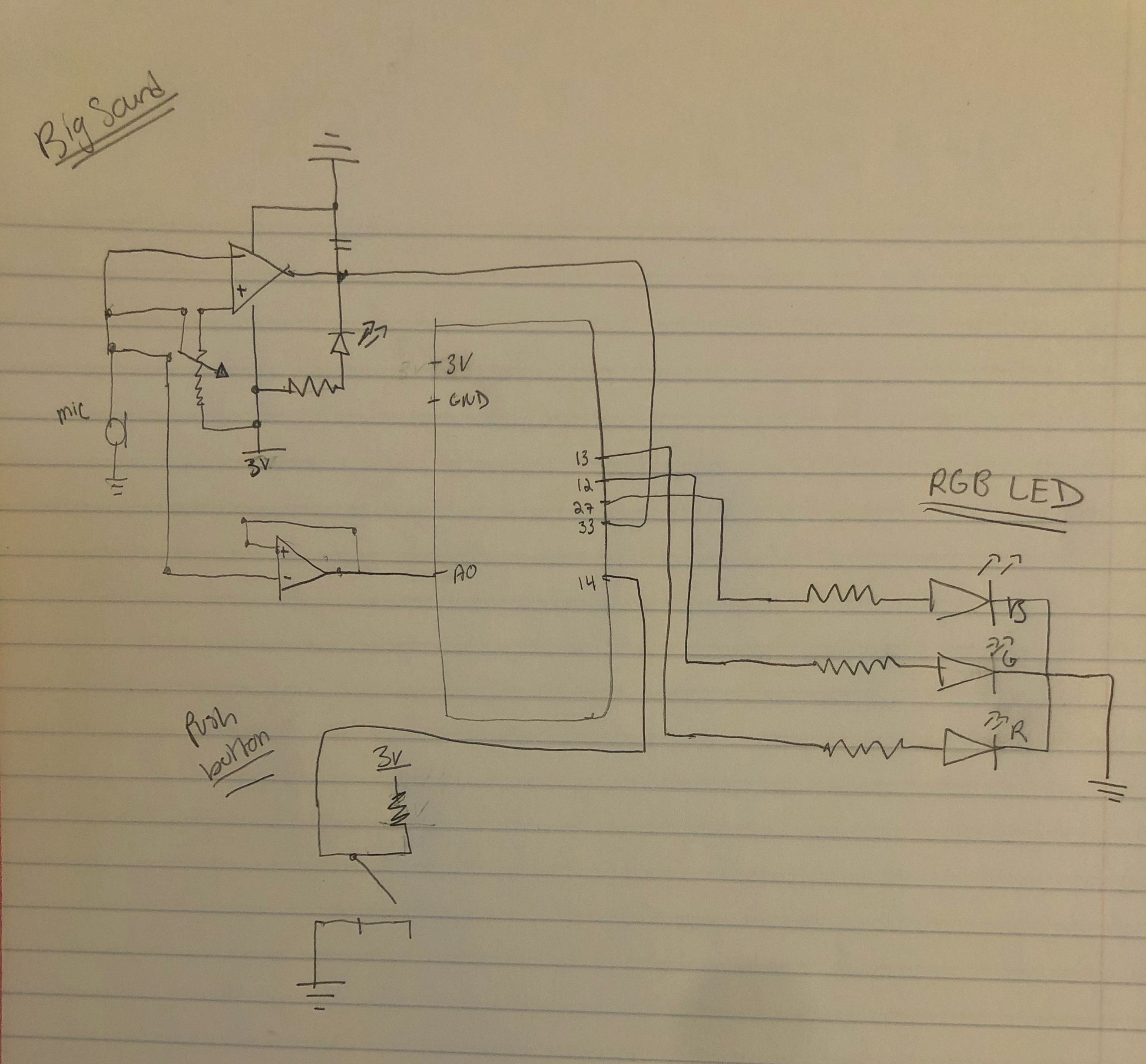
**Music Reactive LED’s with Push Button Interactivity**

By Lauren Simons

**Description**

For my individual design project, I made music reactive lights that are interactive with the touch of a button. To do this, I used the Big Sound Sensor, a triple color LED, and a push button. The sound sensor (with digital and analog) and the push button pin (digital) were established as inputs and each LED color pin as outputs. The push button turns on and off the program. If the program was on and the sound sensor detected no sound, the red LED would turn on. If the sound sensor detected a sound (if digital output pin was 1), it would randomly turn on one of the 3 LED colors (red,blue, or green). The brightness of the LED is determined by the analog output from the sound sensor, which indicates the sound volume. I did this by putting an array list in the code and having the index adjust using the random() function every time the sound sensor detected noise. If the push button turned the program off, there would be no light. While the goal for this project was to have the LED’s be interactive with music, it also works for any type of sound such as regular speaking or clapping.

**Schematic**

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