Final Project Proposal

Project Name: Music Producer

Project Subject:

Build a light pad that responds to motion and gradually fade back to idle when there is no motion.

At the same time, each sensor controls the speaker to produce one note. More lights on, more music.

Project Technical Support:

1. LED lights pad (8*8)(Octolively Kit http://shop.evilmadscientist.com/productsmenu/tinykitlist/411-octo)

2. Infrared Proximity sensor (8)

3. Audio wave shield

4. SD card(with eight simple music or notes)

5. Speaker

Project works:

Case 1:

When the hand move above the lights pad, the LED lights will illuminate following the hand.

At the same time, produce several rhythmicities controlled by sensors.

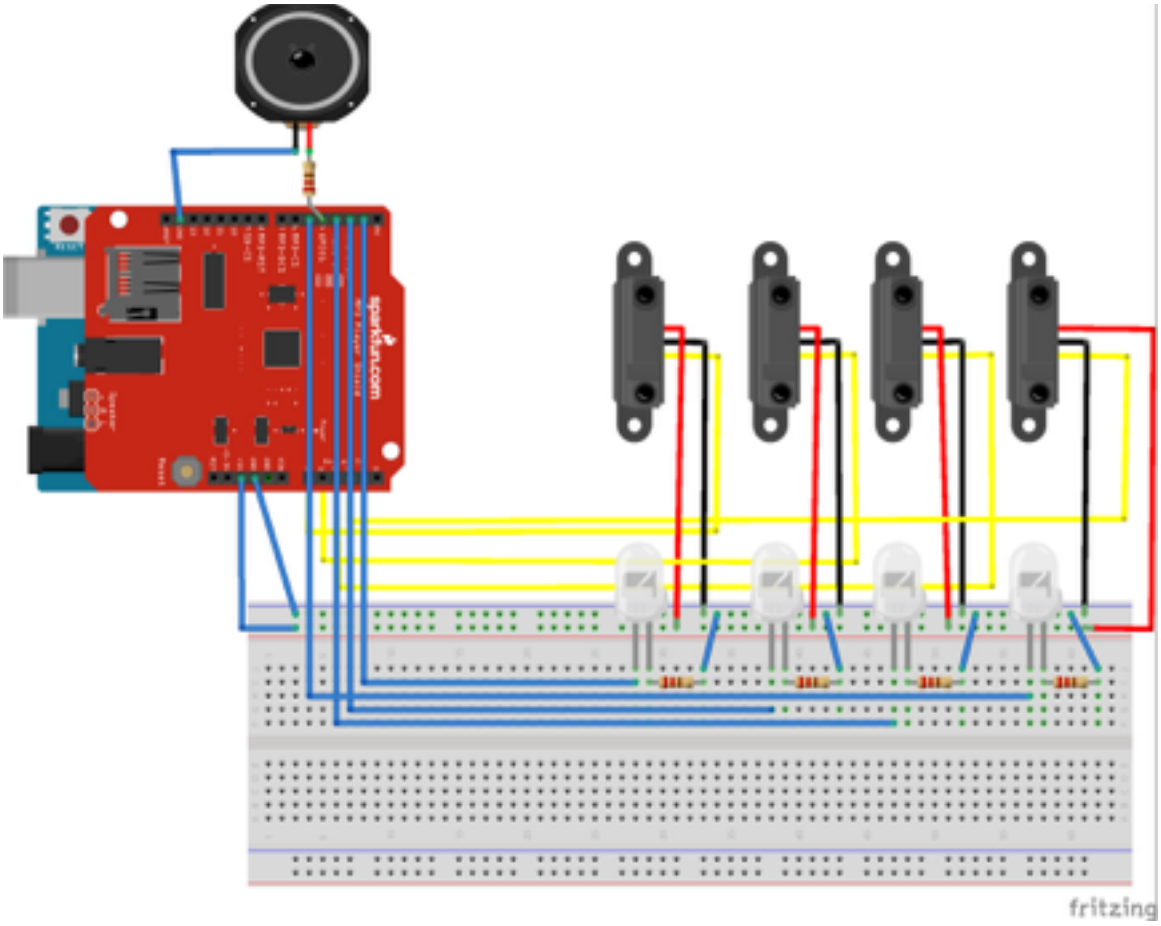
Case 2:

Another option is that, when there is no motion near the lights pad, the lights will sparkle at some beautiful pattern.

When there is a motion nearby, lights on the nearest light, and produce a single rhythm.

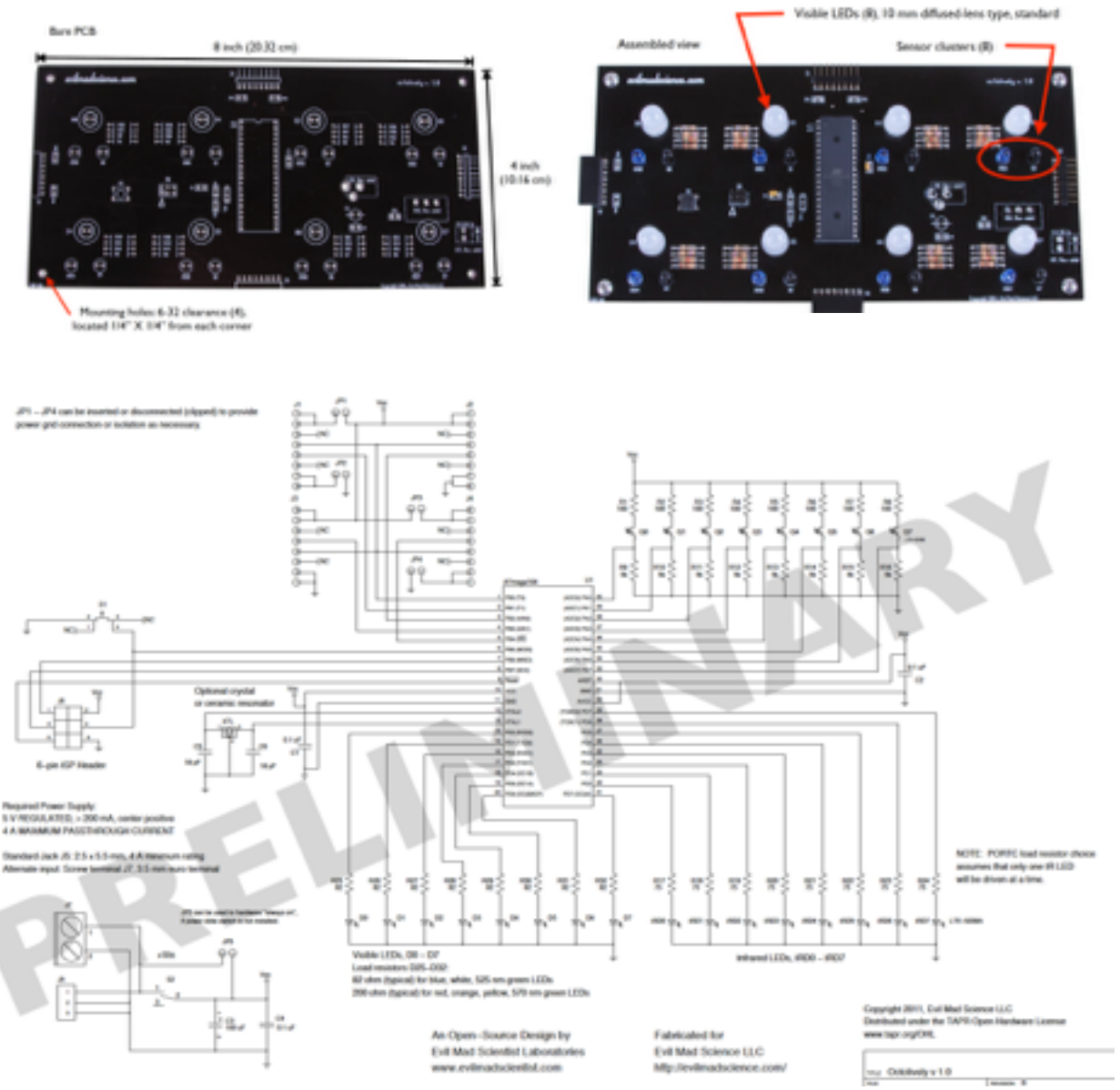
More lights on, more rhythmicities.

Rough Circuit：
I made a simple circuit of this system, I drew 4 infrared proximity sensors here, but actually I will use 8 sensors and 8 LED lights.



Expected problem

1. There may be difficult if reprogram the Octolively. If there is no way to do that, I will write a code and solder a circuit by myself.
This is the octolively shield . There 8 holes to install LED lights and 16 holes to install infrared proximity sensors.I



The document said that the programming interface is Standard 6-pin AVR ISP (ICSP/SPI)(which I haven't used before, I will try to reprogram it, if I can't I will write a program by myself using it's shield.)

2. The code may be difficult to control the light to produce a beautiful pattern.

Similar Video:

https://www.youtube.com/watch?v=1WrntyHieKs