Music-controlled, LED light show (LED Equalizer)

Kyle Baker
Baker1797@gmail.com

Problem

Music is great, but music with lights is better. Normal lights during parties are boring and only available at large concerts. Musically controlled lights add entertainment as well as an artistic visual display.

Solution

Use audio jack splitter to listen to inputs from stereo system

Pulse LEDs for three frequency ranges:
- Treble (> 4 kHz)
- Mid-tones (300 Hz to 4 kHz)
- Bass (< 300 Hz)

50 LEDs per frequency domain

Frame should be about 2x1 or 3x2 feet (maybe larger if LEDs put out enough brightness)

Increased brightness intensity based on relative voltage throughout song, or period of the note (cap it to not blow out LEDs)

Pulse across whole frame but much higher bass brightness and low treble brightness when (< 300 Hz - bass frequency). Opposite when in treble range

Added Features
- left to right stereo control mode
- multi color channels (based on user input or variable control during song)