OK. Please proceed.

Project Proposal

Title of the Project: Metronome Wristband

Team MOSFETS

Metroband

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Problem Definition

Lots of beginner as well as professional musicians sometimes find it hard to maintain their tempo while playing a musical instrument or singing. Usually, metronomes are used as a solution for this problem. However, metronomes emit a sound which is not ideal for recording or live performances. Although in professional instances where music conductors are being used, there can be a tendency where the conductor might miss out on tempo. This is an ongoing issue, which we have practically experienced.

Proposed Solution

A pulsating wristband at an adjustable number of Beats per minute (BPM), which can be set on-device as well as through a mobile application. This device would have multiple levels of vibration intensities which would be more sensitive than a typical metronome. Since it would not emit any ticking, it would not interfere with music when recording or performing. Moreover, the device would be easily accessible and affordable for many instrumentalists, singers, and conductors. Furthermore, we can add BPM presets to the device for music where the BPM changes with time.

Item List

- ATmega328P Microcontroller
- I2C OLED Display (about 1" in size)
- WiFi module/Bluetooth low energy module
- Required resistors, capacitors and inductors
- Button switches
- Few LEDs
- Li-ion batteries
- TC4056A Charging IC
- Mini USB connector
- Casing and rubber straps
- Vibrating Motor