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Lab Project Proposal

ELEX 7660

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Project Summary

We will be designing an **LFO Generator**. This is a guitar effect pedal accessory that generates a low frequency oscillator (LFO) control voltage (CV) signal to control external guitar pedal parameters.

For example:

I have a guitar overdrive pedal that has a ¼'' "EXP" input. This input is intended to be connected to an external foot pedal that allows the player to control the filter cutoff parameter with their foot as opposed to turning the "FILTER" knob on the pedal.

Using the same principal as the foot pedal, an LFO signal can be applied to this input to create a dynamic effect by continually modulating the filter cutoff.

Features

- Control parameters: LFO rate, depth (amplitude), and waveshape.
- Waveshape ideas: sine, square, triangle, ramp up, ramp down, & random.
- Display active LFO parameters on an OLED display screen.
- LED indicators to show visual representation of LFO rate and on/off state.
- Use encoder knobs to select and change LFO parameters.
- Stomp switch on/off control.

Budget

Proposed budget < $50 for OLED display