The Modular Pedalboard

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Introduction

The modular pedalboard passes audio signal, daisy-chains power, and acts as a platform for guitar effects pedals. It features an interlocking mechanism that allows for a quick and easy reconfiguration of an effects chain.

Benefits and Applications

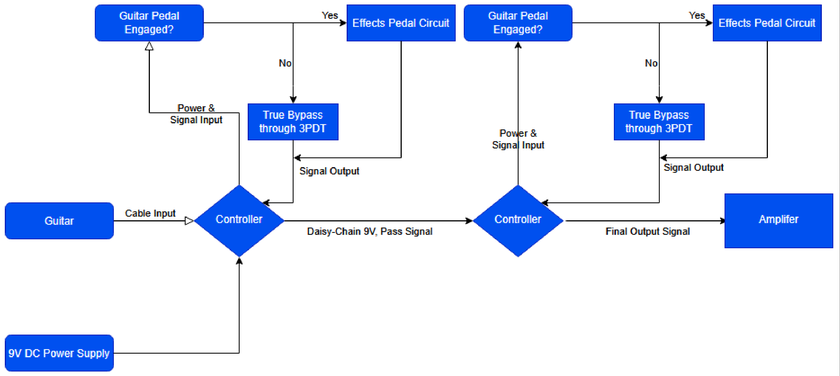
- To consolidate secondary purchases associated with guitar effects into a single controller.
- Reduces financial barrier-to-entry for aspiring musicians.
- Enable live musicians to swiftly reconfigure their effects chain, reducing downtime between performances.

Objectives

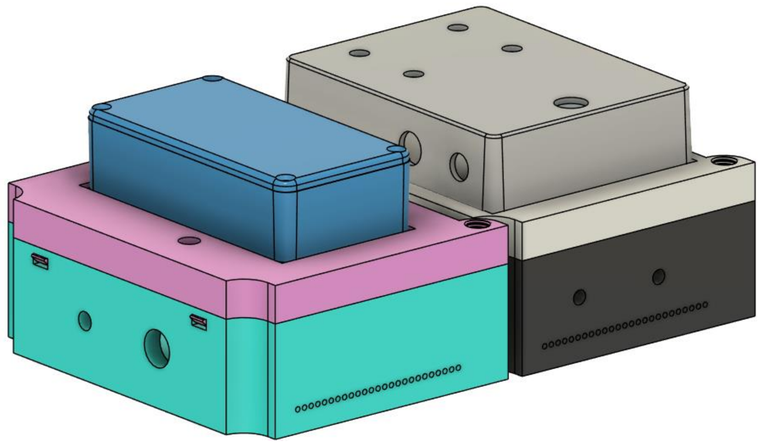
The project is outlined by three objectives:

1. To design and prototype a central controller capable of signal carrying and supplying power.
2. To design and create a distortion pedal using industry standard measurements to ensure wide-scale compatibility with existing pedals.
3. To improve musician time management and expenses.

The Modular Pedalboard System



The Central Controller



Distortion Pedal with Noise Gate

- Derived from a noise-free distortion pedal senior project, which was itself was inspired by the BOSS SD-1 Super Overdrive.

Two primary improvements:

1. Integrating a three-pole double-throw switch to implement true bypass and an LED that indicates ON-OFF state.
2. Designing an enclosure with industry-standard measurements (1590B) and positioned I/O ports with central controller in mind.