

E2.06 – Ouroboros Looper Pedal

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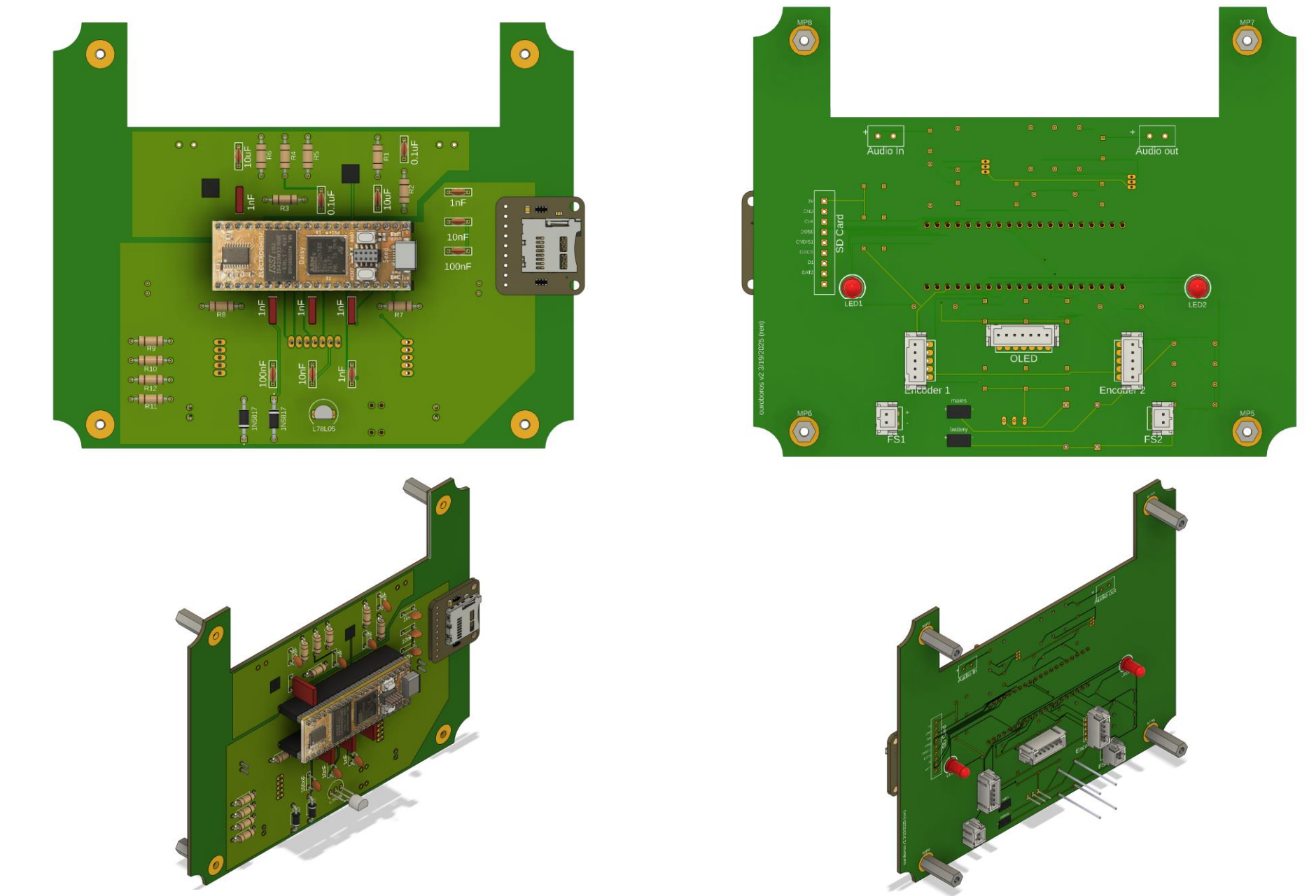
ouroboros

Meet the Team

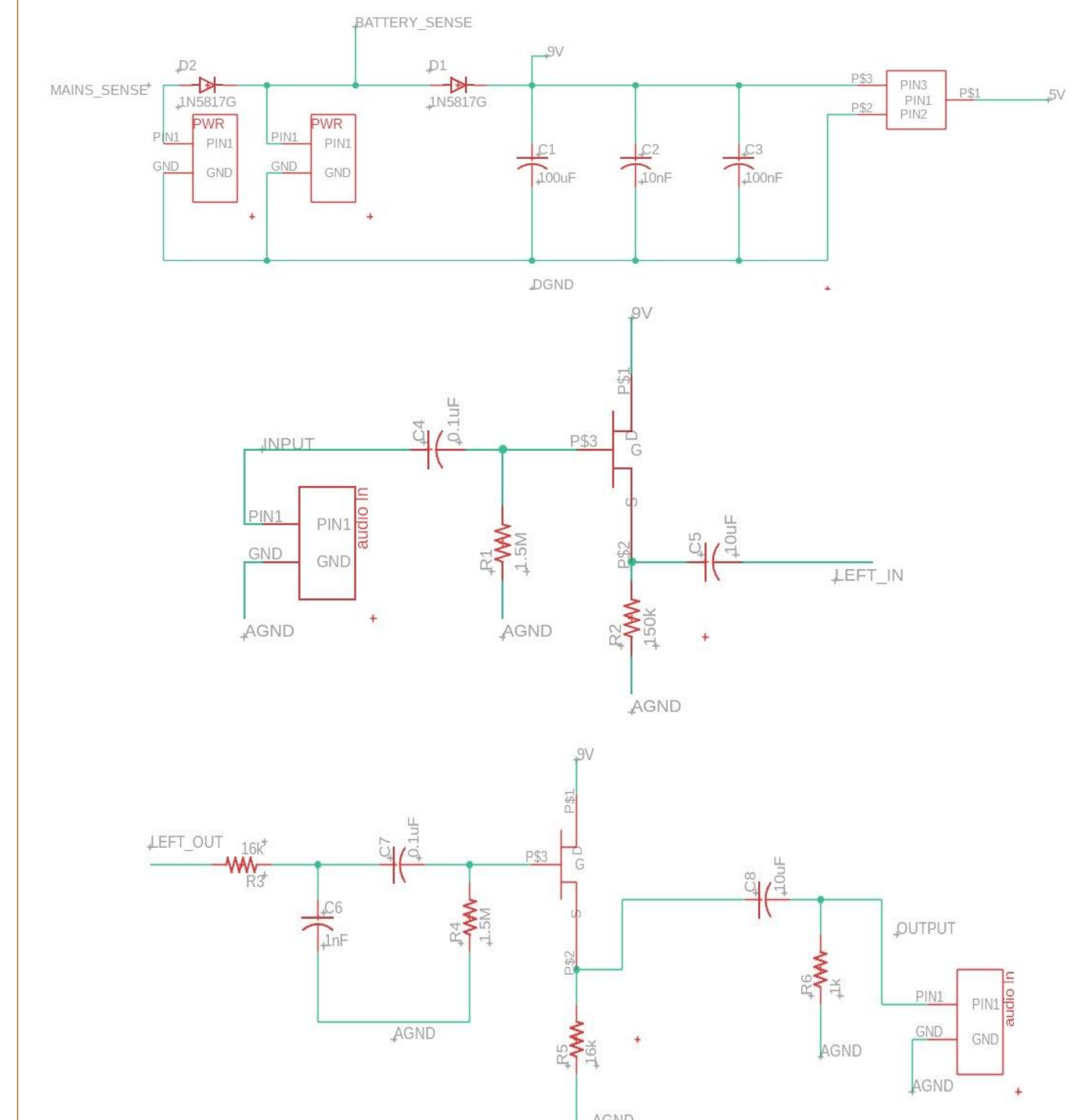


Brandon David Kyle Renee

PCB Design



Circuit Schematics



Acknowledgements

Sponsor/Faculty Advisor: Professor Welker

Overview

The Ouroboros Looper Pedal enables users to record and loop up to 10 two-minute sessions, offering unlimited overdubs and Undo/Redo functionality for real-time modification. Users can play over imported or newly recorded loops. Ouroboros provides an open-source and cost-effective alternative to traditional pedal offerings on the market.

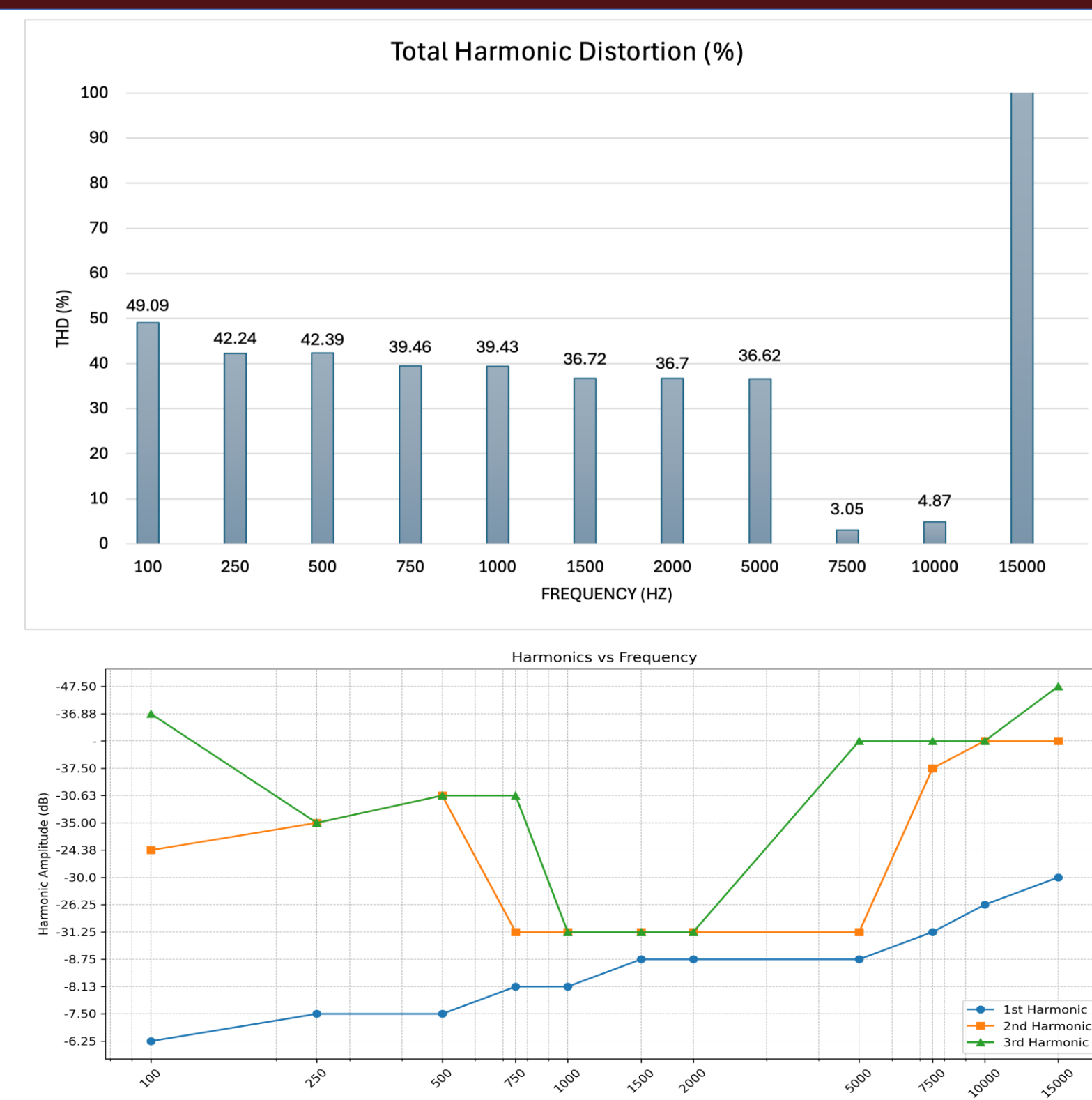
Feature Specs

- 9VDC Operated
- A/D-D/A conversion
- Stores and Recalls 10 loops
- 2-minute recording time
- USB import/export capabilities
- Unlimited Overdubs and Undo/Redo function
- 12-bit uncompressed audio quality
- Real-time looping display

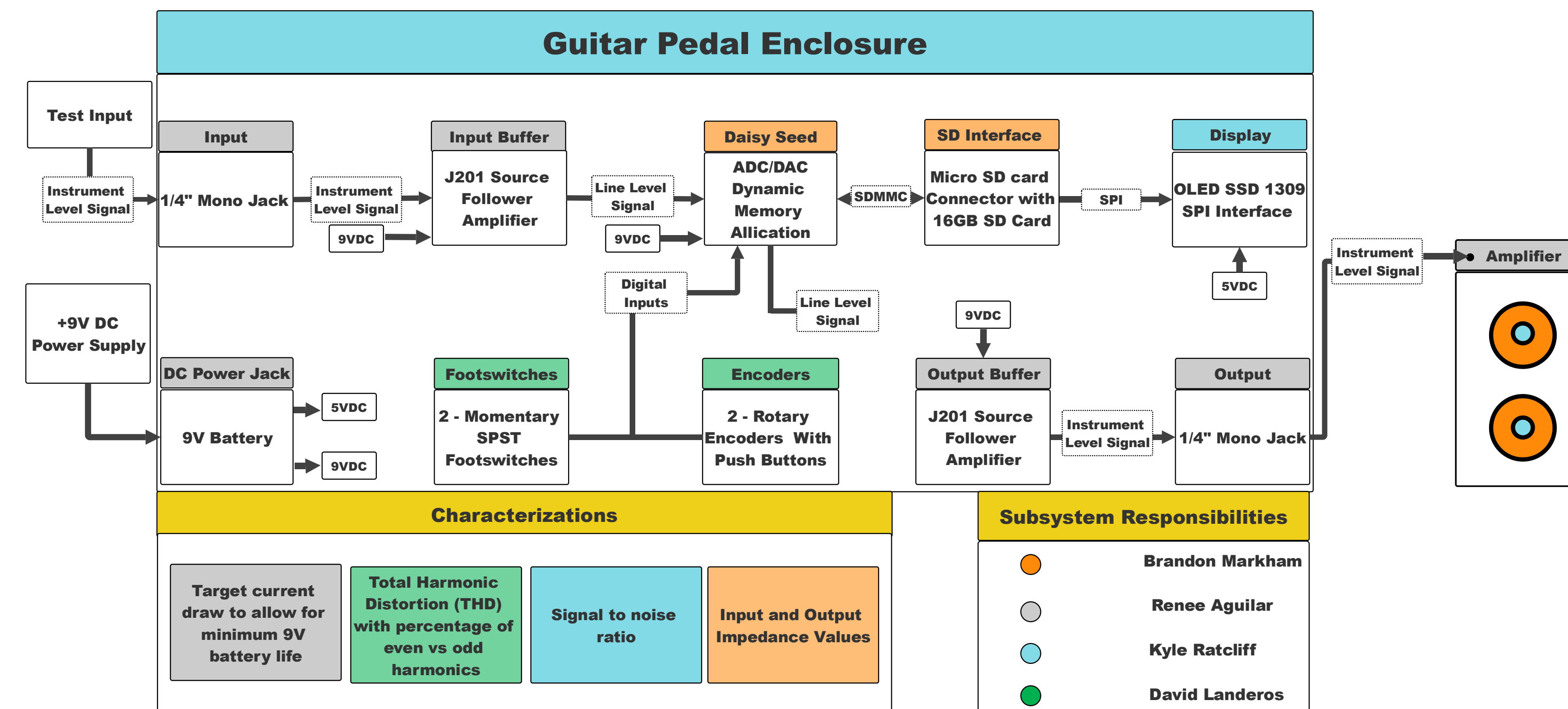
OLED/Enclosure



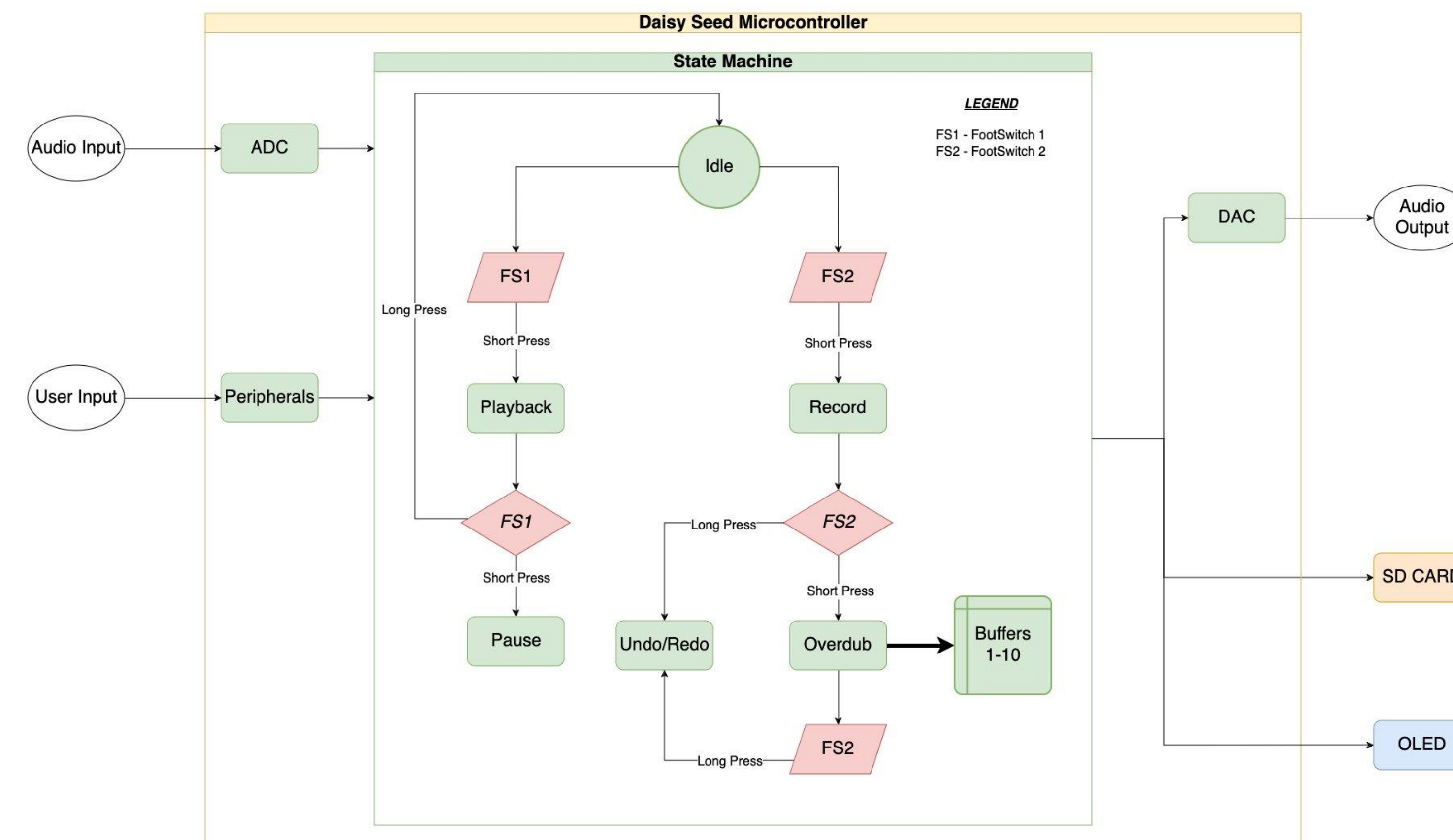
Total Harmonic Distortion



Top Level Block Diagram



Main Looping Program



Audio Processing & Dynamic Memory Management

