Sound Suite is a collection of digital audio effects that can be applied to any real-time input. The suite supports real-time layering and switching between distortion, wah, tremolo, delay, flanger, chorus, and reverb. The system replaces pedalboards and other bulky hardware setups with a digital solution, allowing for extendibility into the mobile realm.

Buffer Scheme – We achieve real-time application of digital audio effects through our efficient circular 3-buffer processing scheme.

Time-Based Effects – A temporary buffer stores a history of the input signal to properly process time-based effects on a per-sample basis.

Frequency-Based Effects – Processing buffers are converted to the frequency domain, filtered by applying FIR coefficients, and converted back to the time domain.