Alex Mixon

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Project Proposal

I am proposing the creation of a multi-effect guitar pedal plug in. The effects will include a distortion, tremolo, and chorus effect. The distortion effect will require parameters for drive, filter frequency (high pass filter for the signal before being distorted), and overall mix of dry and wet signal. The tremolo effect will require parameters for depth of the LFO and frequency of the LFO to determine the strength of the tremolo effect. Finally, the chorus effect will require parameters for depth of the modulation (0 to 1), modulation rate (in Hz), delay time of the chorus (in seconds), and feedback gain (0 to 1). Each of the mentioned parameters will have a control for the user to adjust within the software.

I will need to learn how to replicate the MATLAB algorithm I created for a chorus effect in C++. This will include creating a time vector as well as applying feedback and creating the delays in C++. Overall, I like where my signal processing is for now, so it should just be about transferring the programs to C++ code.