ToneCore Tremolo Preliminary Report

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Summary

The effect I would like to design is the stereo tremolo effect. The effect is created by creating a low frequency oscillator and mixing the original sound with a slightly delayed version. The slight delay oscillation is controlled by the LFO. The two channels of the audio signal are delayed by different amounts, to create an interesting stereo tremolo effect, which uses the separate channels to give more depth to the effect.

```
function [output] = tremolo(Fs,inSound,LFO_type,LFO_rate,lag,depth)
%TREMOLO tremolo(Fs,inputsound,LFO_type,LFO_rate,lag,depth)
%
%LFO_type is sin, square or triangle
%LFO_rate is speed of LFO
%Lag adjusts the stereo timing
%Depth changes the depth of the stereo switches

t = (0:1/Fs:(length(inSound)/Fs-1/Fs))';
t2 = (-(lag*1000/Fs):1/Fs:(length(inSound)/Fs - 1/Fs - lag*1000/Fs))';

switch LFO_type
    case {'sin','SIN','Sin'}
        lowosc = sin(2*pi*LFO_rate*t)+1;
        lowosc = repmat(lowosc,[1 2]);
        lowosc(:,2) = sin(2*pi*LFO_rate*t2)+1;
    case {'square','Square','sq'}
        lowosc = square(2*pi*LFO_rate*t)+1;
        lowosc = repmat(lowosc,[1 2]);
        lowosc(:,2) = sin(2*pi*LFO_rate*t2)+1;
    case {'triangle','Triangle'}
        lowosc =sawtooth(2*pi*LFO_rate*t,1)+1;
        lowosc = repmat(lowosc,[1 2]);
        lowosc(:,2) = sin(2*pi*LFO_rate*t2)+1;
end

output = depth*lowosc.*inSound + inSound;

end
```