Registration Form

TEAM INFORMATION

Team Name/Project Title: Wylie Amplification and Effects / The TremoloEX Expression Pedal for Electric Instruments

Department: Electrical Engineering

Faculty Advisor: Jeff Selman

Team Member: Mark Wylie

PROJECT INFORMATION

Description:

A redesigned tremolo effect pedal for electric instruments which allows the musician to make instant signal modulation changes while playing.

Abstract:

The tremolo is a simple yet effective expression pedal when used correctly with electric musical instruments (most notably electric guitar). Unfortunately, nearly all tremolo effect pedals are made in a small ‘stomp-box’ design, which makes adjusting signal modulations (in this case, rate and depth change in signal amplitude) while playing very difficult. A more operative tremolo expression pedal can be created by incorporating a classic, discrete-component tremolo circuit design inside a foot-controlled, expression-style pedal housing. This design will allow the musician to adjust the rate and depth aspects of the tremolo effect circuit instantaneously while playing. In turn, this design will allow the tremolo modulation circuit to be better utilized while composing. Most notably it will immediately encourage and enhance improvisational playing. This expanded use allows greater creativity in arranging and performing music, where it can be incorporated more as a rhythmic tool as opposed to occasional (and limited) sonic treatment. In turn, this tremolo effect pedal will suggest that other modulation effects with under-stated rhythmic attributes – such as echo, delay, flanger and phaser effects—can also benefit from a similar design.