

GUITAR DISTORTION: ROCKING IN THE DIGITAL WORLD^{*}

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Abstract

An introduction to a project on guitar distortion.

Since the days of the 1940s and 1950s, not much has changed in the guitar amplification world. Good engineering produced a robust design that has lasted several decades without much alteration. That is until recently, when advances in technology allowed the production of electronic circuits that could perform several complex calculations on signals in real time. This has revolutionized the way audio components are built today, and piqued our interest in how to build a simple guitar distortion model that models a classic tube amp.

In this day and age, we can use computers and filters instead of large bulky circuitry to mimic this classic sound, thereby reducing the cost of this expensive equipment. All we need is a good program, and we're set! This project focuses on using MATLAB for the simulation of distortion.

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