




UNT College of **ENGINEERING**

Senior Design Day 2018



Department of
ENGINEERING
TECHNOLOGY



ELECTRICAL ENGINEERING TECHNOLOGY

SquareBear Mini: Analog/Digital Synthesizer

Team Members:

- Matt Heupel
- Alex McGuinness
- Gelacio Sanchez

External Sponsors/Mentors:

Internal Sponsors/Mentors:

- Dr. Robert Hayes

Abstract:

“Simplistic Design, Unlimited Potential”

Group SquareBear provides an affordable and portable music synthesizer for experienced as well as beginning music enthusiasts. The SquareBear mini is a compact sound synthesizer utilizing analog and digital technology that enables the user to produce music in remote locations. The hybrid technology takes advantage of the best of analog and digital processing of audio spectrum signals. This product fills a niche market in the vast market of commercial synthesizers by providing port ability and affordability in a compact unit.



Tempescope and Weather Station

Team Members:

- Joshua Merryman
- Daren Bessinger
- Juan Lopez

External Sponsors/Mentors:

Internal Sponsors/Mentors:

- Dr. Robert Hayes

Abstract:

A-Team provides a Tempescope/Weather Station that presents a visual display of the weather conditions outside that is accurate and pleasing to the eye. The design makes several improvements to the OpenTempescope which was the brain child for the project. The Tempescope/Weather Station gives people in places like a hospital room or a cubicle at work a representation of what's happening outside that can improve their work environment. By taking data from a local paired weather station, the Tempescope/Weather Station is accurate to what is actually going on outside. Adding a LCD display to show all the data that can't be simulated complements the visual display of weather conditions that can be simulated. The addition of more accurate weather data, moon phases, rain intensity, lightning, and more realistic clouds are a few of the added and/or improved aspects to this version of the original OpenTempescope.

