vGuitar System

The vGuitar System is a [Foot Pedal](https://github.com/phorton1/Arduino-TE3), [USB Audio and Midi](https://github.com/phorton1/Arduino-TE3_hub) interface, and a built in [Looper](https://github.com/phorton1/circle-prh-apps-Looper) that connects to an **iPad** which provides Guitar Effects and a Synthesizer for a `[Fishman Triple Play](https://www.fishman.com/tripleplay/) (FTP) guitar synthesizer pickup, all in a single box.

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# Overview

The vGuitar rig is a [Foot Pedal](https://github.com/phorton1/Arduino-TE3), [USB Audio and Midi](https://github.com/phorton1/Arduino-TE3_hub) interface, and a built in [Looper](https://github.com/phorton1/circle-prh-apps-Looper) that connects to an **iPad** which provides Guitar Effects and a Synthesizer for a `[Fishman Triple Play](https://www.fishman.com/tripleplay/) (FTP) guitar synthesizer pickup.

It has many features, including:

* Blah
* Blah
* Blah

It is totally 3D printed, and this repository and related repositories include all of the source code, 3D printing and Circuit Board schematics and design materials necessary for anyone to make one.

# Requirements

## External Connections

Provides the following

* a single USBC power in plug that powers everything
* a single USBC cable to the iPad
* MIDI host port for the FTP
* Guitar-In 1/4" jack
* 1/8" jack or RCA-pair that connects to an external amplifier (PA)
* Four 1/4" jacks for Expression Pedals
* Micro USB port to the teensy 4.1

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## Built in UI and Controls

## For Makers

## For my own Sanity

### Synthesizer

### Guitar Effects

# Architecture

## Architectural Overview

## TE3\_hub – the teensy 4.0 USB Audio and Midi device with Host

## TE3 - the teensy 4.1 Foot Pedal MIDI controller

## Looper – the circle rPi 3B+ application

# Design

# Implementation

# Topics

## Recap of Midi Protocol

## 

# Appendices