



# **DSID 137**

## **Processbook**

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# Scavenger Hunt



This portion of the project was to help find and pick a topic and also to learn that there are some ways to prototype quickly. Some of the concepts were: a cellular booster, DAC case, Portable guitar amp, Smart piano of learning how to play, bone conduction glasses, speaker case, guitar learning tool, and a self diagnose tool.



## Problem

Learning an instrument online can be difficult. Because no music teacher is with you, it can be difficult to not only learn but also to stay motivated. At the same time space is limited in college dorms.

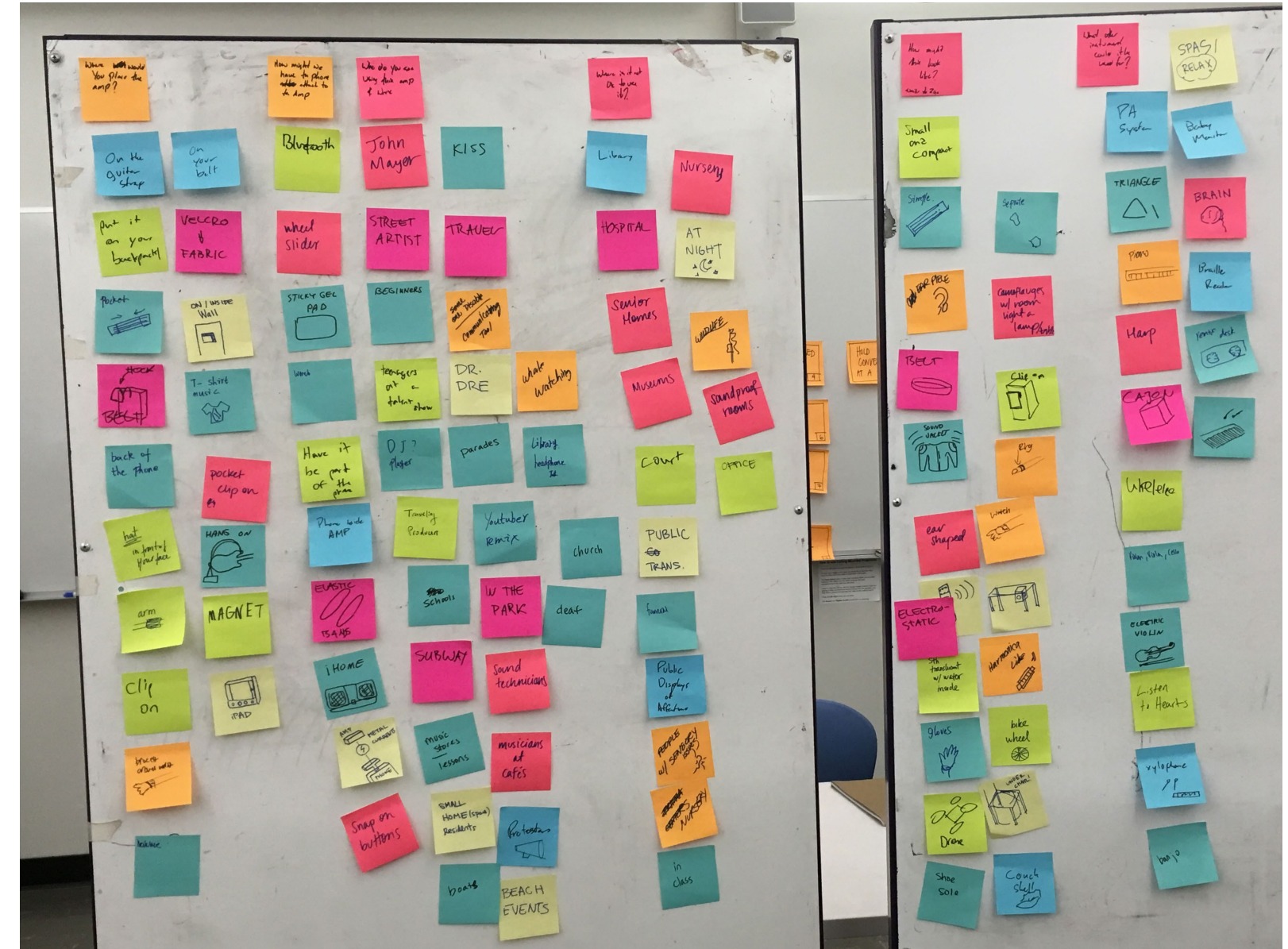


# Persona

This is Joey, he goes to college and lives on campus. He has been wanting to learn to play the guitar. There are just a few issues. He does not have the money to hire a teacher and he feels that if he does an online course that he will lose interest.



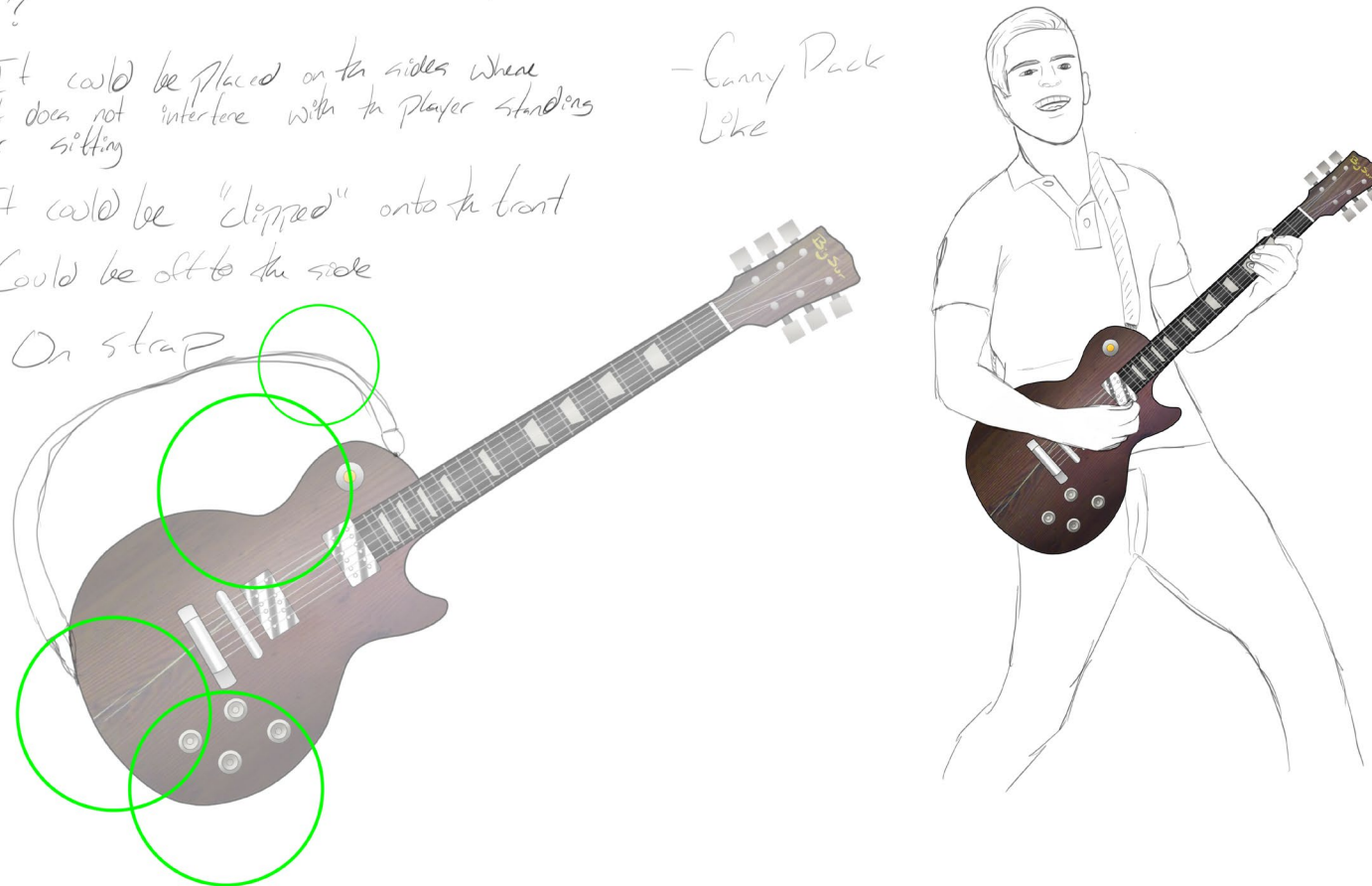
# Brainstorm



# Research

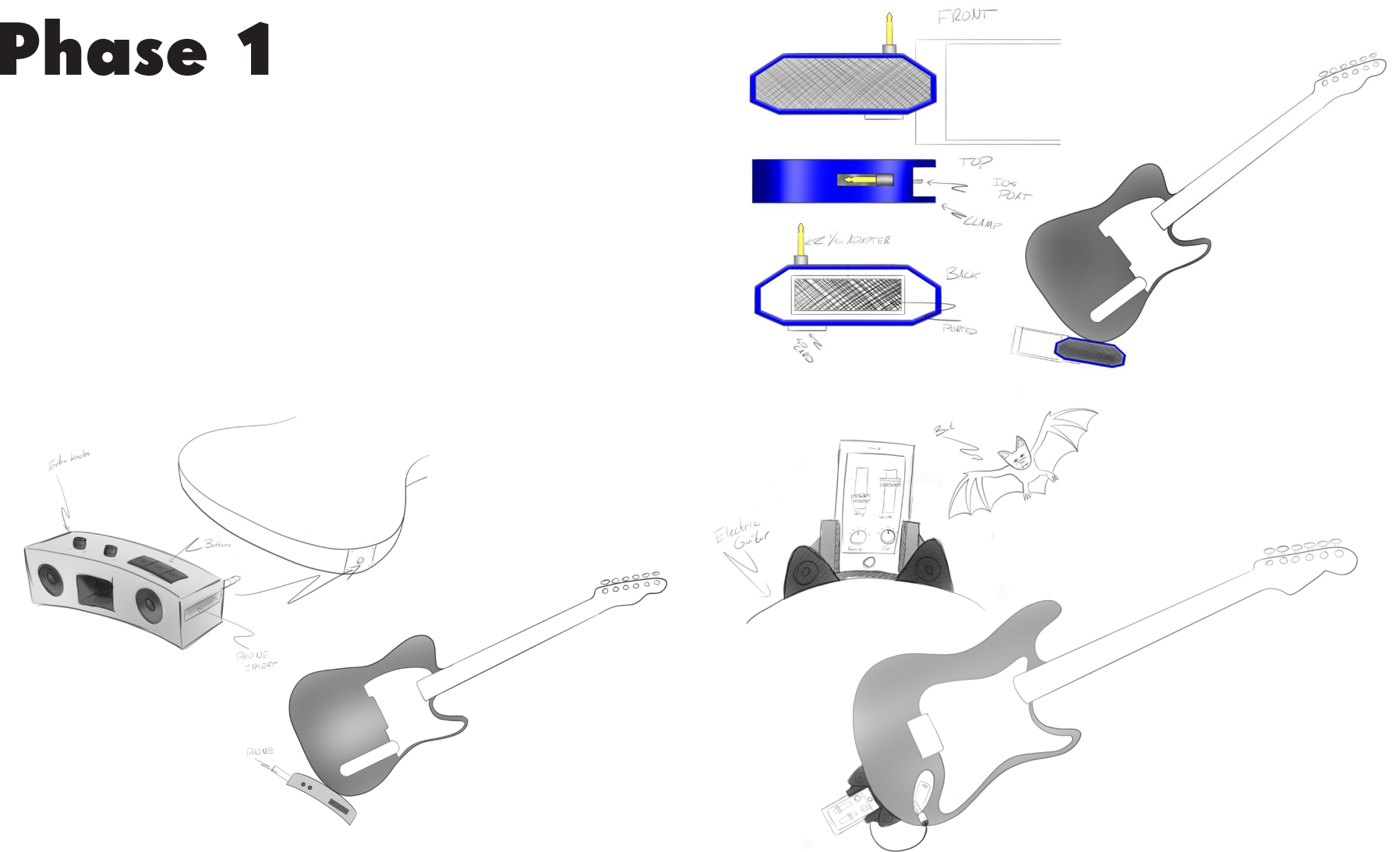
SO Where could this amp be placed b/c it is Portable?

- It could be placed on the sides where it does not interfere with the player standing or sitting
- It could be "clipped" onto the front
- Could be off to the side
- On strap



Here I was looking at different places that objects could go without interfering with the player.

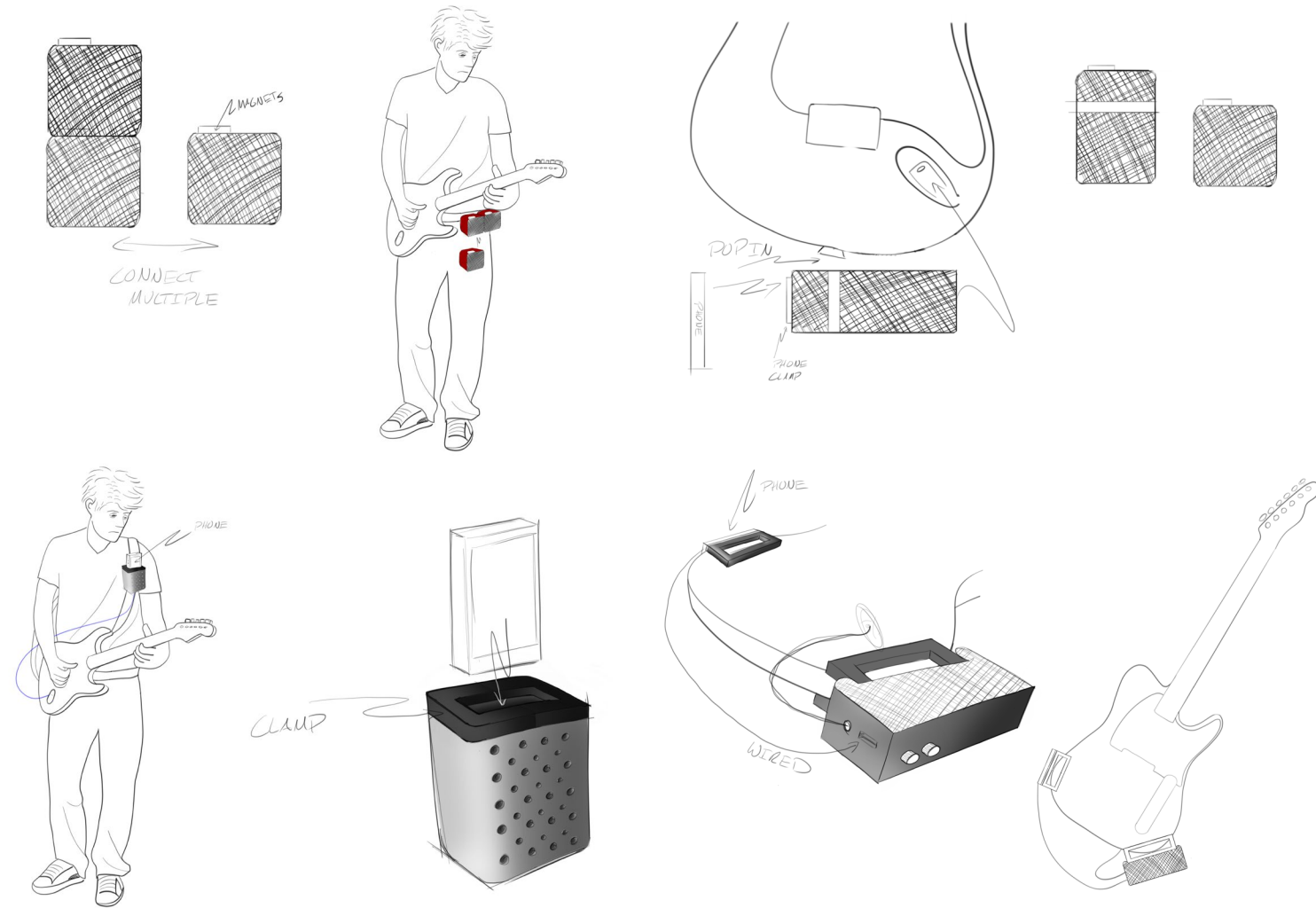
## Phase 1



In the beginning I was mostly looking at how can I mount this item on a guitar or even having it on the person trying to use it.



## Phase 1



# Simulation

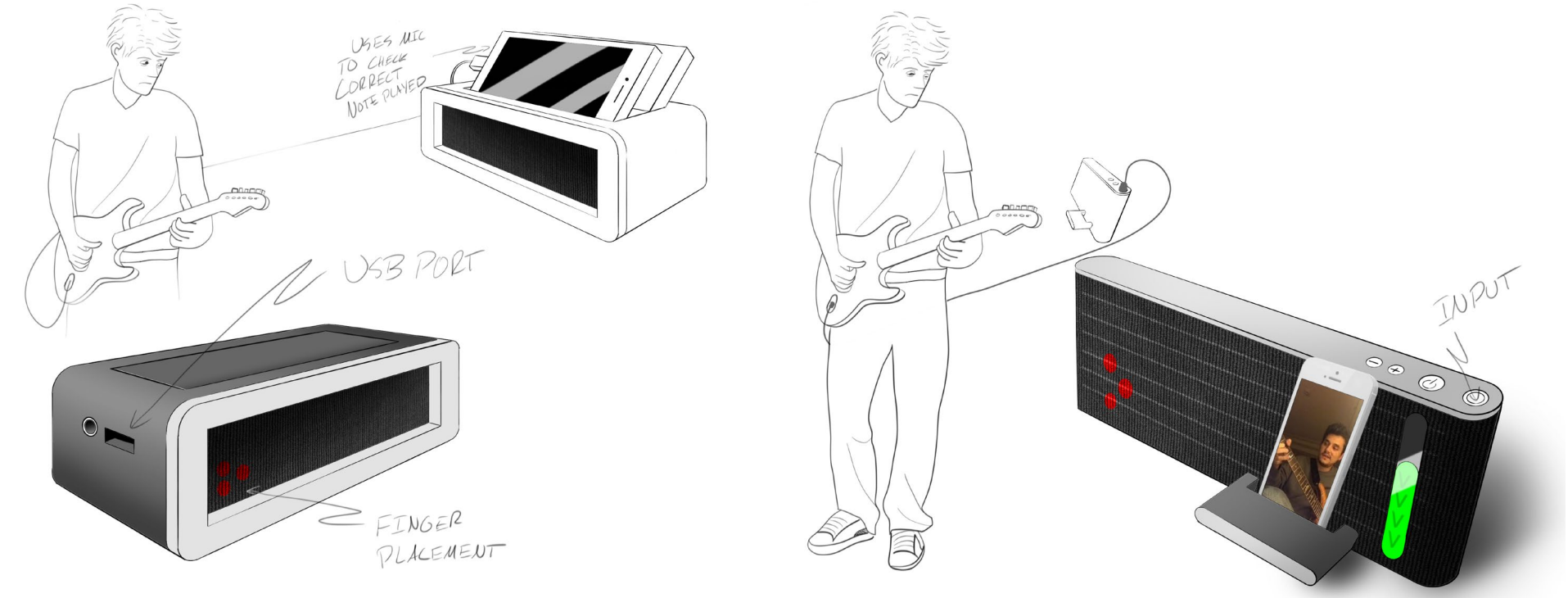
Using a glass Starbucks bottle filled with water so simulate a similar weight which the products are theoretically. Placed them around the spots where I sketched them. What I found it that having that heavy in any part was not ideal in most situations.



# Mock Ups



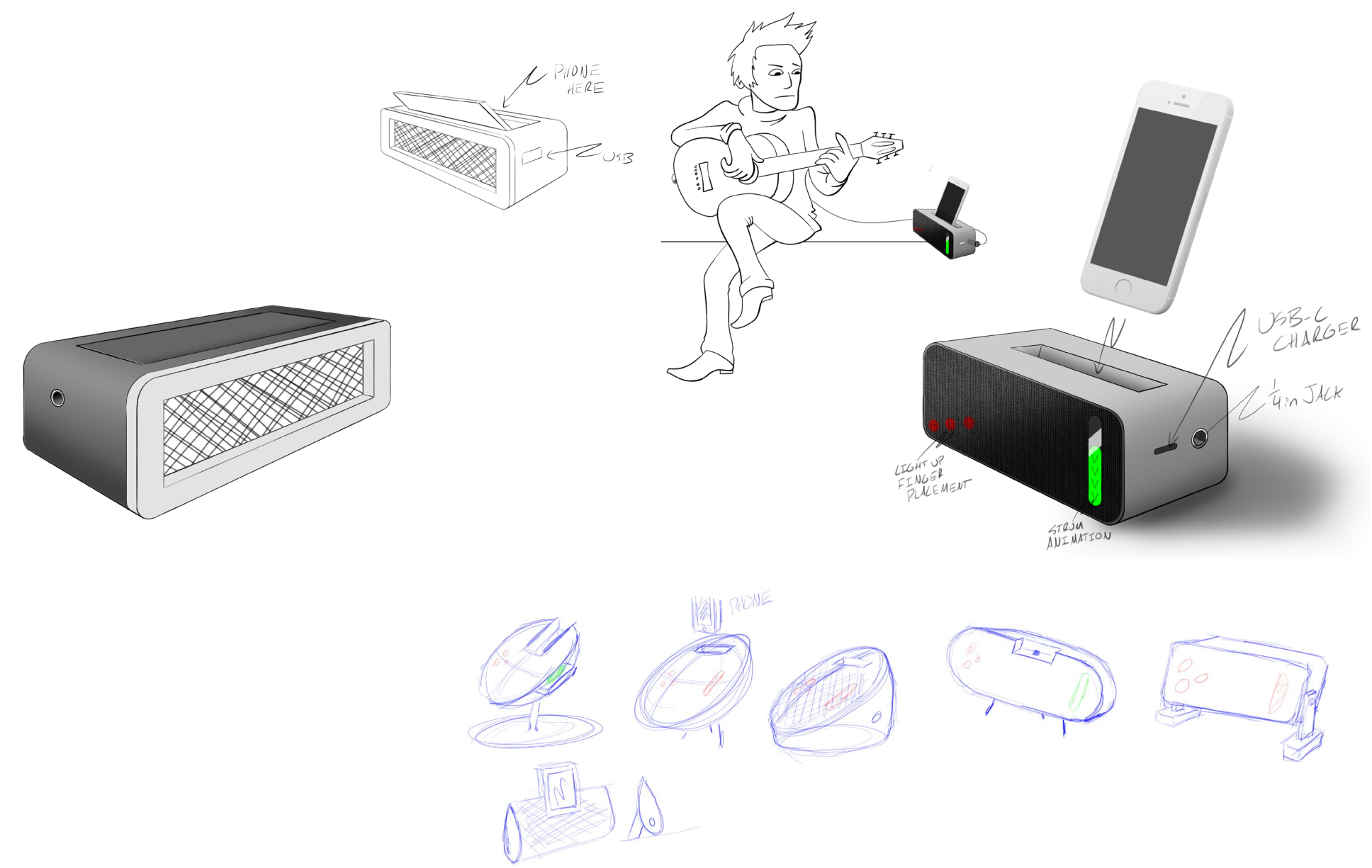
## Phase 2



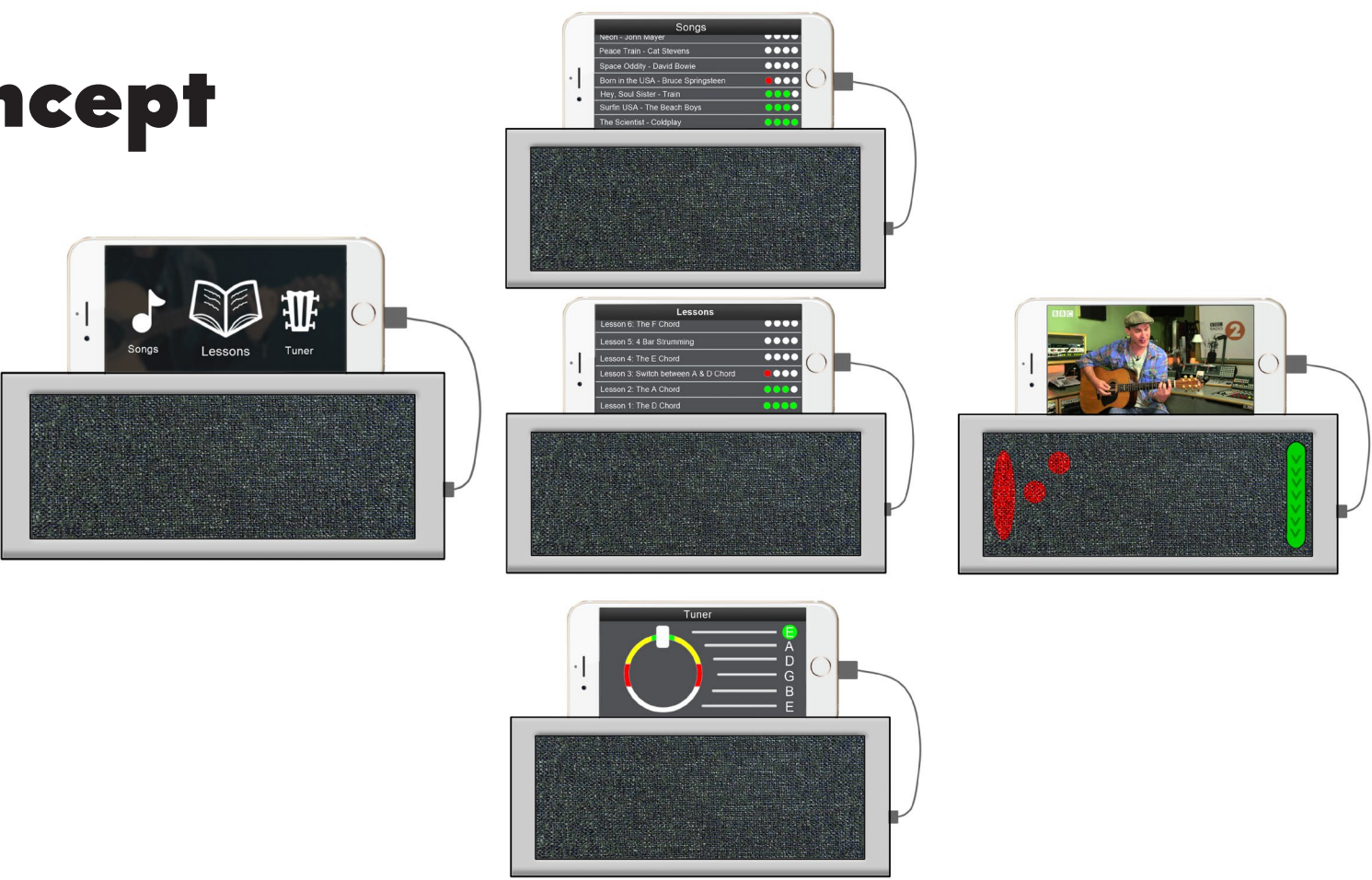
Then after I decided to scratch the whole idea of having the device being on the guitar. I decided to move towards something that is larger and has an easier way to see the lessons being given by the phone. Moved toward an iHome approach where you would watch the lesson on the phone and there would be ways to make it easier to explain chords by doing it visually.



# Phase 2



# UI Concept



Then I began trying to come up with a simple UI to try to explain how someone learns using this. Also, showing how the process of learning can be gamified. It was planned to teach by projecting finger placement patterns for people to mimic while they looked at it.

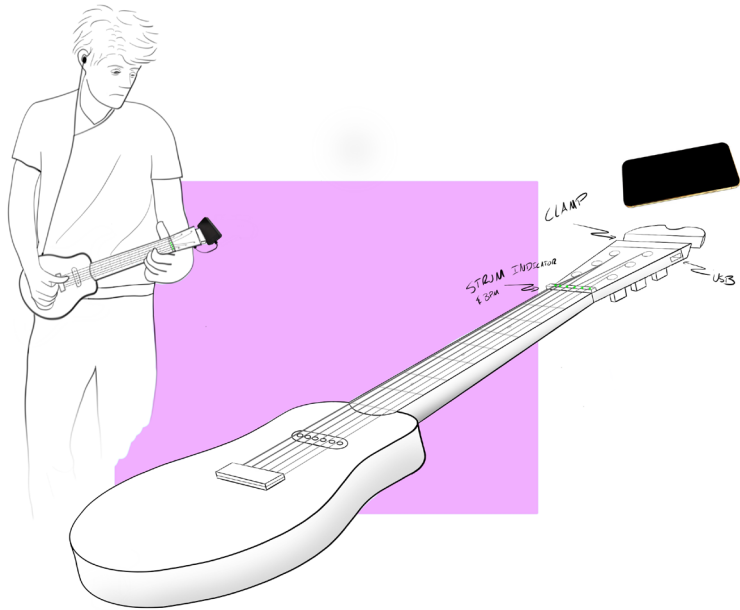
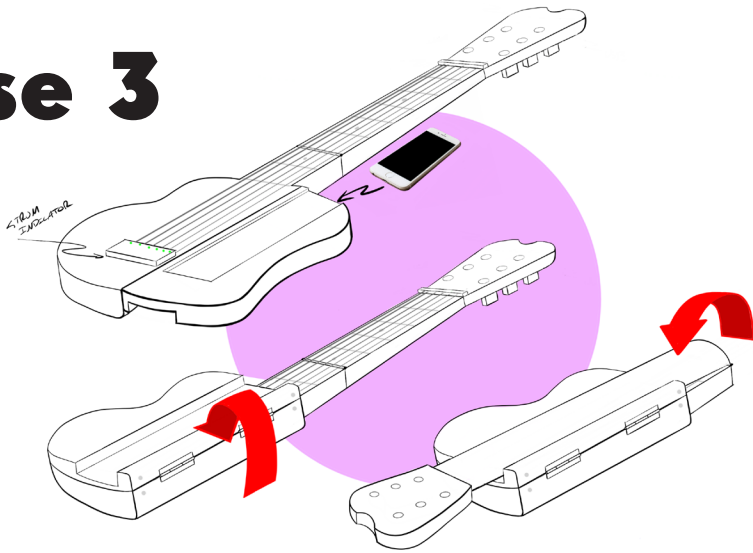
In the end it posed a problem because it forced people to look multiple places at once.



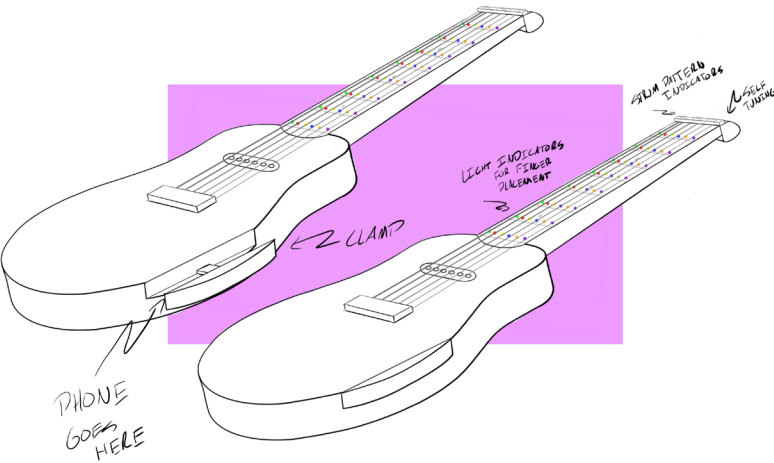
# Mock Ups



# Phase 3

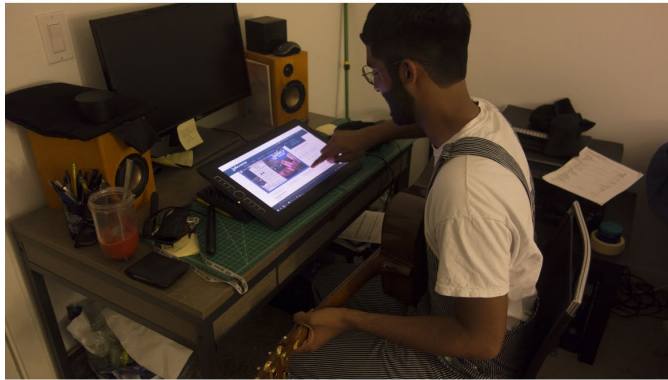


After the previos phase I began to experiment whether having an amp was the best way to go for a college student. So I asked myself, Will they have enough space for both a full guitar and an amp? Where would they store these things. And would roommates appreciate the noise coming from a beginner learning to play guitar. After asking myself those questions I realized that it would make more sense to have it be an all in one. Where the phone goes into a condensed guitar.





# Storyboard



Goes online to learn Guitar



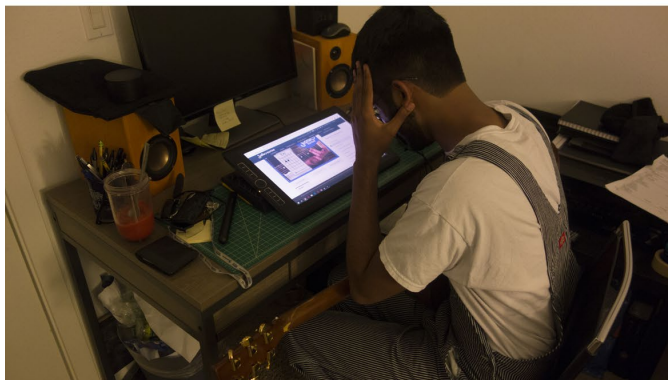
Struggles to understand the lesson because of lack of clear demonstration and guidance



Begins to play notes wrong while believing he is doing them right



OMG my roommate is annoying me with his guitar playing and I have to study



Becomes super frustrated and wants to give up

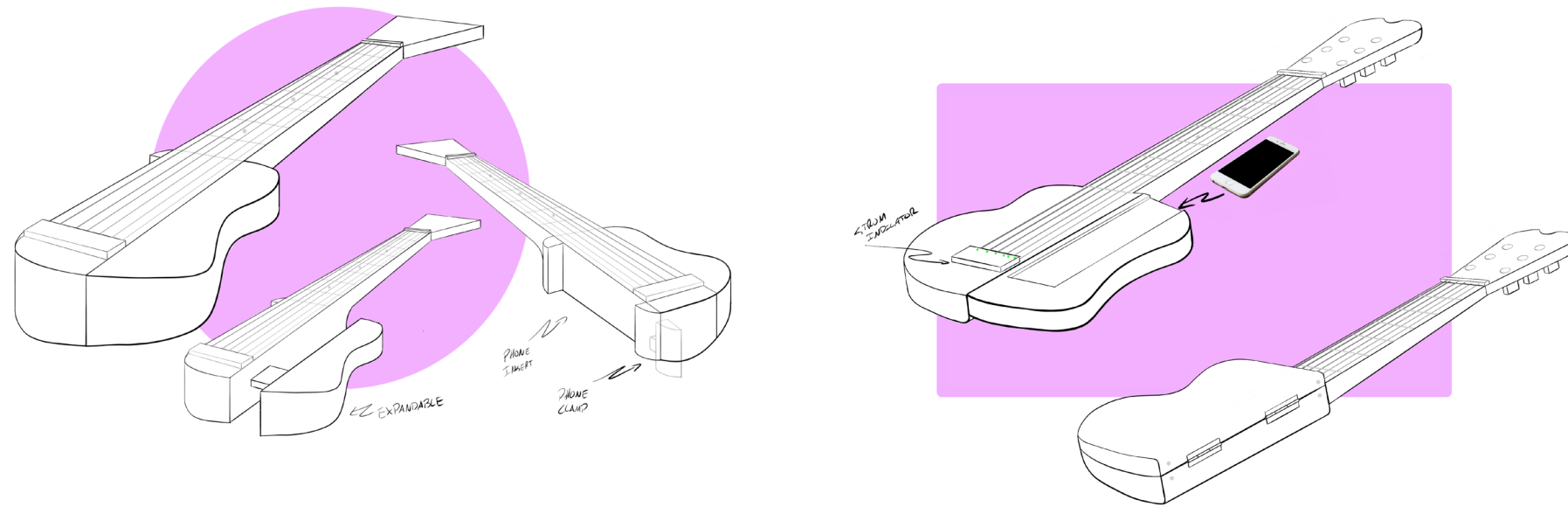


# Simulation

Here is where I was experimenting with the placement of the phone



## Phase 3



So how do we get rid of the problem of making noise and bothering the people you live with?

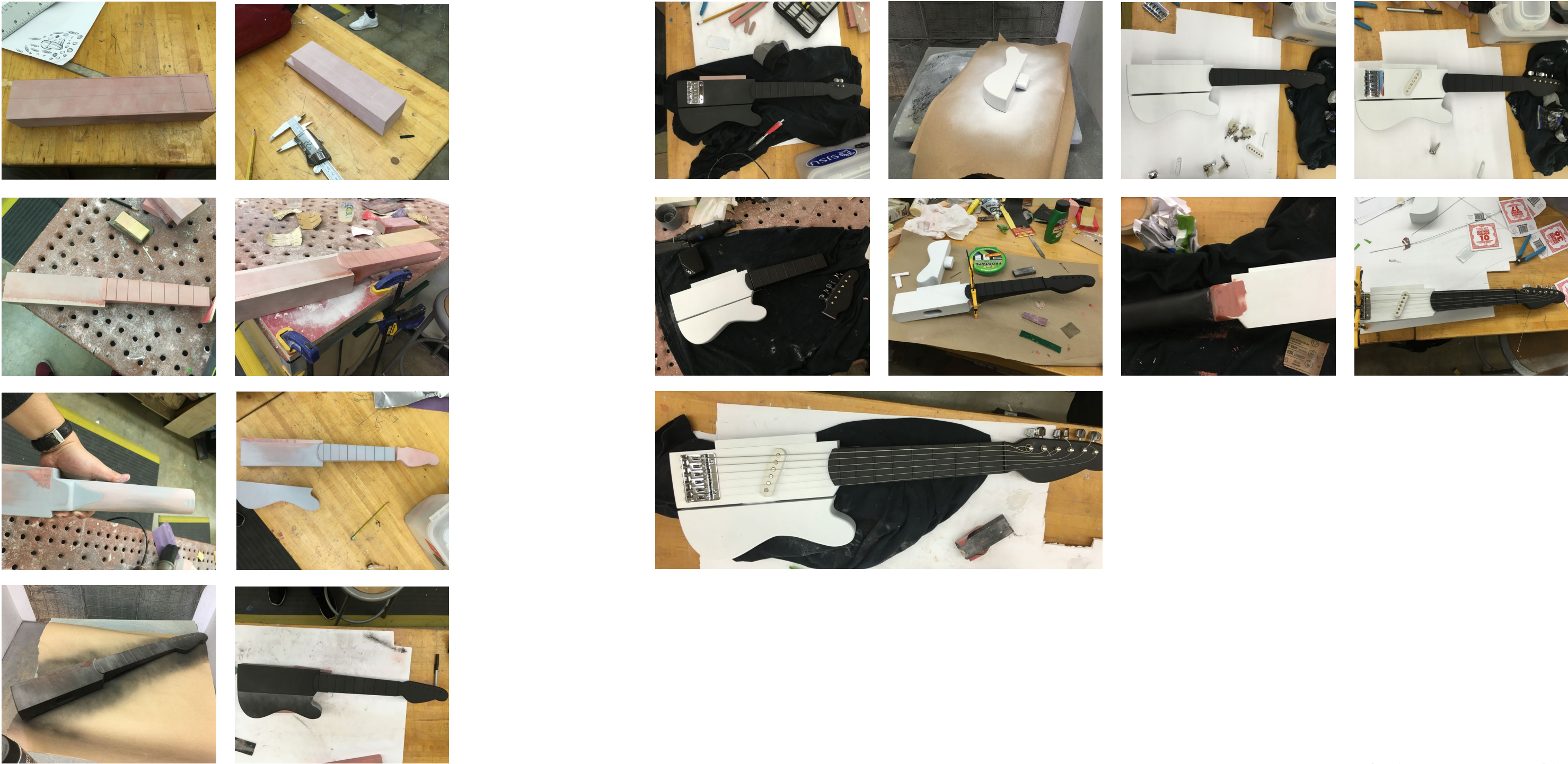
- AUX for headphones
- Solely visual feedback
- Vibrational/Bone Conductive
- Volume limit

## Mock Ups





# Model Build







Final

## Features



LEDs under fret to follow during lessons.



Headphone jack to plug in headphones



Body retracts to adjust body size