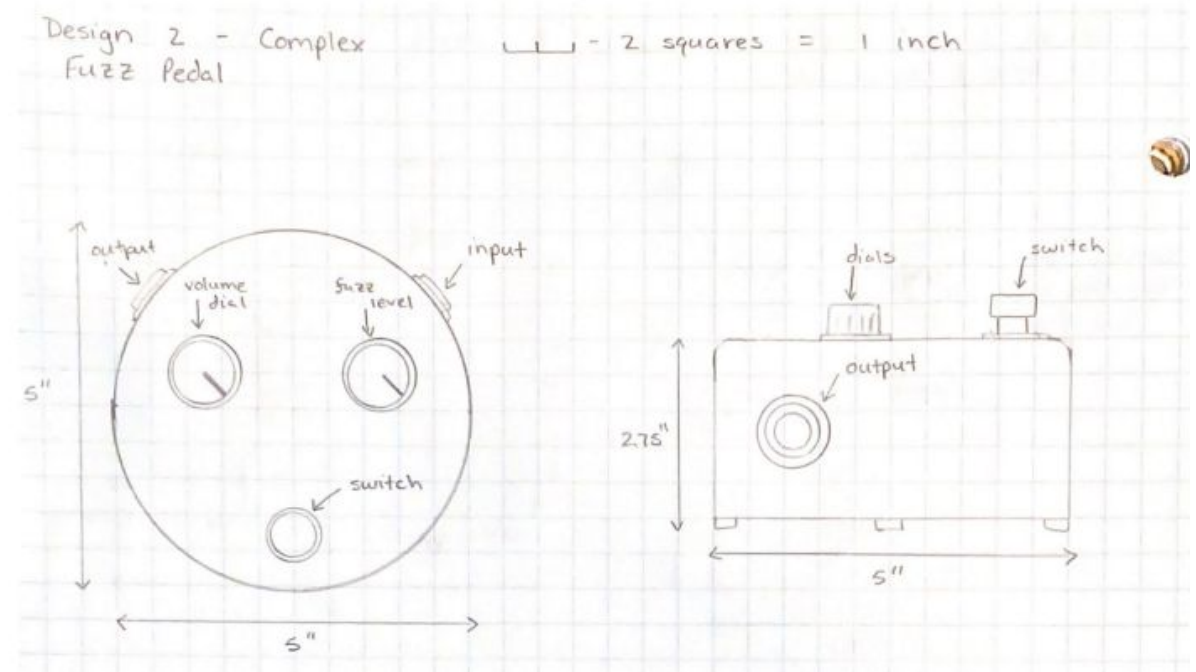
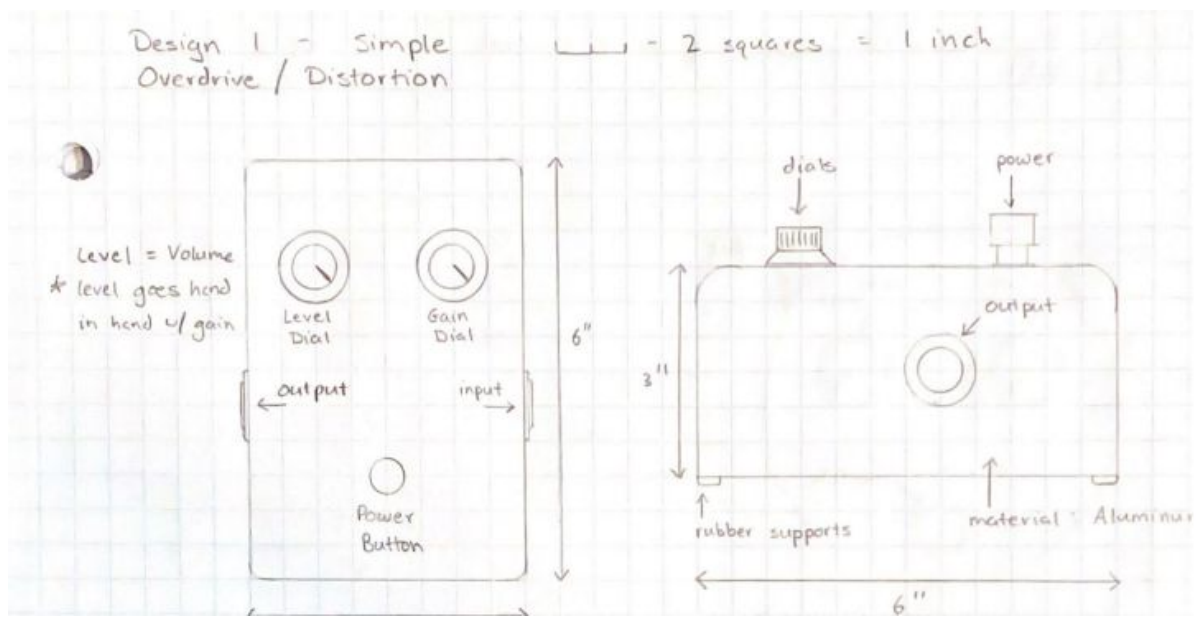
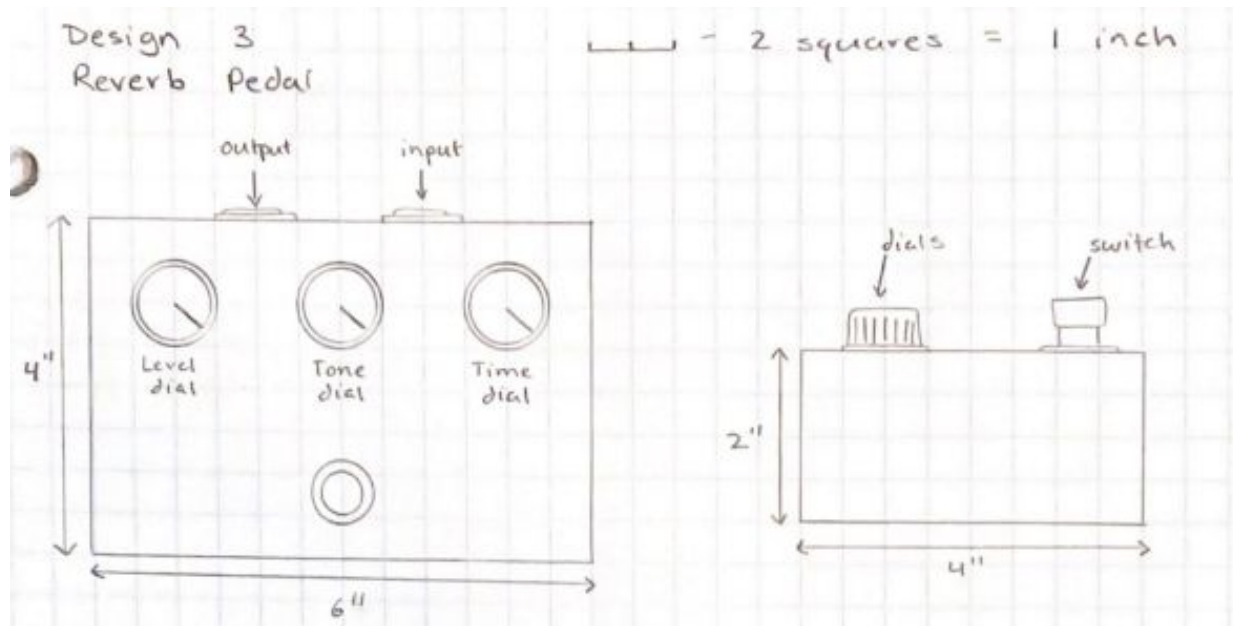


Andy Ventura Molina, Shundong Li, Guilherme Sperotto

Initially, we came up with several designs for the pedal itself, depending on the type of pedal we chose. Although we chose distortion in the end, any of the designs could have been picked, as long as they were modified to fit the pedals needs.



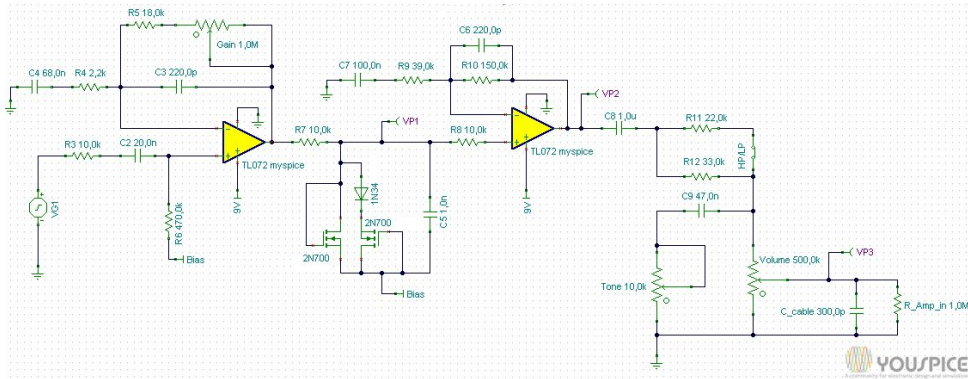


After, we ordered parts so that we could start working on the outside portion of the pedal, while thinking of the hardware aspects. The parts we got are listed below.

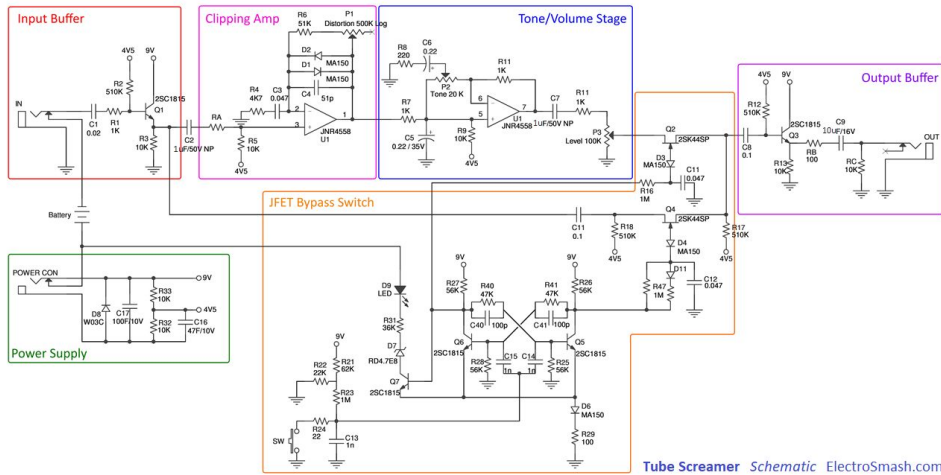
Pedal Building/Costs	
Boss BD-2 Blues Driver	102.99
Fender Deluxe One Foot Instrument Cable	14.99
Truetone 1Spot 9V Dc Power Adapter	21.99
Silver Tone I Rotary Knobs 6mm	9.99
1/4 Stereo Female Jacks	8.99
Stomp 6-pin Pedal Switch	8.49
Aluminum Stomp Box	11.99
Flat Test Hook Clips	8.99

The next part was making sure we based our pedal on actual overdrive pedals. We were able to get access to several schematics from online. After analyzing the schematics we separated them into their sections of Tone Control, Volume Control, and Clipping, this is an important analysis when designing your own schematic.

Fulltone OCD

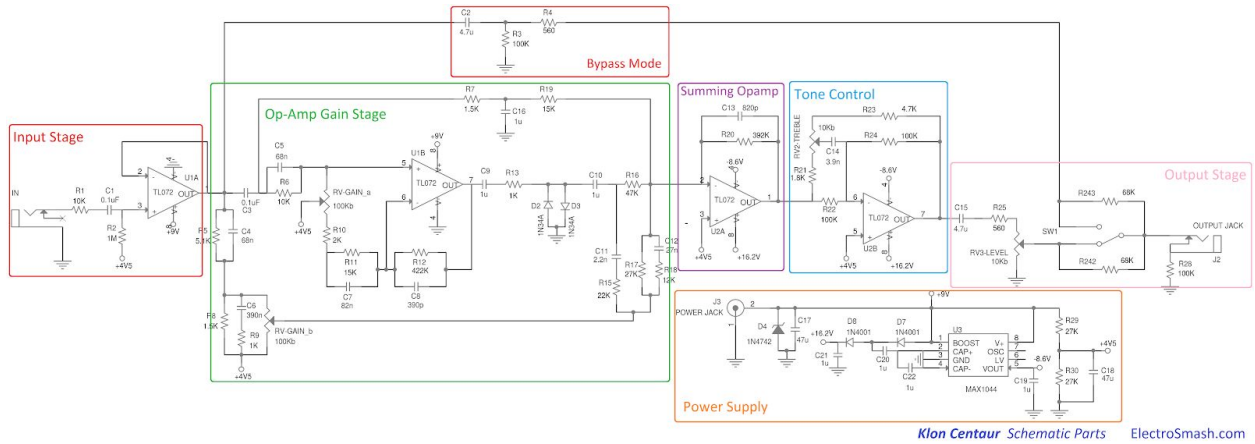


Ibanez Tube Screamer

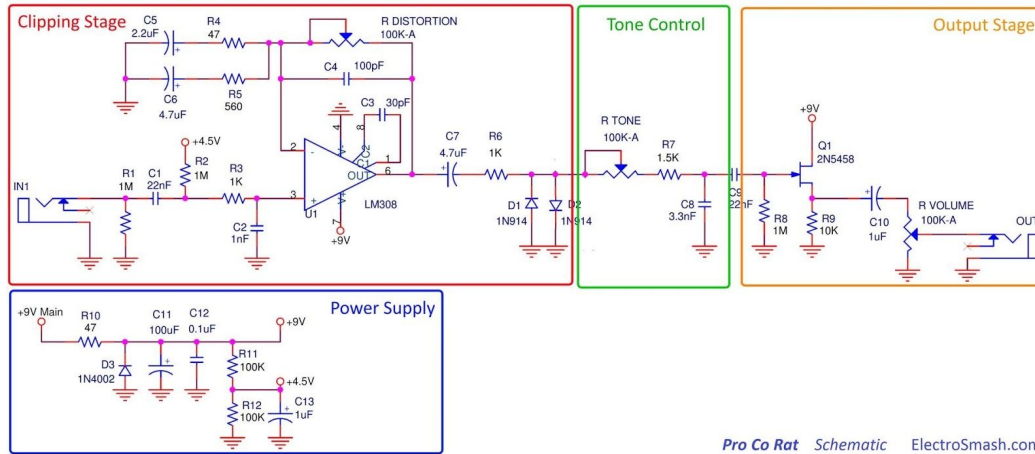


Tube Screamer Schematic ElectroSmash.com

Klon Centaur



ProCro Rat



Volume

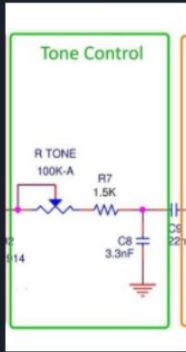
Cochrane Timmy

ProCo Rat

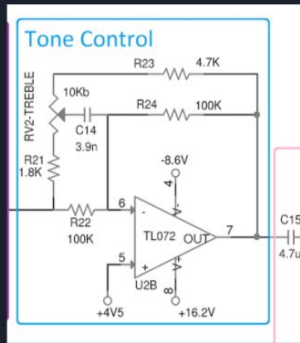
Ibanez Tube Screamer

Tone

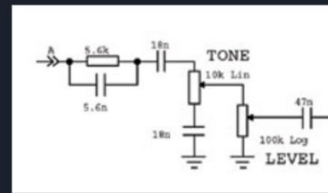
ProCo Rat



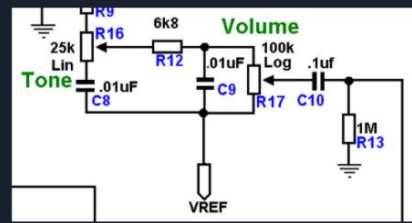
Klon Centaur



Boss BD-2

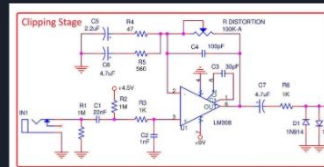


Blues Breaker (Tone and volume)

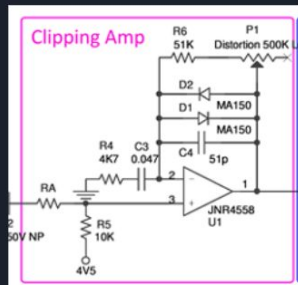


Clipping

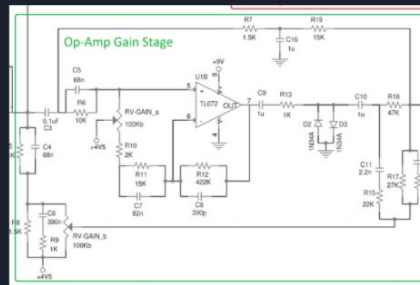
ProCo Rat



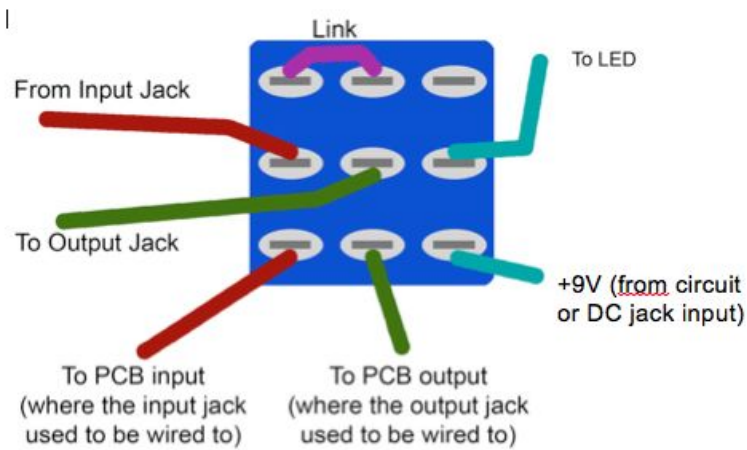
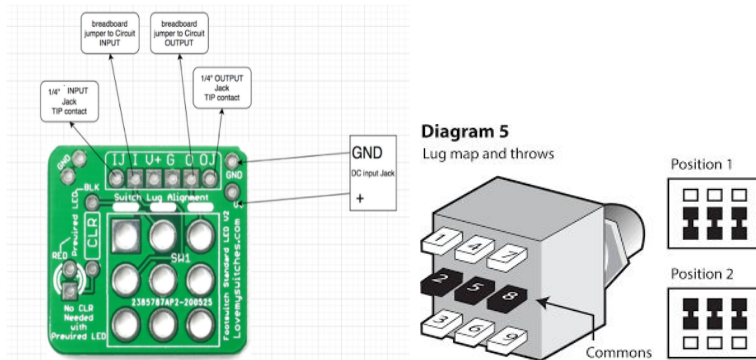
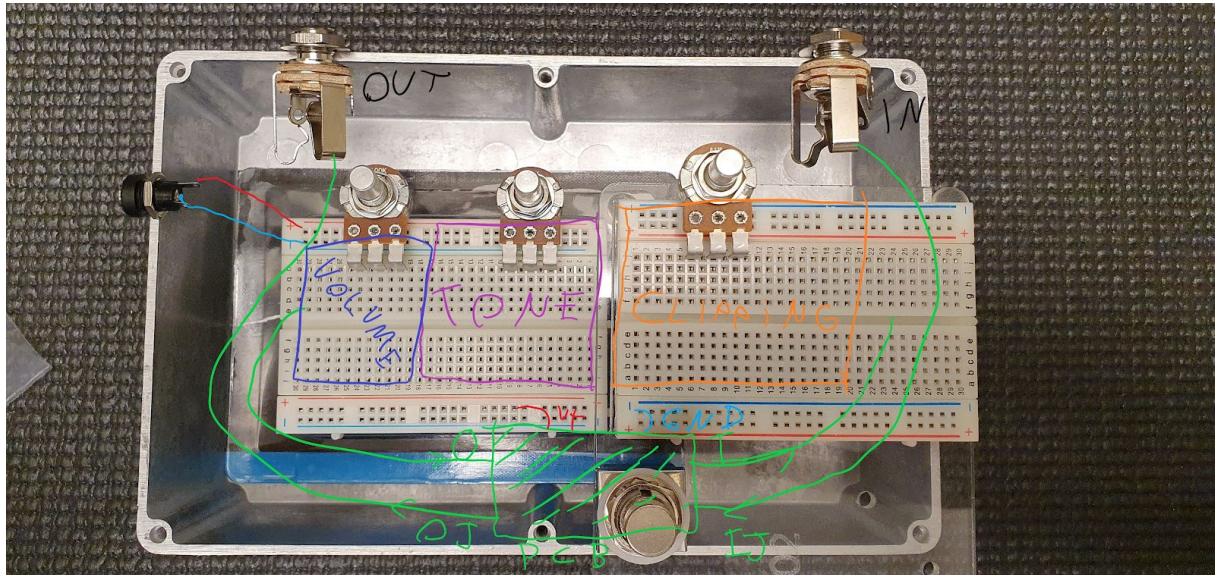
Ibanez Tube Screamer



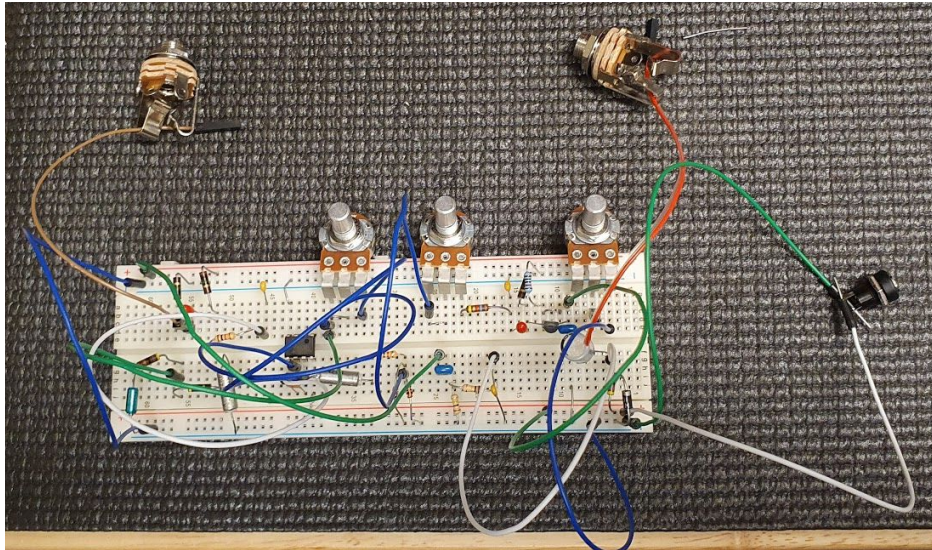
Klon Centaur



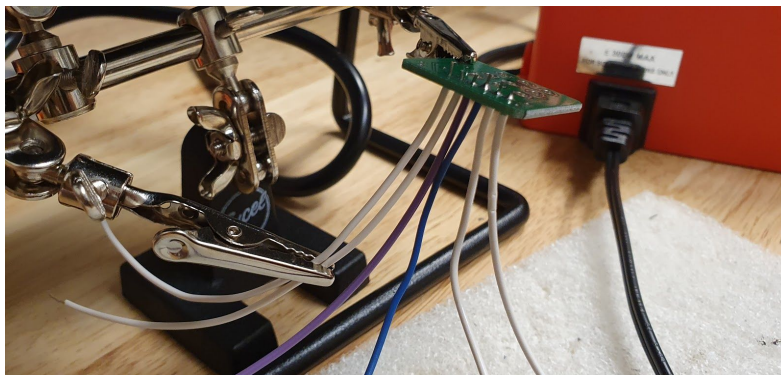
With all the schematics, we decided to base our pedal off the ProCro Rat. Next, we came up with our schematic design and focused on the 3PDT Switch Pinout, the PCB, and other components.



With all of these parts set, we added components to the breadboard.



Once the pedals hardware was built, and the jacks and PCB soldered, as shown in the picture below, we were able to test out the pedal itself which gave us a sound. It wasn't a very "hard" overdrive sound but it gave a small grit as compared to playing without it.



The next step was to drill the encasing to fit the jacks. To do so, first we measure the outside diameter of the threads of each jack, and prepare the drill bits necessary for those diameters. Then we mark the center of the holes to be drilled, to guide the bit. Make sure to secure the encasing and apply drilling fluid to prevent overheating.