Future Work

This project has inspired me to seek out other broken or project guitars. I thoroughly enjoyed the work and the results, and will continue to learn more about this subject.

In addition, my confidence to repair my own instrument has grown with the completion of this build.

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The Inspiration

I’ve had a lifelong love for listening, learning, and performing music. Although I have over 20 years of experience playing guitar, I really know very little about how it actually works from an electricity and electronics standpoint. I intended to solve this problem by building a custom guitar from the ground up.

This project required both mechanical and electrical portions in order to complete. I learned a great deal from an electricity and electronics standpoint during throughout the build. The practical implementation of components such as capacitors, electromagnets, and potentiometers has given me a more tangible grasp on what I’ve learned in my classes.

Motivating Factors:
- I had never owned a high-end guitar before
- Desire to become more familiar with instrument
- Attempting to complete the project on a $500 budget

My background mechanical knowledge was very helpful in allowing me to complete this project at a very high quality.

The Build

First, many weeks of research went into finding components. With consideration for what I wanted the final product to sound like, I chose specific pickups, potentiometers, capacitors, and shielded wiring.

Results

The completed guitar plays as well as a comparable instrument in the $2,500 to $3,000 range, proving that a budget friendly, high-end guitar can be made for a fraction of the price.

Conclusions

Building a high quality guitar can be done relatively inexpensively, with good planning and the right tools.

My soldering and electronics skills were tested thoroughly by the delicate, expensive components.

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