

Making Mjolnir: An experiment with electromagnetivity

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Physics 211

Origin Story

An interest in Comics and Science led us to building a prototype Mjolnir for an Engineering Design 100 Class.

Specs:

1 purchased electromagnet

1 Lithium Polymer Battery

11.1v

1200 mA

A mechanical switch

Maximum holding force

75 lbs

Build Time

6 hours

Updated Specs

With these new parts we were able to achieve power rivaling the God of Thunder himself!

Maximum holding force

450 lbs

Build Time

11 hours

Idea for Improvement

Upon further research into the topic, it was discovered that it we could relatively easily improve our design at a relatively low cost.

Improvements Made

4 Lithium Polymer Batteries

11.1 v

1200 mA

3 2-way Deans Male to
Charger connectors

One microwave transformer
Modified into usable E
configuration

One Mega2560 Arduino
Board

Prototype Breadboard

NFC Receiver

NFC Transmitter

Miscellaneous wires

Resources

(2015, October 11). Retrieved October 07, 2016, from
https://www.youtube.com/watch?v=0_8Xhzt5YQI&t=114s



PennState
Wilkes-Barre