



Charging Bike Station with Electrical Emphasis(Design Process)

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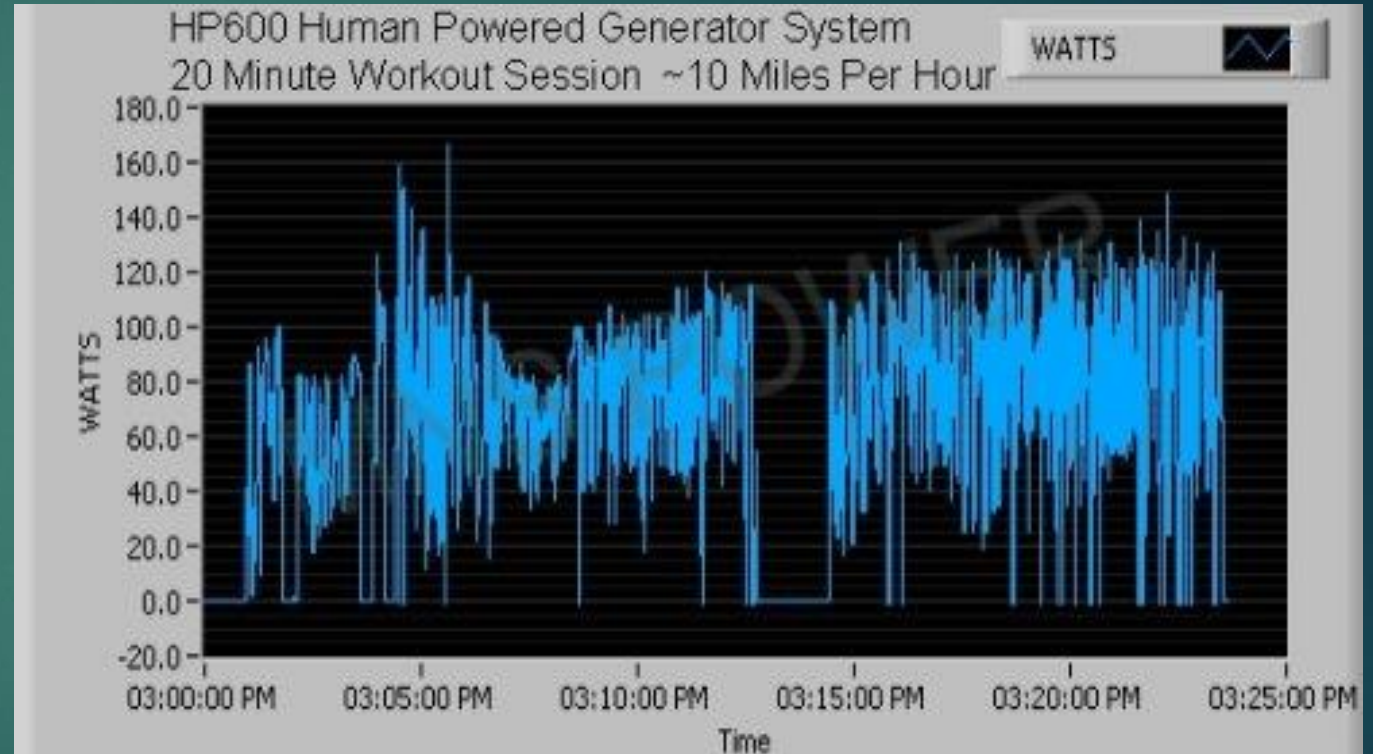
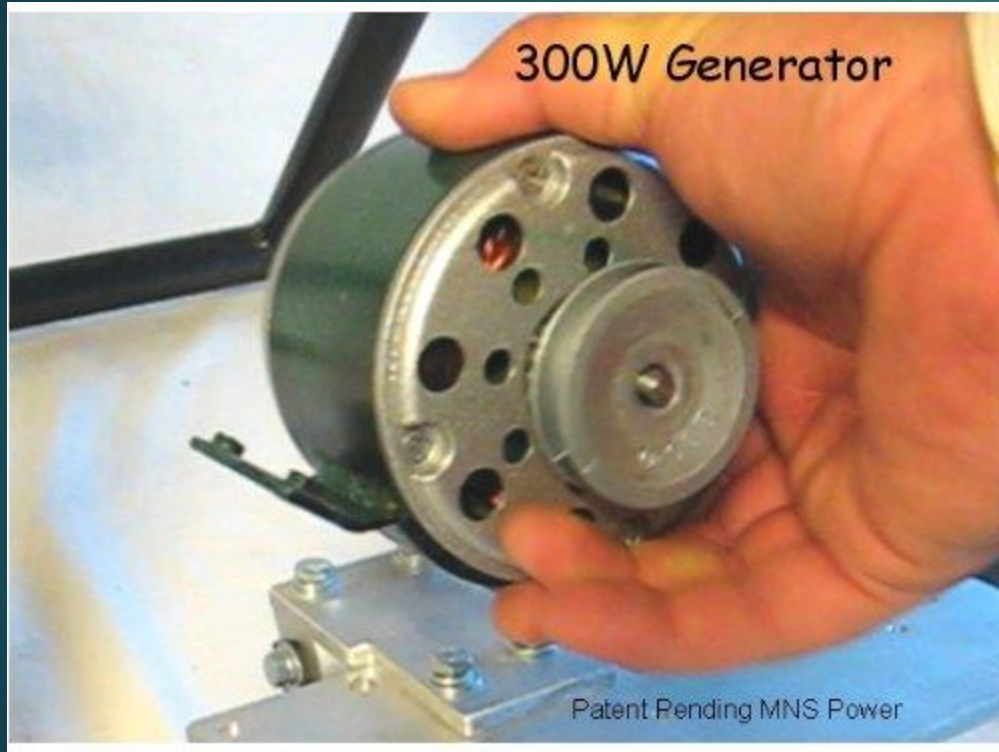
Outline

- ▶ Introduction
 - ▶ Modifications and Prototyping
- ▶ Display
- ▶ Generator
- ▶ New Budget
- ▶ Project Plan

Introduction

- ▶ Charging Bicycle Station
 - ▶ Generator
 - ▶ Display
 - ▶ Power Logger
- ▶ Modifications
 - ▶ Winter break
 - ▶ Programming
 - ▶ Selection of Generator (AC or DC)

Generator – 300W/DC



http://www.amazon.com/Bicycle-Generator-Power-Pulley-Dynamo/dp/B001WB3TZ4/ref=sr_1_5?ie=UTF8&qid=1390607126&sr=8-5&keywords=dc+generators+100+watts#productDetails

Display – 7" touch screen



<http://www.ebay.com/itm/like/331094752377?lpid=82>

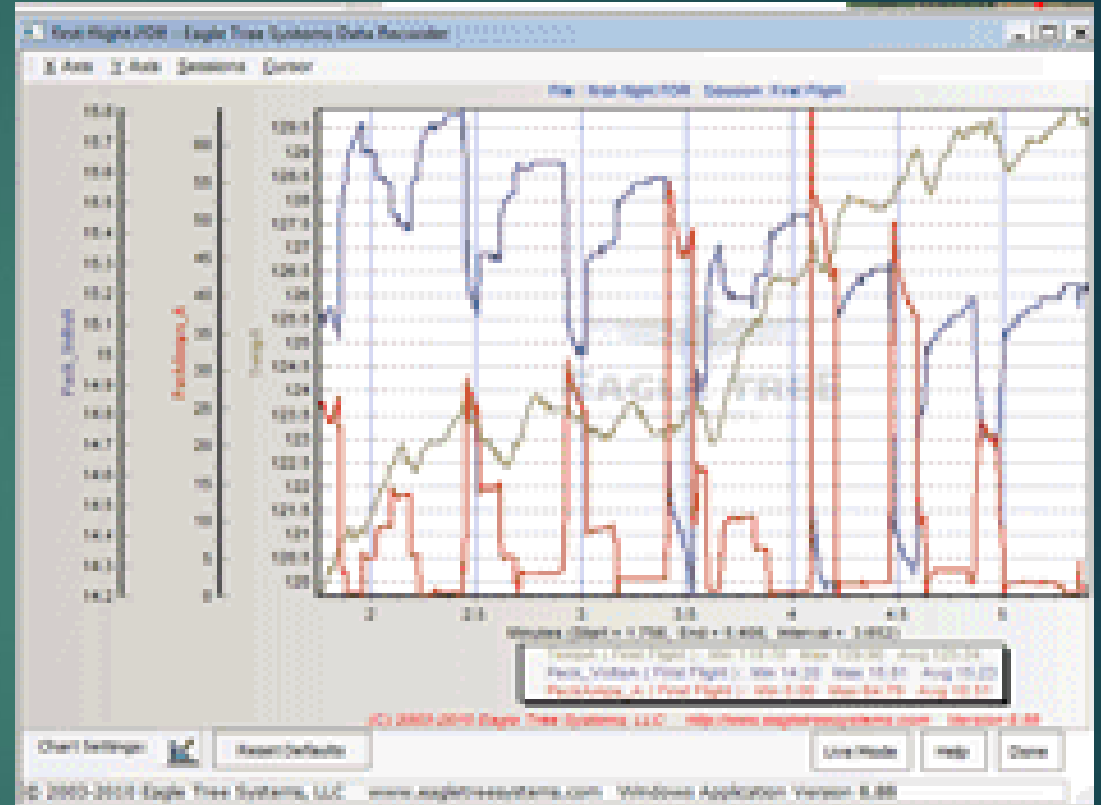


<http://www.amazon.com/Monitor-Raspberry-driver-AT070TN93-800%C3%97480/dp/B00GV6UT8U>

Devine

Power Logger - eLogger

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http://www.eagletreesystems.com/index.php?route=product/product&path=62&product_id=54&sort=p.price&order=ASC

List of Electronics

- [HDMI Cable](#) – 10FT SILVER HDMI- \$8.86
- [SD Card 8GB](#) – SD card 8Gig - \$4.99
- [Raspberry Pi Model B](#) - \$35 Model B
- [Raspberry Pi Case](#)– Raspberry Pi case \$7.89
- [Capacitor Pack 50 V](#)– Capacitor pack 50V \$7.00
- [Three-Two Prong Cables](#) – Pack of 11 - \$3.00
- [New iPhone Chargers](#) – New Iphone 5 chargers - \$2.18

List of Electronics

- [iPhone Chargers](#) – \$1.85, old iphone chargers
- [USB to USB Cable](#)– 6ft, \$2.78 USB to USB
- [USB to Micro Cable](#) – USB to Micro, 6ft, \$5.99
- [DC to AC Inverter](#)– 200W \$21
- [Power Logger](#) - \$69.99
- [Display](#) - Display \$89.00
- [Generator](#) – Generator \$199.00

Budget

Components	Price (\$)
Generator	199.00
Display	89.00
Power Inverter	21.00
Raspberry Pi	35.00
Raspberry Pi Case	7.89
SD Card	4.99
Capacitor Pack	7.00
Cables	24.66
Power Logger	69.99
Total	458.53

Budget on Track

- ▶ Current design is \$348.47 under our estimated budget.

Estimated Budget

Components	Price(\$)
Purchased Generator	500
Raspberry pie	35
Display	200
Capacitors	30
Cables	42
Total Budget	807

Summary

- ▶ Materials needed have been defined.
- ▶ Programming has begun.
- ▶ Finalized Budget.
- ▶ Waiting on materials to be purchased to finalize programming.
- ▶ Waiting on materials to be purchased for generator and display test.