Atmospheric Water Generator Retrofit Kit

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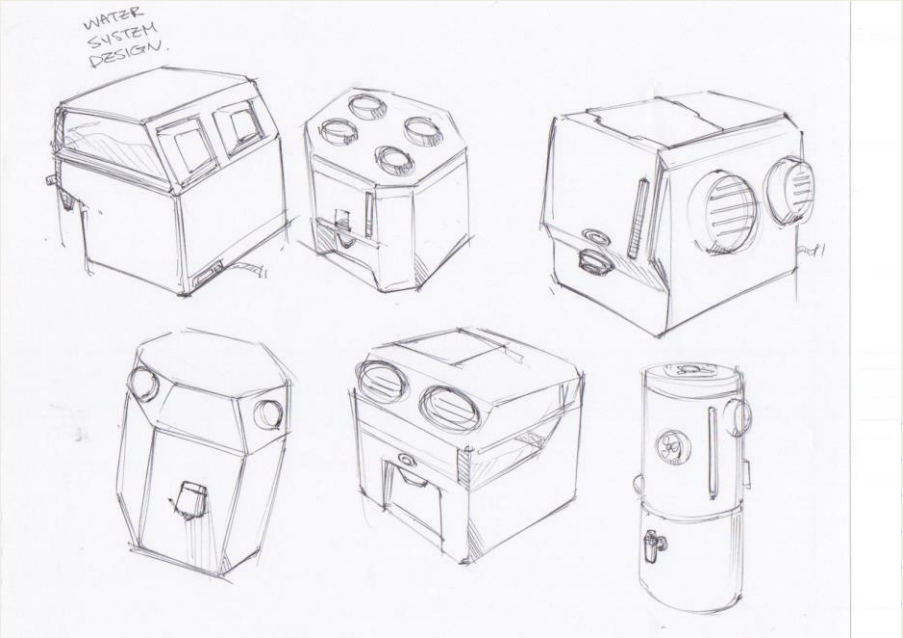
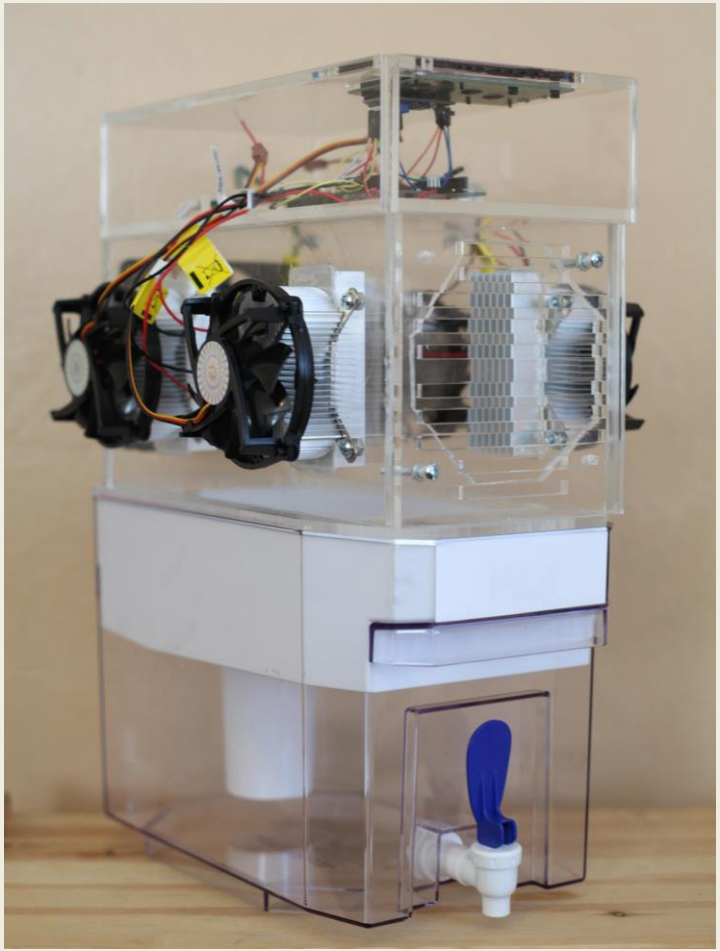
Introduction

- Problem
- Solution
- Objectives and Goal
- Projected Consumer/Audience

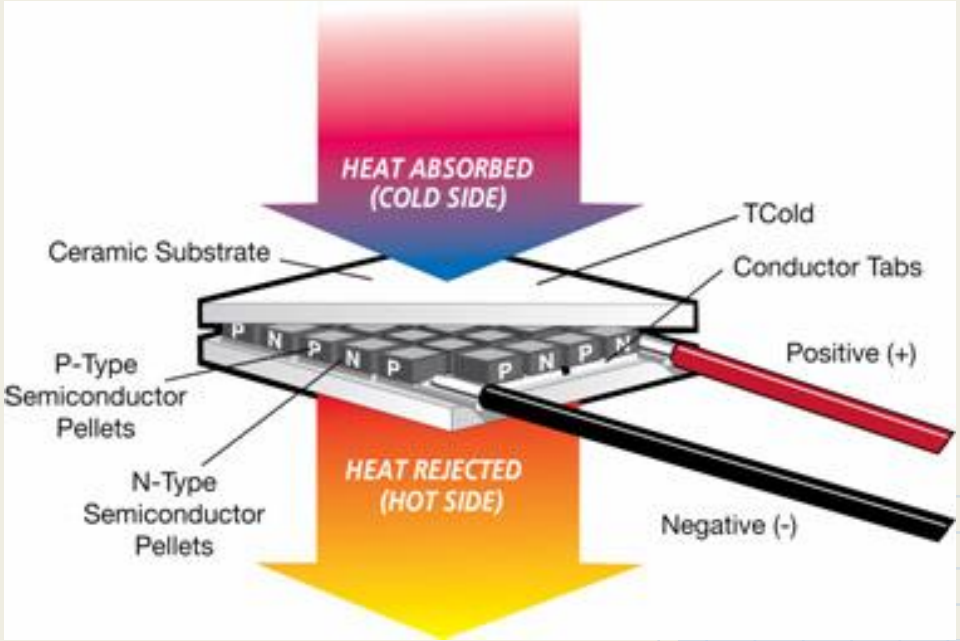


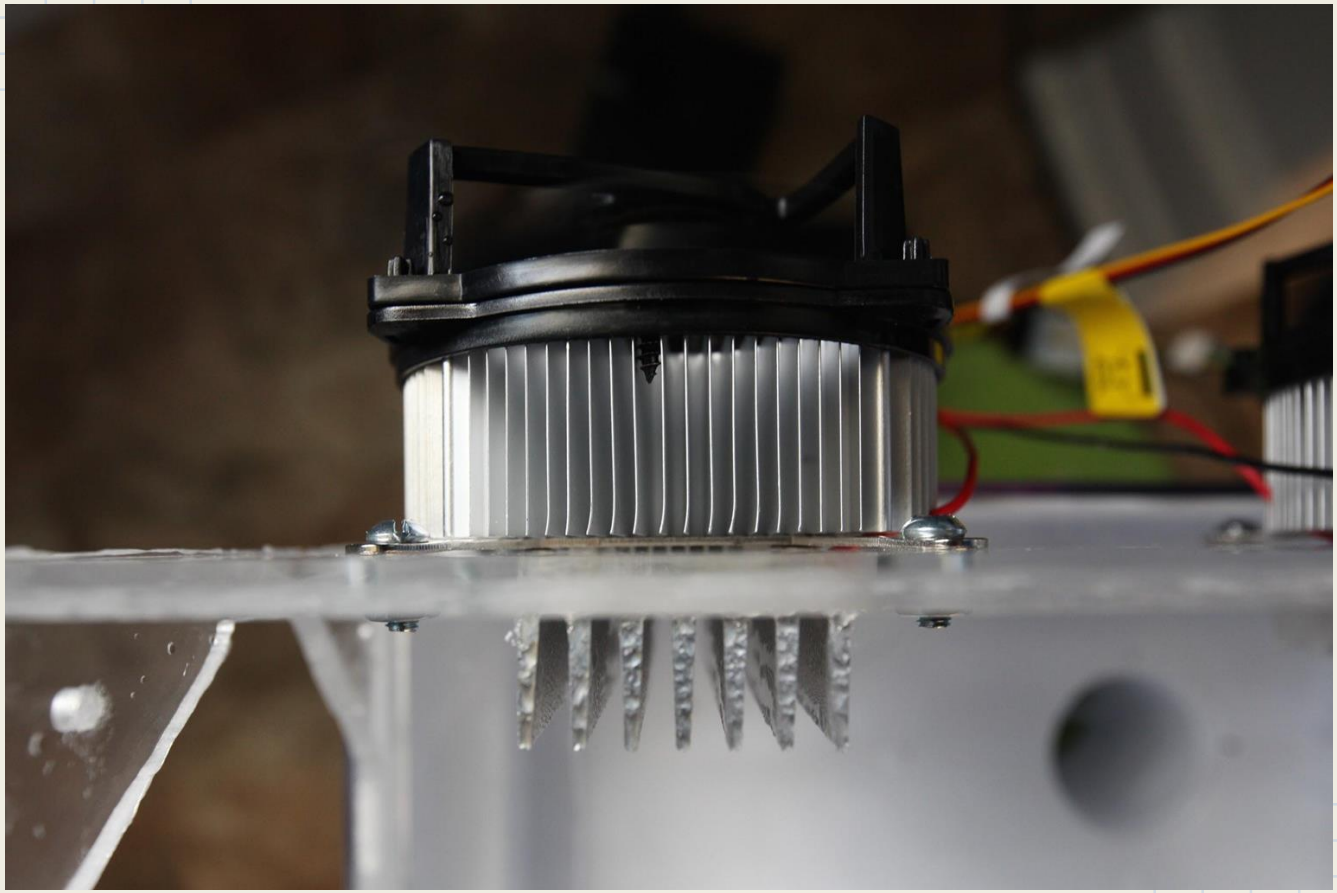


Dew Point

Peltier Tiles

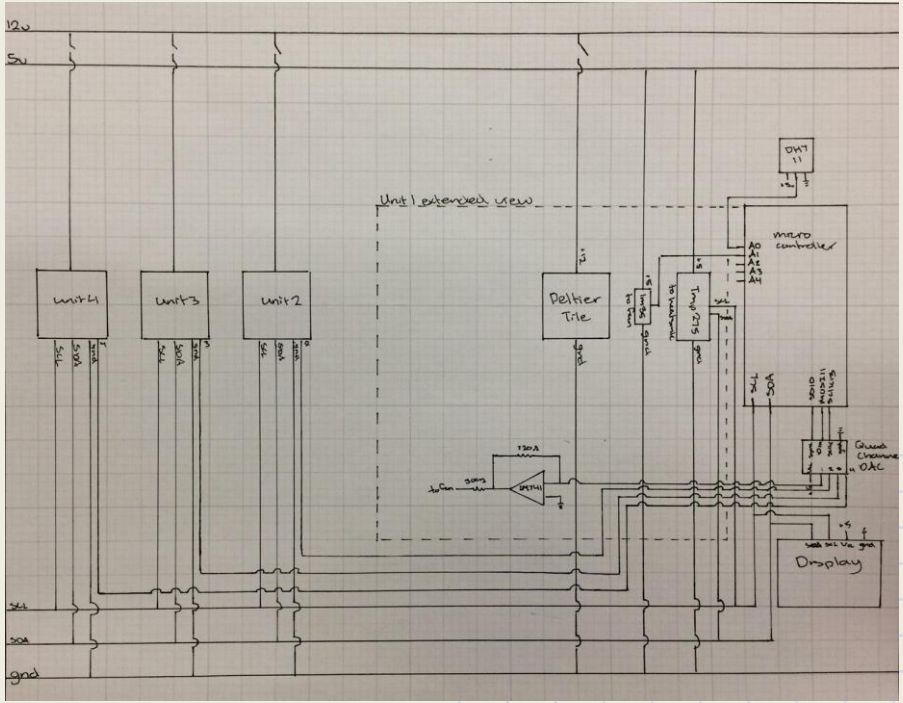
- Peltier Effect
- Compact
- How we use it



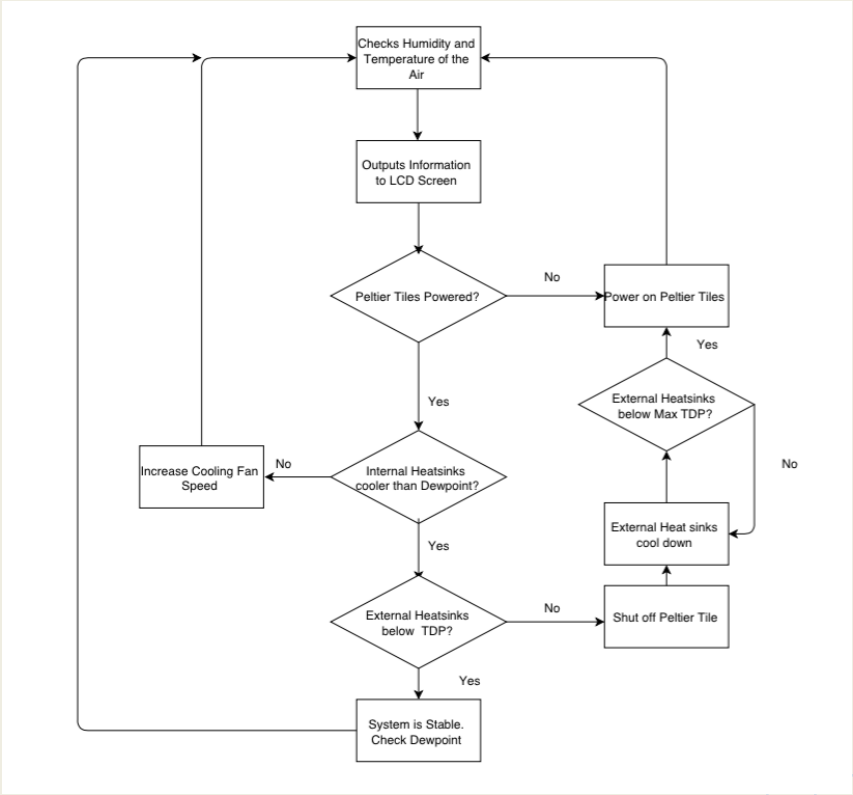


Hardware

- DHT11 Temperature and Humidity sensor
- LM35 Temperature sensor
- TMP275 Temperature sensor
- DAC0804S085 Quad Channel DAC
- LCD Display
- Relays
- LM741 Opamp
- Arduino Uno

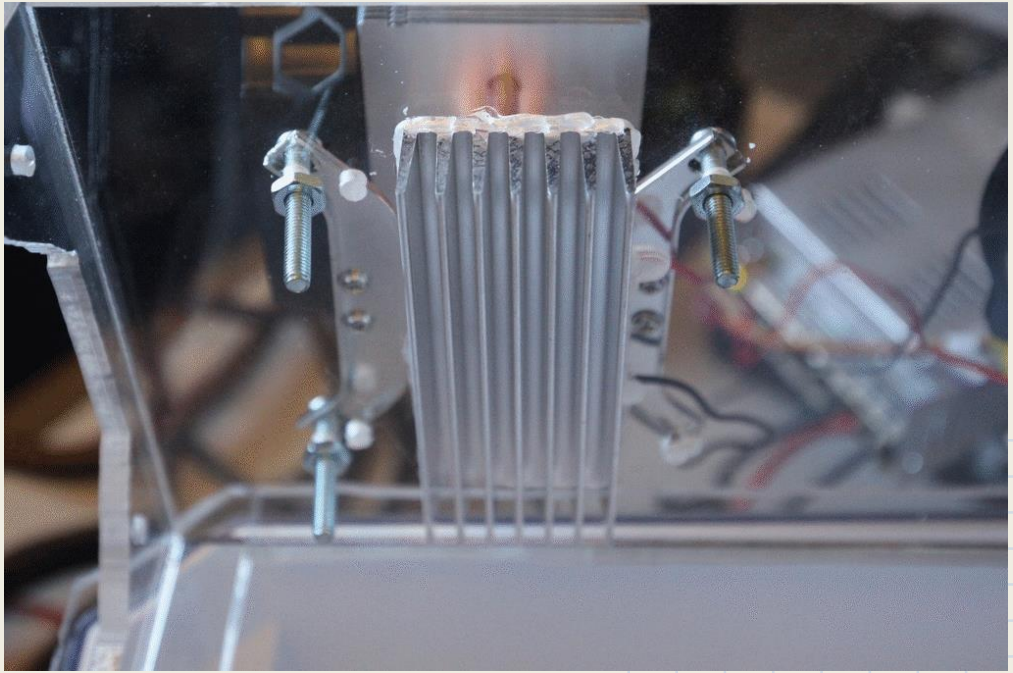


Software


Checks Humidity and Temperature of the Air
Outputs Information to LCD Screen
Peltier Tiles Powered?
No
Power on Peltier Tiles
Yes
External Heatsinks below Max TDP?
No
Yes
Internal Heatsinks cooler than Dewpoint?
No
Increase Cooling Fan Speed
External Heat sinks cool down
Yes
External Heatsinks below TDP?
No
Shut off Peltier Tile
Yes
System is Stable. Check Dewpoint

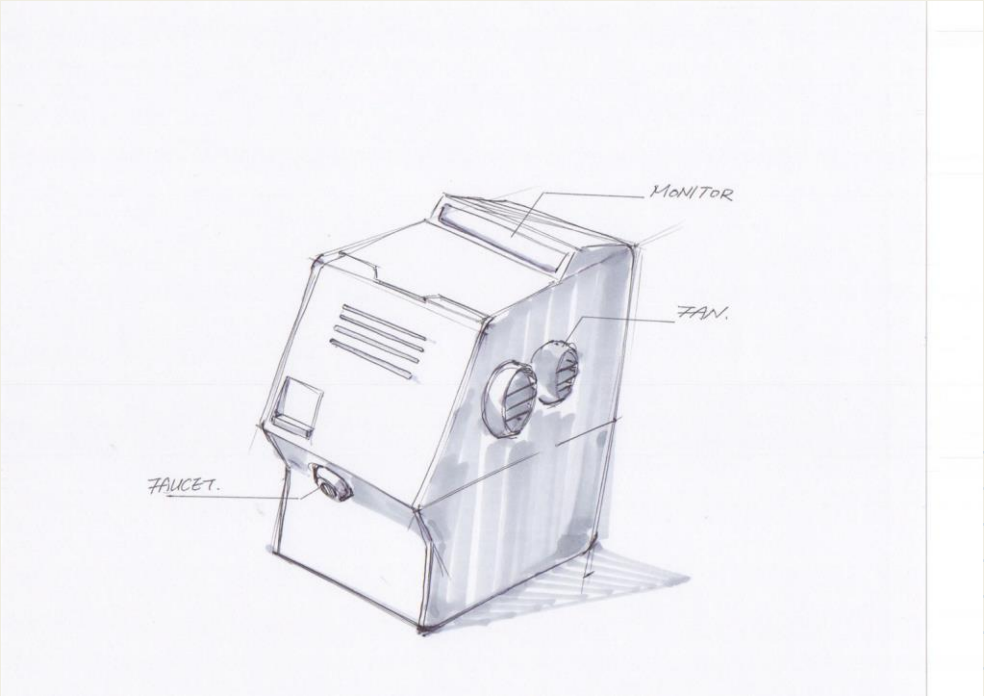
Results/Demo

- 1.008 L / Day
  - .7 mL / 10 min
  - 75% Humidity



Challenges/Improvements

- Heatsinks
- Aesthetics



Thank You