Project Name: Pill Dispenser
Sponsor: Quality of Life Plus (QL+)
Created by: Team Pharmhouse

Team Pharmhouse

Advisors:
Annemarie Orr, QL+
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Project Overview

Team Pharmhouse designed and manufactured a pill dispenser that is able to distribute a desired amount of medication pills to their respective days in both weekly and monthly pill organizers, including am and pm weekly containers. The dispenser also is able to be compatible with pills of a variety of shapes and sizes, as it is common for users to take multiple unique pills per day. The design will accommodate users with impairments such as arthritis, color-blindness, and various upper extremity issues. Simple, intuative operations in conjunction with durability make this device the perfect solution. Lighter and smaller than similar products make transportation even easier.

Team Members

Chandler Meziere
Team Leader

Jeff Smith
Systems Engineer

Sean Myers
Manufacturing Engineer

Tony Nguyen
Software Engineer

David-Paul Sabado
Design Engineer

Jacob Martinez
Software Engineer

Naser Alfaresy
Procurement Engineer

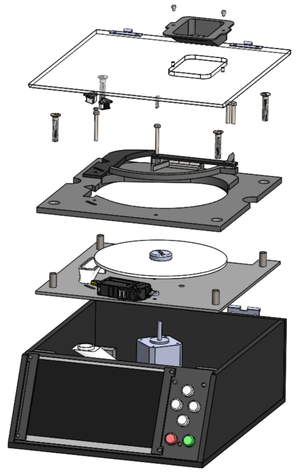
Musaed Albaghdadi
Systems Engineer

Micah Spence
Quality Engineer

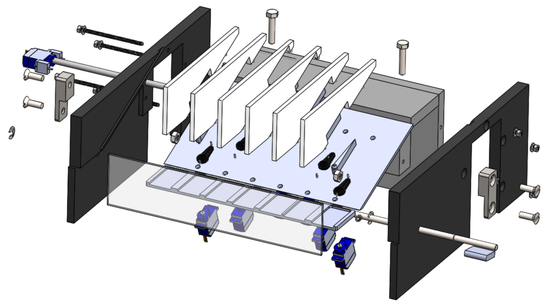
Jennifer Thai
Software Engineer

Manufactured Product

CAD Design



Counter Subsytem - Exploded View



Separator Subsytem - Exploded View

Complete System - Collapsed View

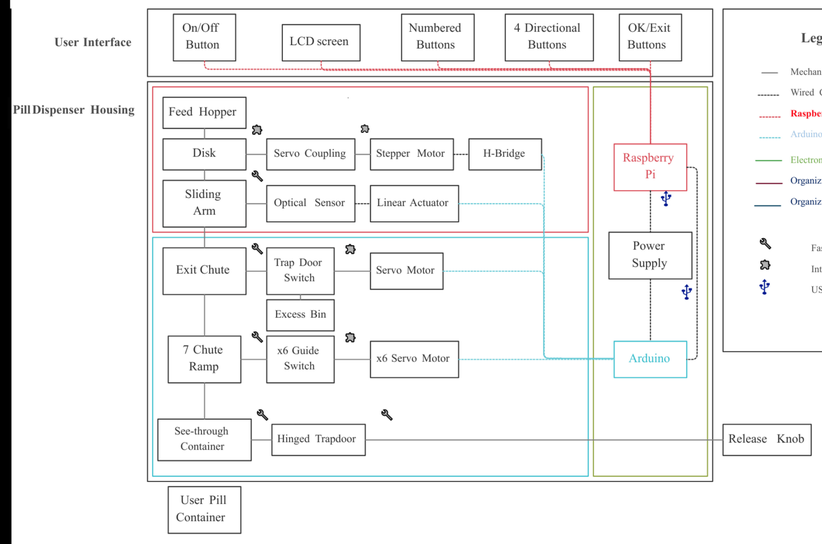
Specifications

Size Envelope: 11.9" x 9.8" x 8.9"
Power Required: 12V 60Hz AC
Weight: 12.8 lbs.
Transport Method: (2) 2" Nylon Straps

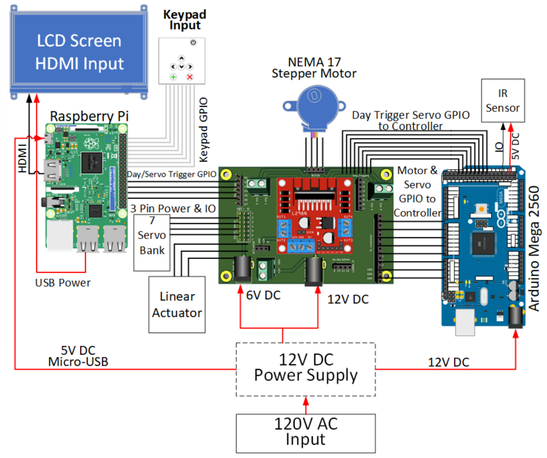
Main Components:
- FDA Approved Food-Safe Materials
- Arduino MEGA
- Raspberrry Pi 3B+
- IR Break Beam Sensors
- Micro Precision Servo Actuator
- Nema 17 Stepper Motor
- SG90 Servo Motors
- 7" LCD Screen
- 12V Power Supply

Project Budget: $5000
Costs Spent: $1214
Excess Budget: $3786

System Level Diagram



Electronic Connections Diagram



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