

EE/CPRE/SE 491: sddec22-11

Mini Retrofit Blind Controller

Weekly Report #8

Start date: March 28 - April 3, 2022

Client: ECPE

Faculty Advisor: Lee Harker

Team Members:

- Daniel Andrews - TEAM LEAD
- Andrew Deick - Front-End Software LEAD
- Jacob Nett - Back-End Software LEAD
- Hieu Nguyen - Communication LEAD
- Logan Shada - Design editor, Hardware director, Team overlap connection
- Caleb Townsend Hardware Lead and Maintenance Lead

Weekly Meeting time (decided):

- Team Meeting:
 - Monday: 9:55 AM - 10:50 AM
 - Friday: 9:55 Am - 10:50 AM
- Individual Hardware and Software meeting:
 - Thursday: 2:10 PM - 3:10 PM
- Advisor Meeting: (bi-weekly)
 - Monday: 9:55 AM - 10:50 AM

Weekly Accomplishments:

- We met with our TA (Teaching Assistant), Darrshen P Balachanthiran, on Monday, March 28th. We discussed how the project is going. He said we could add some more detail on our weekly reports. He also mentioned how this semester we need to know what we plan to do fully, and next semester we can implement. We have already begun implementation and some basic testing.
- Meeting with Lee on Friday, April 1st.
 - Notes
 - Data sheets - heat circumstances (what is the dye of a circuit) more power, more heat, every circuit develops heat. For 1 watt, 40 C? Think about it. Still a heat synch. Ambient vs forced air rating. Get far into the data sheet. 7805 voltage regulator (1.5 and 1, to 3, to 5 amps)
 - Mini Arduino
 - Printed circuit board layout, access to the SW. PCB (why is it thick? KICAD, Eagle, multi sim and multi board - schematic of circuit (the

best one is the one you like) **accuracy and completeness.** //
ashpark. //

- Naming!! PCB. use a specific name for your file!! Migrate op amp circuit / blind controller number, author, group 11.
- Reference designators.
- Power supply sources come together.
- Hoping for something that portrays the pinnacle of our engineering career. VS get something done and get out quickly.
- It is about the process not the project necessary - make it so it is able to be duplicated a thousand times - (circuit boards are duplicated)
- 3d printing is love/hate.
- You can get boxes in 1000 different ways. / company makes the box, find the data sheet or maybe even the 3d file.
- Bud industries - pn series. (boxes)
- Esp family of processors.
- Awards banquet last night.
- Best way to learn is to do it. Summary: don't be scared to learn and do things, break it down into small achievable steps and take it one step at a time.
- Udb (standard internet protocol) (wb sockets) over.

Pending Issues:

- Learning how to making a PC board
- Figuring out and trying to make the microcontroller less heated up.

Upcoming Tasks:

- Consider buying arduino nano 33 IoT (In ordering process)

Ordering

1 - 8mm

https://www.freshwatersystems.com/products/8mm-od-ldpe-polyethylene-tubing?variant=13266990858283&c1=GAW_SE_NW&source=PLA_USA_SS&cr2=shopping_-_nw_-_smart&kw=13266990858283&cr5=&cr7=c&utm_source=PLA_USA_SS&utm_medium=cpc&utm_term=13266990858283&qclid=CjwKCAjwloCSBhAeEiW3hVo_b8pumYHa-m7j2dgDIDRQ3OhsxNLL3aCfsLMYWX48Xr7OxGR-ZlrwhoCT2MQAvD_BwE

2 - 3/8th

https://www.freshwatersystems.com/products/3-8-od-ldpe-polyethylene-tubing?variant=13249511882795&c1=GAW_SE_NW&source=PLA_USA_SS&cr2=shopping_-_nw_-_smart&kw=13249511882795&cr5=&cr7=c&utm_source=PLA_USA_SS&utm_medium=cpc&utm_term=13249511882795&qclid=CjwKCAjwuYWSBhByEiWAKd_n_qNdkDLdPxVSWThtDeTw5RzEXiK-sR8HIN3voK9t8NaDAJNeKg47thoCZCMQAvD_BwE

Individual Accomplishments:

Team Member	Contribution: description of what you did	Weekly hour	Total hour
Daniel Andrews	<ul style="list-style-type: none">● Research about possible server client patterns● Look into ways to control arduino● Research into transferring UPD files	5	41
Andrews Deick	<ul style="list-style-type: none">● Research Authentication and investigate widget we will be using.	3	45
Jacob Nett	<ul style="list-style-type: none">● Motor controller test code using Arduino● Decide between wireless options for server to hardware.	5	46
Hieu Nguyen	<ul style="list-style-type: none">● Connecting/soldering components● Testing microcontroller/ arduino● Complete ordering part	5	36
Logan Shada	<ul style="list-style-type: none">● Connecting Components● Determining microcontroller connection● Looking into PCB design websites	5	41
Caleb Townsend	<ul style="list-style-type: none">● Putting together components● Tubing part for connection	5	30