

P14045 Week 5 Shared Visions & Individual Three Week Plans

4 Main Questions:

IV.A) What do we need to do? (GROUP)

Sorted in order by priority.

1. Complete Battery Box- *Materials were ordered after quotes were too high, even with addition to budget from money left over from last years team.*
 - a. Holds components
 - b. Mounted on stander
 - i. *waiting for quotes*
 - ii. *switched to aluminum*
2. Complete Tray System- *Materials were cut but they were not welded in time for the presentation*
 - a. Movement
 - i. *test for tray system*
3. Wheel System
 - a. Drive straight
 - b. Figure out power supply.
4. All Electrical Modules working and ready to be integrated together
 - a. PWM and QEI for wheels - PWM module was working. QEI module was started but was experiencing some intermittent failures.
 - b. ADC for speed control - Code was working prototype of physical circuit not built.
 - c. UART for communication - Not Touched
 - d. Bluetooth for remote
 - e. I2C and touchscreen
5. Tests Completed
 - a. Can it be Painted
 - b. Usage Test
 - c. Budget Test
6. Working skeleton of Remote - *Work was spent on other areas of electronics on the stander*
 - a. Communication between computers
7. Preliminary Instructables build documentation - *Waiting on brackets to*

complete mock up

a. Tray System Build Complete

8. Up to date documentation

I.) What did we say we were going to do?

Group Plan:

1. Order Parts
2. Contact R82
3. Contact Locking Hinge Company
4. Quote for Battery box
5. Sleep

JD :

1. Start Basic Programming examples

Alex:

1. Attempt to contact R82 again, probably by phone.
2. learn how to use the accelerometer
3. Help tie up loose ends with adapters, tray, packaging.
4. Help group with completing documentation for gate review

MV:

1. Work closely with JR in determining the best approach for RC/Bluetooth Remote System.
2. Have a solid plan for the establishment of the touchscreen control unit such that a testing approach is ready to go by the time parts are ordered.
3. Review code composer & learn how to use Tivaware effectively.

GR:

1. Contact Locking Hinge Company

EC:

1. Order parts
 2. Meet with Unifab about outsourcing the box
 3. scrounge up materials
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II.) What did we actually did do?

Group: JD/EM: Worked on Order Parts

GR:

1. Contacted Locking Hinge Company
2. Worked on Battery Box CAD Build

Alex:

1. Help tie up loose ends with adapters, tray, packaging.
2. Help group with completing documentation for gate review
3. Contacted R82

JD:

1. Revamped BOM
2. Prepared IDE

MV:

1. Agreed to use the WT12 Bluetooth module breakout board
2. Reviewed TI documentation to use coding software effectively

EC:

1. Meet with unifab and obtain a quote for the box
 2. obtained industrial grade velcro
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III.) What did we learn?

JD:

1. CCS 5 only runs kind of well on my laptop

Alex:

1. There are still some loose ends to tie up

Greg:

1. Asking will get a reduction in the cost
2. A more detail BOM is needed when ordering

EC:

1. Engineers alone should not make budget decisions - should consult with benefactors before ruling options out due to cost

MV:

1. How to use Tivaware
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IV.B) What do we need to do? - **(INDIVIDUAL)**

Alex:

1. Assist with redesign/assembly of battery box
2. Finish tray assembly after planning completes

JD:

1. Create Programming Roadmap
2. All modules at basic level of operation
 - a. PWM and QEI for wheels
 - b. ADC for speed control
 - c. UART for communication
 - d. Bluetooth for remote
 - e. I2C and touchscreen

MV:

1. Communicate with JR in order to cooperate in the creation and development of programming roadmap. (Make sure to have realistic timelines that we follow)
2. Organize team documents.
3. Ask Dr. Bowman if we could borrow his proto board for IC Chip
4. Start cleaning code from last year's group to be used with new environment.

GR:

1. Assist in finishing Battery Box
 - a. Finish CAD mock up of Battery Box
 - b. discuss with machine shop/modify design as necessary
 - c. get quote to build and send out
2. Create plan for Tray Assembly and Document
 - a. Clarify and plan on ordering Locking Hinge
 - b. Negotiate money for locking hinge
3. Ensure group has necessary documentation complete
4. Begin Instructables Documentation

EC:

1. Order essential parts
2. propose outsourcing box to benefactors
 - a. meet with Unifab if approved to discuss order
 - b. acquire materials and plan for in house build