

Date: 10/13/2014

Group Number and Name	DEC14-08 / PUMA ROBOT
Client/Advisor	Dr. Greg R. Luecke
Attendees/Role	Alex Grieve / Leader Nhat Pham / Communication Matthew Bogenschultz / Webmaster Zeyu Zhang / Key-idea-keeper Seth Taylor / Power Circuits

Past week accomplishments

What was done, who did it, and when it was done

A: Alex and Seth ordered a power supply for the PUMA DC motors.
B: Alex, Seth, and Zeyu worked on compiling a complete parts list.
C: Nhat and Matt designed a opto-isolator circuit to be used with status indicator LEDs.
D: Alex, Seth, and Zeyu worked out the logic for when each status indicator LED should be illuminated.
E: The team discovered that the motors create a lot of humming/noise when being used with the H-bridge. Seth designed a LC filter to eliminate the noise.

Plan for coming week

What to do, who, and when should it be done

A: Test, tune, and finalize the PWM and opto-isolator circuits.
B: Order PWM and H-bridge PCBs.

C: Design the LED status indicator PCB. Need to select opto-isolator IC, LEDs, and logic gate ICs.

D: Start creating schematics of our complete design.

Pending Issues

A: The only solutions to motor humming we have seen are filters that eliminate PWM control.

B: Finalizing the PWM, H-bridge, and opto-isolator circuits remain crucial to getting PCBs manufactured.

Individual hourly Contributions

<u>NAME</u>	<u>Hours this week</u>	<u>HOURS Cumulative</u>
Matt Bogenschultz	9	66
Nhat Pham	21	73
Alex Grieve	12	75
Zeyu Zhang	9	47
Seth Taylor	12	71

Comments and extended discussions:

We don't know of a way to eliminate humming without sacrificing PWM control of the motor.

We need to finalize our circuits, because the lead times on PCBs are long. Our test H-bridge

PCB took three weeks to be manufactured.