

Week 3 Lab Milestone

Due Tuesday, March 28

1. Process in OS that drives:
 - a. 2 foot per side square
 - b. 2 foot per side triangle
 - c. 2 foot diameter circle
 - d. These are approximate. The size should be your goal. It is not necessary to be precise. This is a timing issue that needs to be tweaked.
 - e. Hint: turn all other processes off. Or maybe just leave one or two on. Perhaps even considering writing a stand-alone program that does just this.
2. RAM: 8000 to FFFF
 - a. If using MiniIDE : org just like you did last quarter
 - b. Don't un-tether your robot. Rather, walk around with it.
3. Reminders:
 - a. Periodically measure your batteries with a voltage meter in the lab.
 - b. Bad battery: < 4.25
 - c. Remember to unplug batteries when the bot is sleeping

Robot Motors

The motor control register is mapped to address 0x7000.

It is output (write) only, so it is not possible to read back from it. No matter what you do, you will always see back FF, even though there is a number sitting there.

LDAA 0x7000 does not work!

LDAA #0xf0

STAA #0x7000 ; Creating a label for 0x7000 might be helpful

L293D

Gives digital control to devices that have high current demands. The controller does not output a whole lot of current.

Motor 4	Motor 3	Motor 2	Motor 1	Motor 4	Motor 3	Motor 2	Motor 1
10,12	7,9	4,6	1,3				
Motor Enable (Chip Select) = On / Off				Motor Direction			

Come up with a standard. Ex: red wire in lower number for each pair and black wire in higher number.