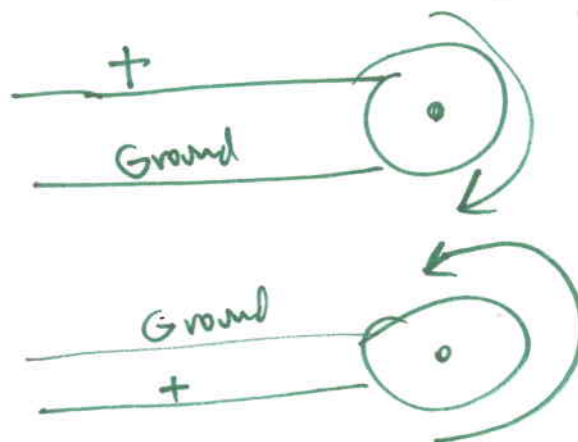
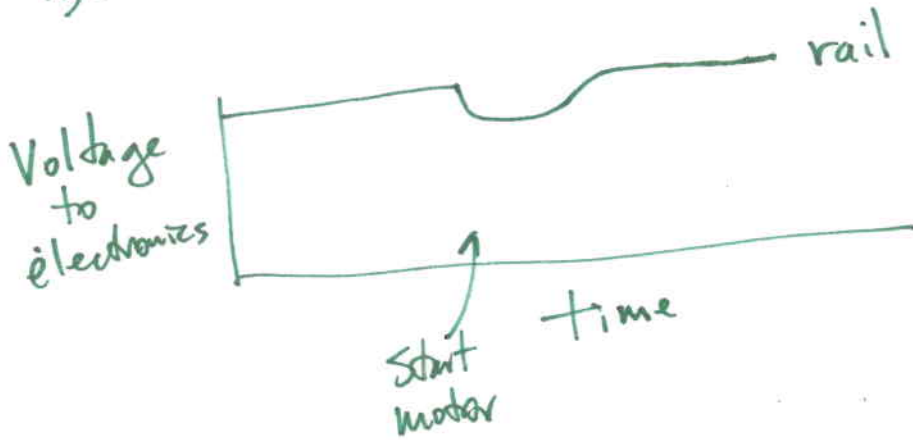
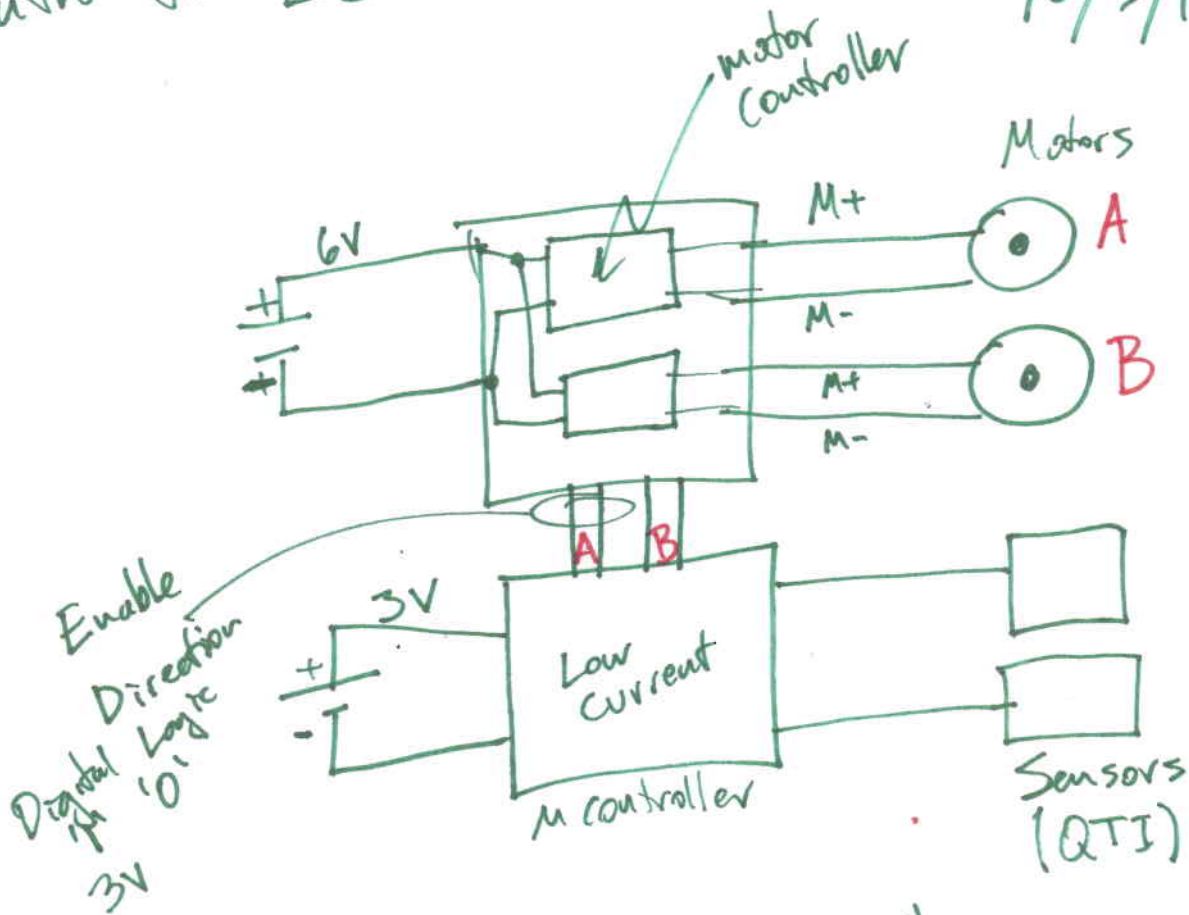


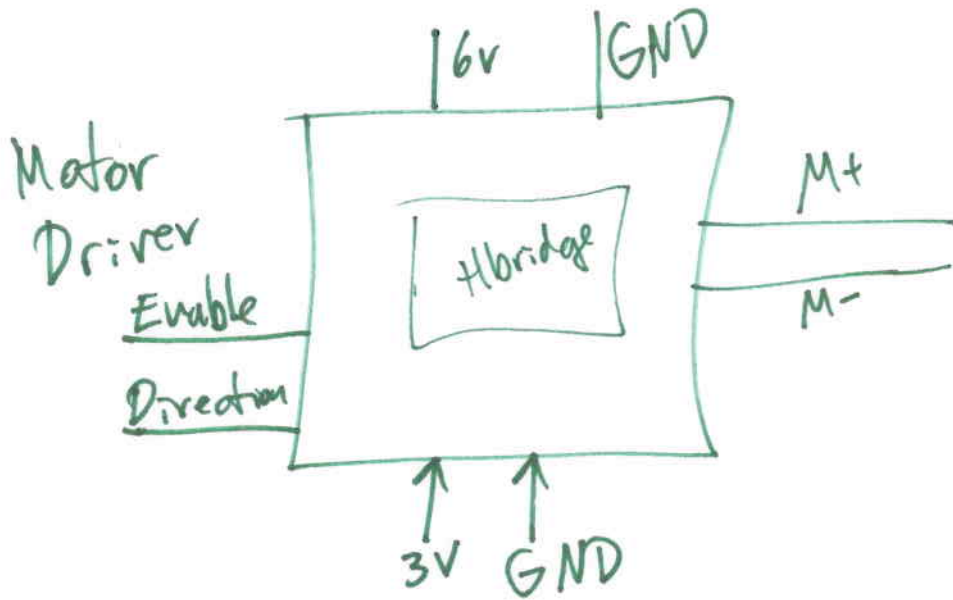
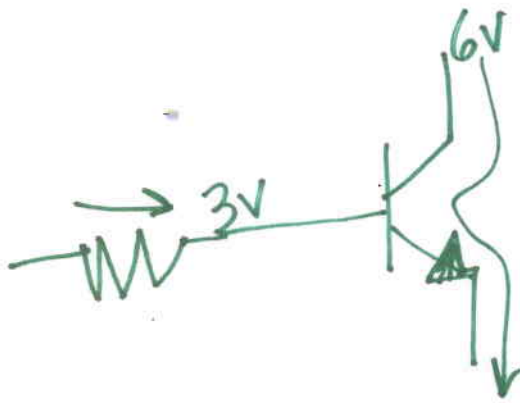
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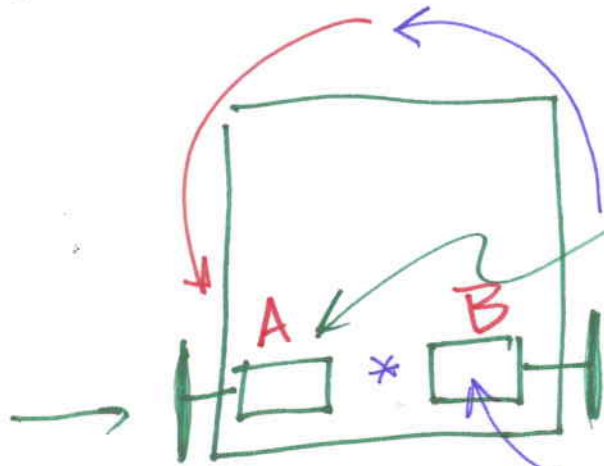


(2)



| Enable | Direction | Motor |
|--------|-----------|---------|
| 0 | 0 | Nothing |
| 0 | 1 | Nothing |
| 1 | 0 | ↻ |
| 1 | 1 | ↻ |

Used Digital Control and Logic to drive an Analog device



Option 1
 A Enable = 1
 Direction = 0

Pivot CCW on right wheel

Option 2
 B Enable = 1
 Direction = 0

Pivot CCW on left wheel

Option 3

A enable = 1
 A Direction = 0

Spin CCW in place

B enable = 1
 B direction = 0

| Aenable | Adirection | Benable | Bdirection | Vehicle motion |
|---------|------------|---------|------------|----------------|
| 0 | 0 | 0 | 0 | no motion |
| 0 | 0 | 0 | 1 | no motion |
| 0 | 0 | 1 | 1 | |
| 0 | 1 | 0 | 0 | no motion |
| 0 | 1 | 0 | 1 | no motion |
| 0 | 1 | 1 | 1 | |
| 1 | 0 | 0 | 0 | |
| 1 | 0 | 0 | 1 | |
| 1 | 0 | 1 | 1 | |
| 1 | 1 | 0 | 0 | |
| 1 | 1 | 0 | 1 | |
| 1 | 1 | 1 | 1 | |

Lab 2 Objectives

- 1) Learn how to look up datasheets on the web, then how to read them.
- 2) Inventory your parts.
- 3) Learn how the H-bridge and motors work.
- 4) Test your H-bridge and motors.
- 5) Build your vehicle, and verify it will run straight using only a breadboard.

Lab 2 Help

- 1) The robotic vehicle is sold by Digilent, Inc. (www.digilentinc.com)
- 2) It has DC motors and gears, NOT a servo motor.
- 3) The kit is discontinued, but information is still available online.
- 4) You will need the basic assembly instructions. You will work with the Sakura board later.

Lab 2 – motor driver (H-bridge) – PmodHB5

<- to computer control

<- to computer power



to motor ->

Motor power

