



**RoboJackets**  
FIRST - IGVC - BATTLEBOTS - ROBOCUP

2009 TE Sessions Supported by

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The George W. Woodruff  
School of Mechanical Engineering

**Georgia**  
**Tech** College of  
Computing

# Eagle CAD Tutorial

[www.robojackets.org](http://www.robojackets.org)



# LED Flasher

alternatively flashes two LEDs

## What I Did

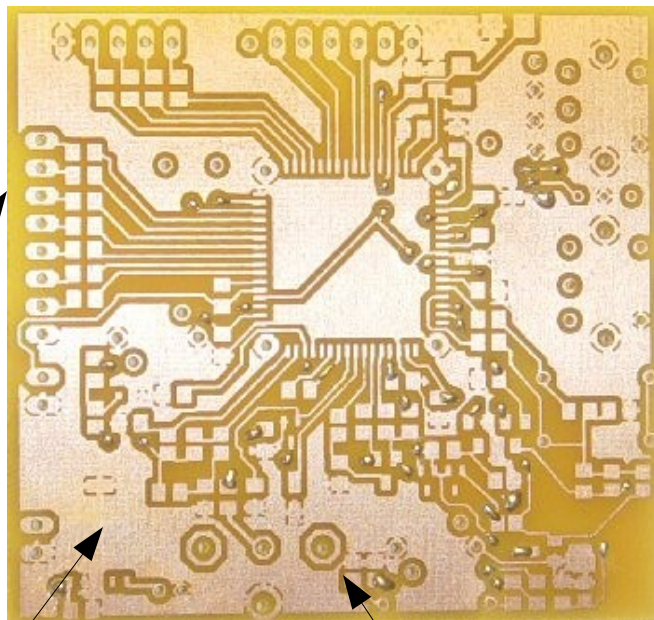
- Drew schematic by hand
- Selected parts
- Prototyped circuit on breadboard

## What I Want

- Make a permanent version of the circuit



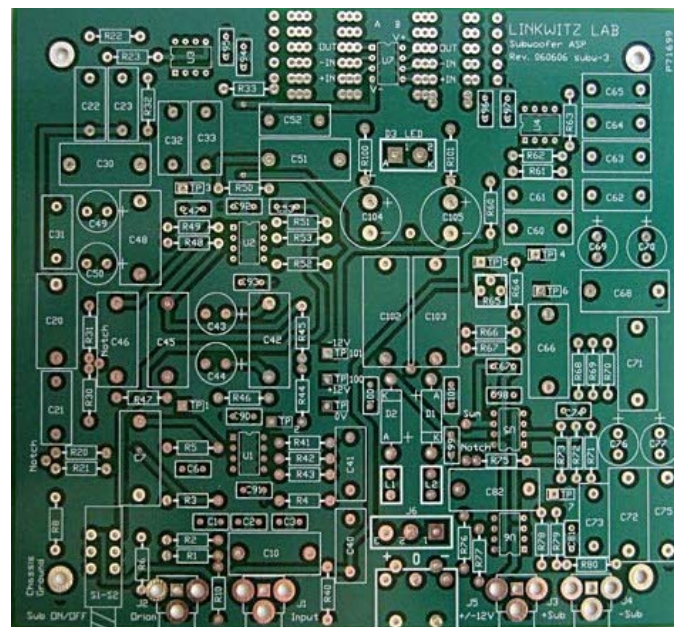
# What is a Printed Circuit Board



Board  
(yellow)

Plating  
(light yellow)  
wires and pads

Holes  
pads, vias, and  
mounting

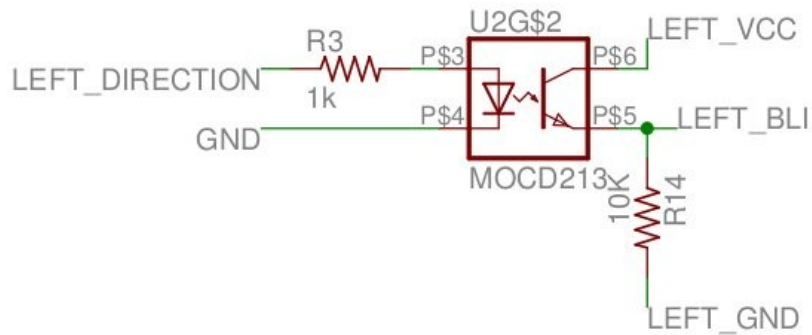


Silkscreen  
(white)  
for writing notes

Solder Mask  
(green)  
keeps solder on pads

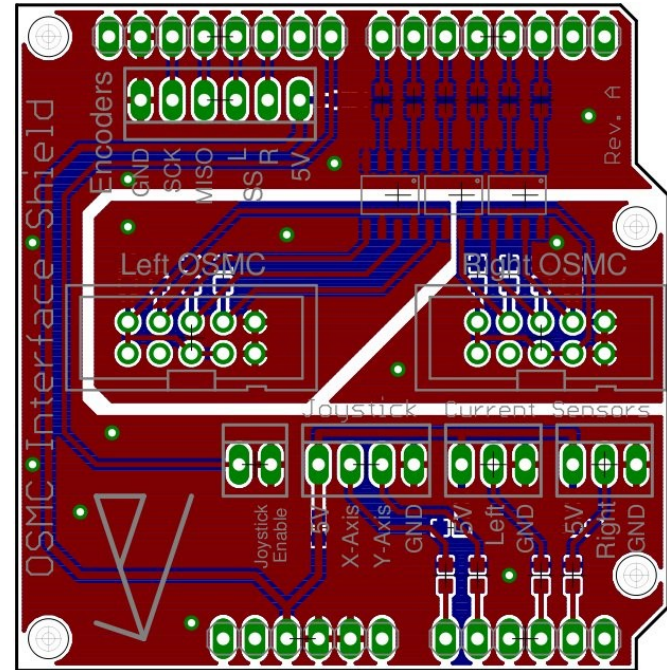


# Designing a PCB



## Schematic

Symbolic representation of circuit

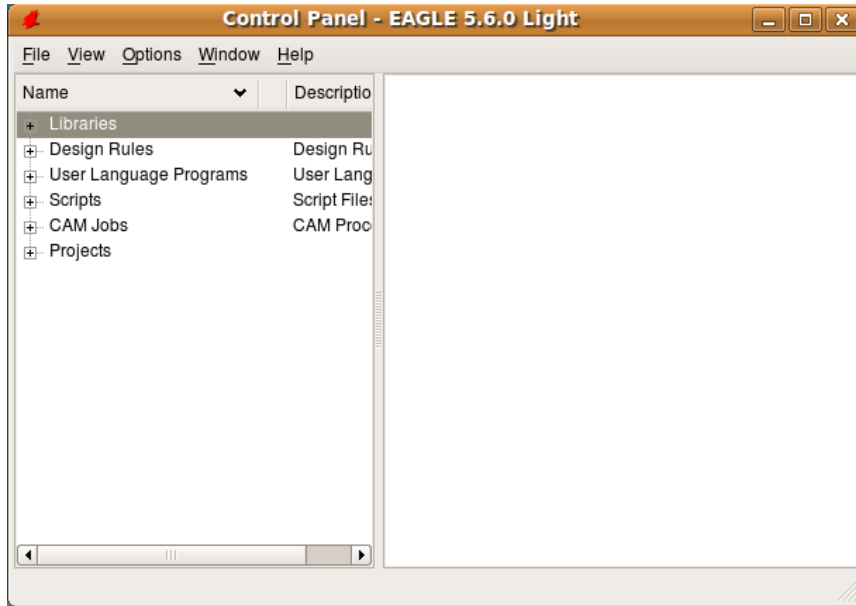


## Layout

Physical representation of circuit



# What is Eagle



- Schematic capture and board layout program
- Hobbyist's standard
- Freeware version – has a few limitations

alternatives: KiCAD, gEDA, PCB123, utiliboard, others