

## Important Links

<http://colvins.ca/?p=86>

<http://www.instructables.com/id/Arduino-stoplight-web-server/>

## Milestones:

-Assemble & Test Red LED Array (Blink on/off using transistor) **DONE**

-Assemble & Test Green LED Array (Blink on/off using transistor)

-Assemble & Test Yellow LED Array (Blink on/off using transistor)

## **DONE**

-do mechanical design **DONE**

-get stoplight machined by kyle

-how to get ethernet connection (use 5V power if possible)

-make web page for server

-get schematic written down **DONE**

-complete a formal schematic

## Ideas for improvements:

-music controlled mode

-motion detector detector controlled mode

6/26

done today:

finished starter project

started major project

finished designs for stoplight

to do tomorrow:

need to get light bulbs

need to find IP address

need to make video of starter project

[http://www.bulbtown.com/T5\\_5\\_6V\\_28V\\_WHITE\\_LED\\_MINIATURE\\_BULB\\_E12\\_BASE\\_p/18035.htm](http://www.bulbtown.com/T5_5_6V_28V_WHITE_LED_MINIATURE_BULB_E12_BASE_p/18035.htm)

find ideas for stoplight over server

[http://www.thorlabs.com/newgrouppage9.cfm?objectGroup\\_ID=2853](http://www.thorlabs.com/newgrouppage9.cfm?objectGroup_ID=2853)

6/27

done today:

made video for starter project

light bulbs won't be bought will use LED's

design for stoplight finished

to do tomorrow:  
get design pdf or print out and make into pdf  
start building breadboard for LED's

6/28

done today:  
started building breadboards for LED's  
to do tomorrow:  
keep building breadboards for LED's

6/29

done today:  
completed first LED board  
found links for ethernet bridge and power supply  
<http://www.amazon.com/Cisco-Linksys-WET54G-Wireless-G-Ethernet-Bridge/dp/B00008WMBT>  
<http://www.dhgate.com/5v-ac-power-supply-for-wet54g-linksys-ethernet/p-ff8080812d0d5b9a012d0d6276d73894.html>

to do monday:  
start on LED board for yellow LED's  
continue working on schematic on eagle

7/2

done today:  
made yellow LED array and cut it out  
cut out red LED array  
to do tomorrow:  
start on green LED array  
continue on schematic

7/3

done today:  
nothing, worked on green LED board but they turned out not to be bright enough  
to do tomorrow:  
do work on getting new LED's

7/5

done today:  
desoldered green LED board  
did a lot of research

to do tomorrow:  
continue research  
find out how to do webpage for project

7/6

<http://www.newegg.com/Product/Product.aspx?Item=N82E16833704052&SortField=0&SummaryType=0&PageSize=10&SelectedRating=-1&VideoOnlyMark=False&IsFeedbackTab=true#scrollFullInfo>

cheapest ethernet bridge with best reviews

done today:

found an ethernet bridge and did extensive research on the programming for the stoplight

to do monday:

need to start on green LED board and get a video of it working

get all three LED boards to work on newly written code

find pins to attach to the ribbon cables

7/9

**goals for the day:**

1 get ribbon cable soldered properly so they can easily attach to the arduino

2 cut holes for lights in pvc pipe

**goals accomplished:**

goal 1, goal 2: got one hole cut in the pvc

got green LED's

**plan for tomorrow:**

start to work on green LED array board

continue cutting holes in pvc

7/10

**goals for the day:**

1 make light array for green LED's

2 get all 3 lights working at the same time

3 get video of all 3 lights working

**goals accomplished**

goal 1 was only completed

also got ethernet code done

**plan for tomorrow:**

continue on pvc and get all 3 LED arrays working at the same time

7/11

**goals for the day:**

- 1 get all 3 lights working at the same time
- 2 get video of all 3 lights working at the same time
- 3 continue cutting holes in pvc

**Goals completed:**

got 2 lights working at the same time  
cut another hole into the pvc and finished the first one

**Lessons learned:**

pvc can get really messy when you cut it

**plan for tomorrow:**

continue cutting holes in pvc  
cement light holes to the holes in the pvc  
7/12

**goals for the day:**

- 1 get light holes cemented to pvc
- 2 cut final hole in pvc

**goals completed:**

1 and 2

**plan for tomorrow:**

get all 3 lights working at the same time

7/13

**goals for the day:**

- 1 get all 3 lights working at the same time
- 2 check over stopduino code

**goals completed:**

lights still need headers so they won't work properly yet  
stopduino code is complete and finally downloading and compiling properly

**goals for monday:**

get the arduino ethernet working over a wireless connection  
maybe start painting the stoplight

7/16

**goals for the day:**

- 1 get all lights put together
- 2 get web server

**goals completed:**

2 local server completed

**goals for tomorrow:**

get all lights working

7/17

**goals for the day:**

- 1 get all lights working together
- 2 get video of all lights
- 3 get code uploaded onto board and get board running over local host server

**goals completed:**

1, 2, 3 is up but not tested yet

**goals completed:**

get board running over server  
make blogpost

7/18

**goals for the day:**

- 1 make blogpost
- 2 get board running over server
- 3 get lights blinking over web server

**goals completed:**

1, 2, 3

the board is running over the server and the lights are being controlled from a router to a linksys to the schools wifi

**goals for tomorrow:**

get the board running over a server but with little to no wires

7/19

**goals for the day:**

- 1 get the arduino to transmit signals to the lights over wifi with the minimum amount of wires needed

**goals completed:**

the arduino is unable to run over wireless but when plugged straight into the router the board runs fine. It also needs to be directly plugged into the computer to run

**Goals for tomorrow:**

get board to run wirelessly over the internet

7/20

**goals for the day:**

- 1 get arduino to work while connected only to ethernet bridge

**goals completed:**

started work on eagle schematic  
brainstormed ideas for arduino board controls

7/23

**goals for the day:**

1 get ethernet bridge configured so that it only needs to be physically connected to the arduino and it can be hooked up to the computer and the the wi-fi over wi-fi

**Goals completed:**

the ethernet bridge worked when within five feet of the wi-fi connector. once moved though it did not work again even when it was moved back within five feet. the same problem of not being able to connect to the bridge settings online when connected. need to keep fooling around with the settings. when connected again must get formal directions to fixing this written down in a good order

**goals for tomorrow:**

get ethernet bridge working from other room  
get ethernet bridge easily working and functioning

7/24

**goals for the day:**

1 get ethernet bridge working  
ethernet bridge works if you put in the following numbers for the following lines in network setting; when connected to the ethernet bridge by cable, while in network settings make the location static IP and set "Configure IPv4" to "manually". Set "IP Address:" to "192.168.1.253", set "Subnet Mask:" to "255.255.255.0", and set "Router:" to "192.168.1.254". after this is all done properly you can put "192.168.1.254" into the address bar on your computer and it will take you to the site where you can edit the settings and similar stuff for the TL-WA801ND ethernet bridge

**goals completed:**

^^^

**goals for tomorrow:**

find out how to install lights in stoplight

7/25

**goals for today:**

1 mount lights inside of stoplight

2 paint stoplight

**goals completed:**

the entire stoplight is paint but still needs another coat of paint on it

**goals for tomorrow:**

finish painting stoplight

find out how to mount lights and arduino inside of stoplight

7/26

**goals for today:**

1 finish painting stoplight

2 mount lights in stoplight

**goals completed:**

did more painting and it still needs one more coat

found out how to use github and I need to make a new

repository for my project

**goals for tomorrow:**

finish making new repository

put more paint on stoplight

7/27

**goals for today:**

put another coat of paint on the stoplight

finish making the new repository for the project

**goals completed:**

painting the stoplight is finished the repository is being bad and

not working, may be caused because of the update to mac's

newest operating system leopard. the lights are now mounted

inside of the of the stoplight. the green light is the only light

working so it may be a connection error with the headers that is

causing the problem.

**goals for monday:**

get all the lights working while inside of the stoplight

test if the ethernet capability is still working

7/30

**goals for today:**

get all the lights working inside of stoplight

touch up wiring for lights to the arduino

find something to properly attach wires to headers

**goals completed:**

got all lights working

all wiring has been fixed

**lessons learned:**

crazy glue sucks

**goals for tomorrow:**

get all lights working over a server

7/31

**goals for today:**

get all lights to work over the web server while in the stoplight

**goals completed:**

got all the lights working and the project is finished

**goals for tomorrow:**

do documentation for the project

8/1

**goals for today:**

get schematic done

get notebook updated on github