Timed Traffic Light PCB

Josh Angell

June 1, 2011

IME 458

Overview

Function:

   Emulates UK Traffic Light

Requirements:

  Timing

  Counting
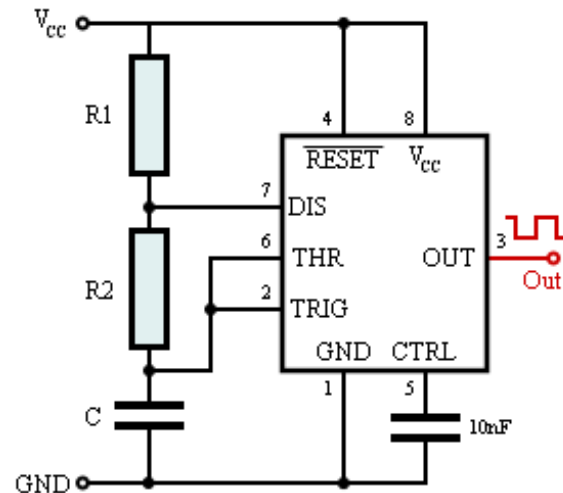
  Correct Sequence

Timing

555 Timer IC

Generates pulses with specific frequency

Adjustable with Potentiometer (R2 below)
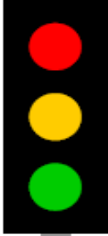
Provides pulses to counter IC
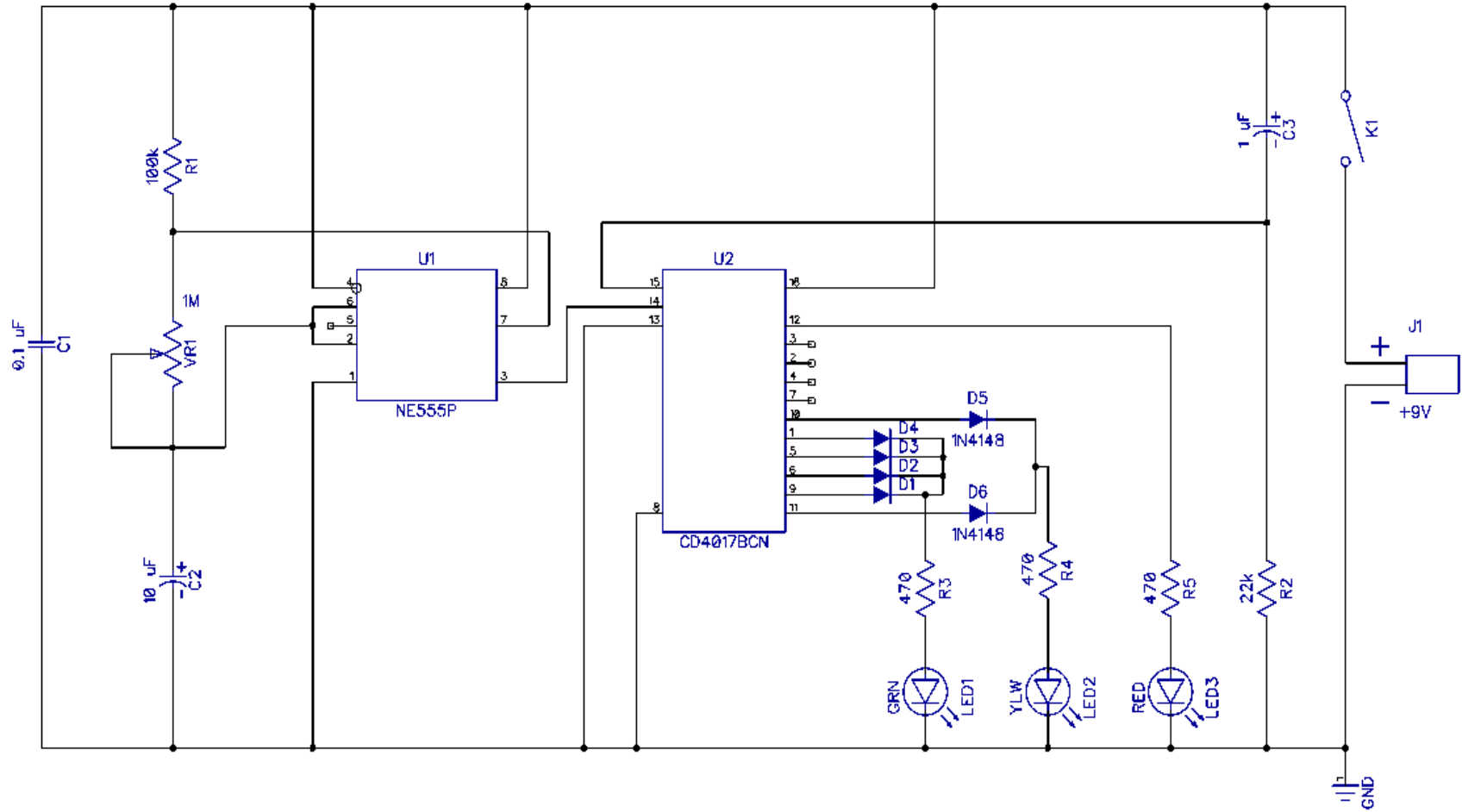
Counting

4017 Counter IC

Decade counter

LEDs connected to IC

4017 counter outputs high	LEDs ●●● = LED on		
	red	amber	green
Q0 and ÷10	●		
Q1 and ÷10	●		
Q2 and ÷10	●		
Q3 and ÷10	●		
Q4 and ÷10	●	●	
Q5			●
Q6			●
Q7			●
Q8			●
Q9		●	

Schematic

PCB Layout
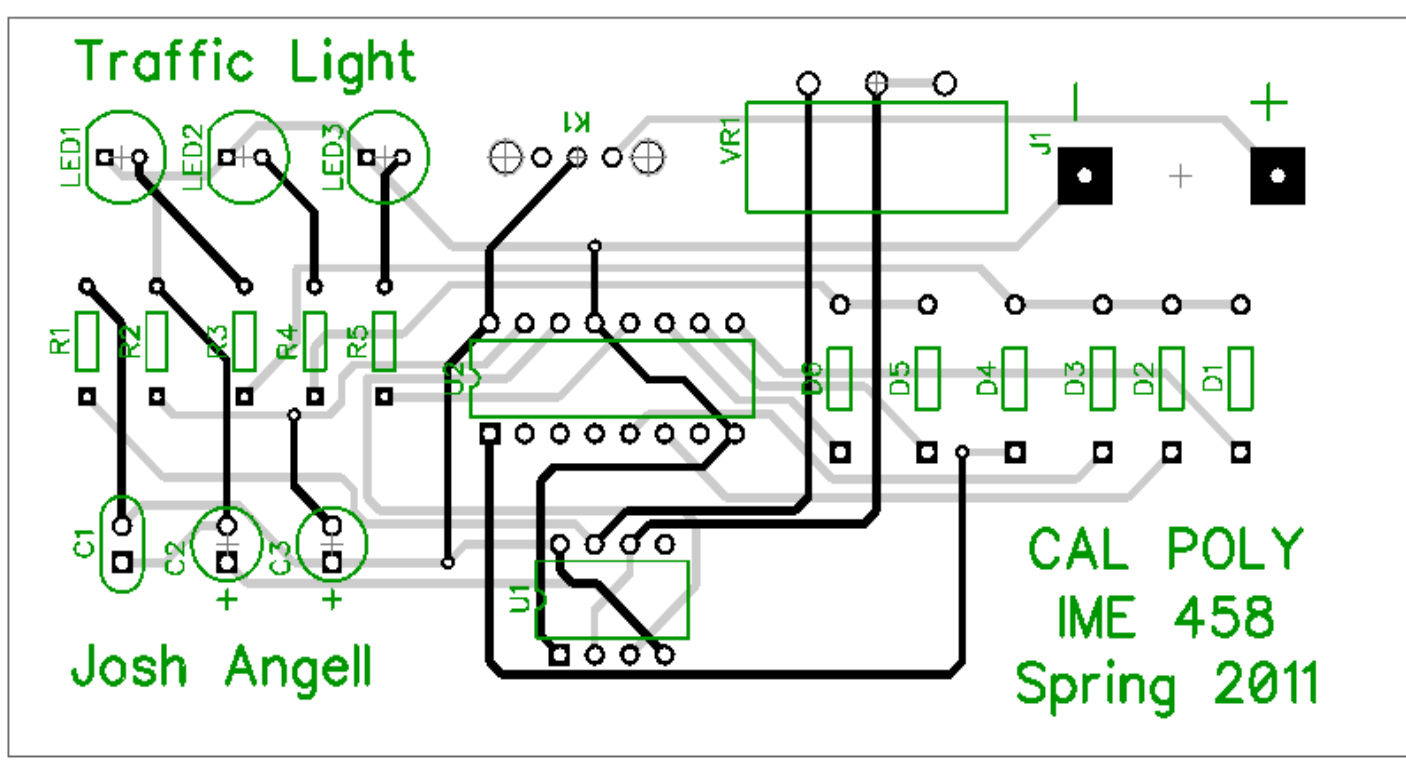
Assembly

- All components through-hole
- Soldered to board
- Components arranged

  for alignment and ease of assembly

Functioning Device