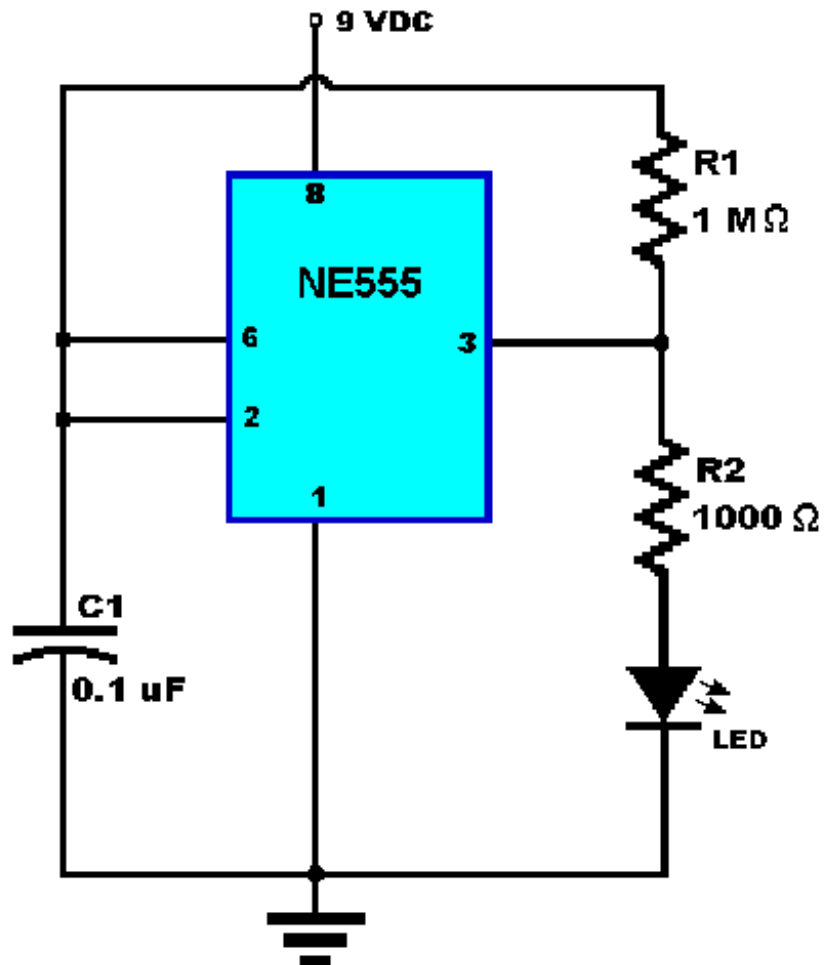


# Electronic Projects – Spring 2010

## Project 1

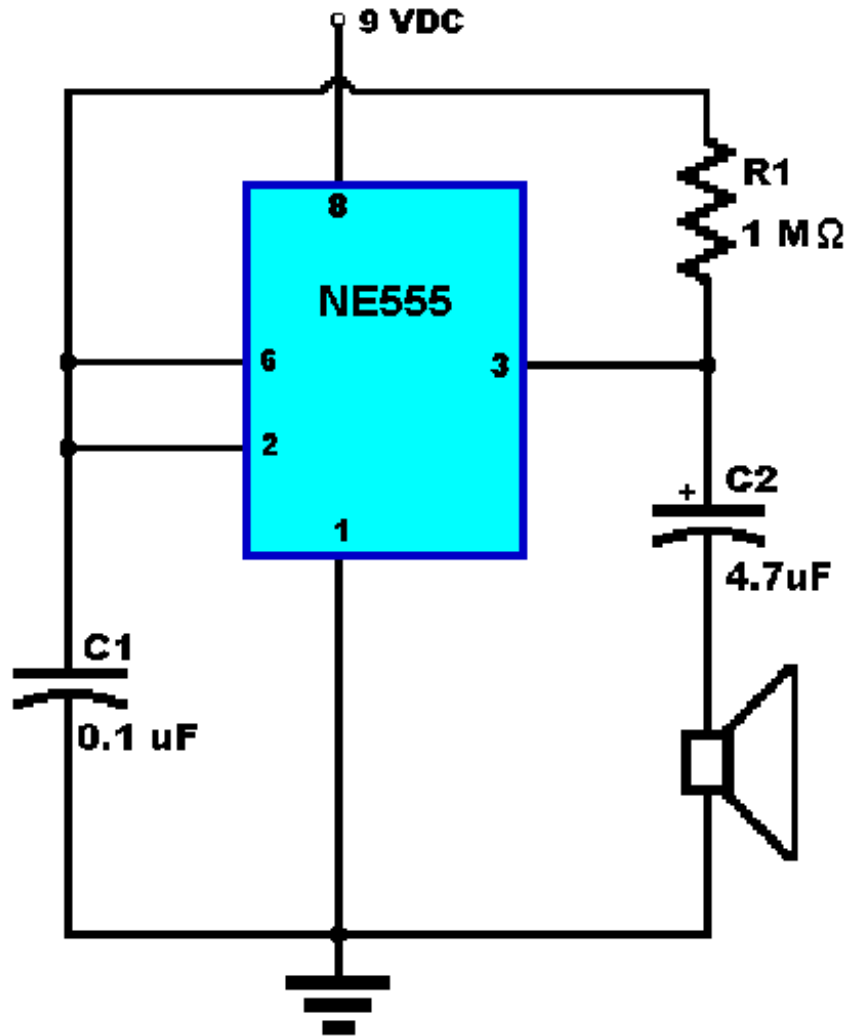
### NE555 Single LED Flasher



Explore the values of R1 and C1 to control the flash rate of the LED. What is the function of R2?

## Project 2

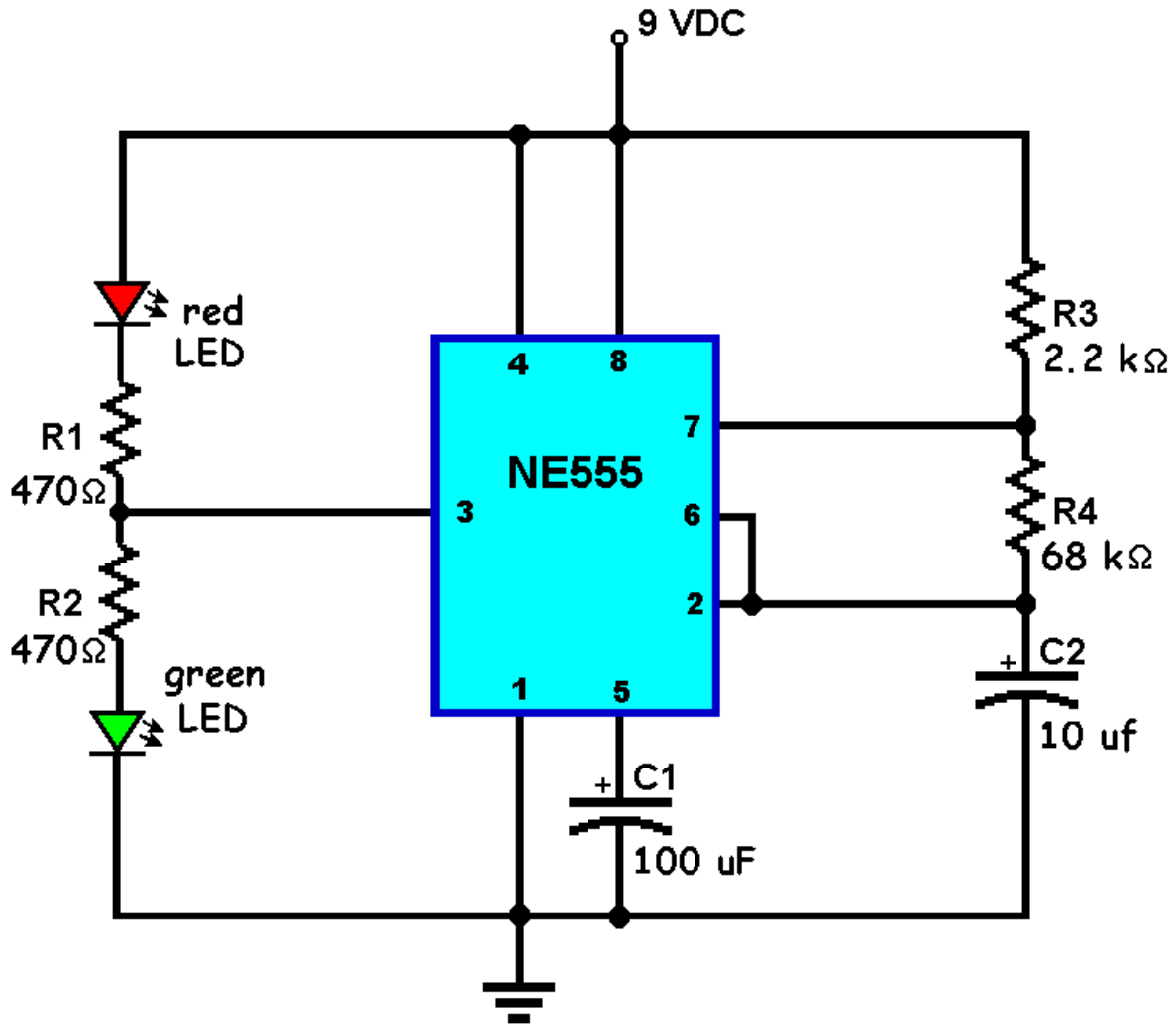
### NE555 Sound Generator



Experiment with the time constant of C1 and R1 to produce different sounds.

## Project 3

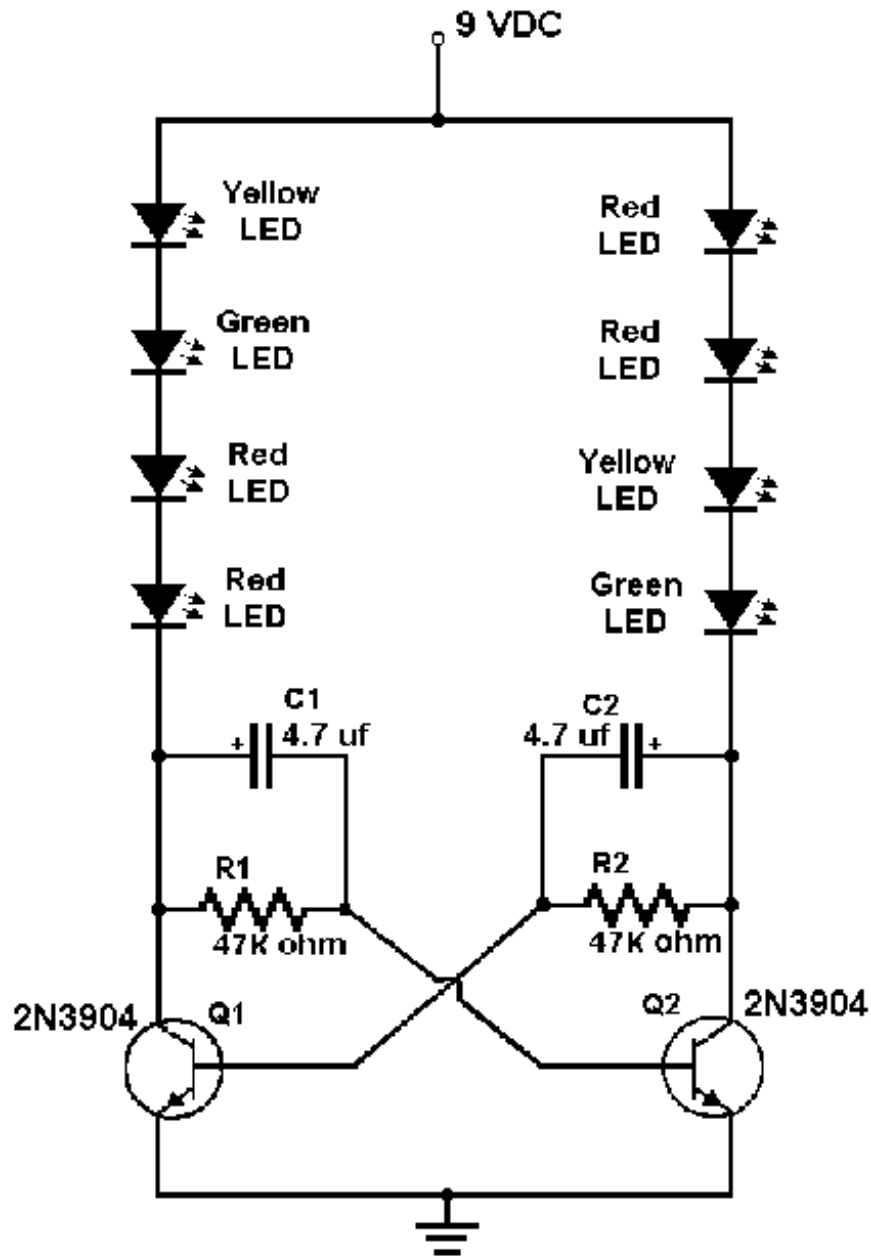
### NE555 Alternating LED Flasher



Experiment with the time constant of C1, C2, R3, and R4 to control the flash rate and flash duration of the LEDs. What is the function of R1 and R2?

## Project 4

### Transistor Multiple Alternating LED Flasher

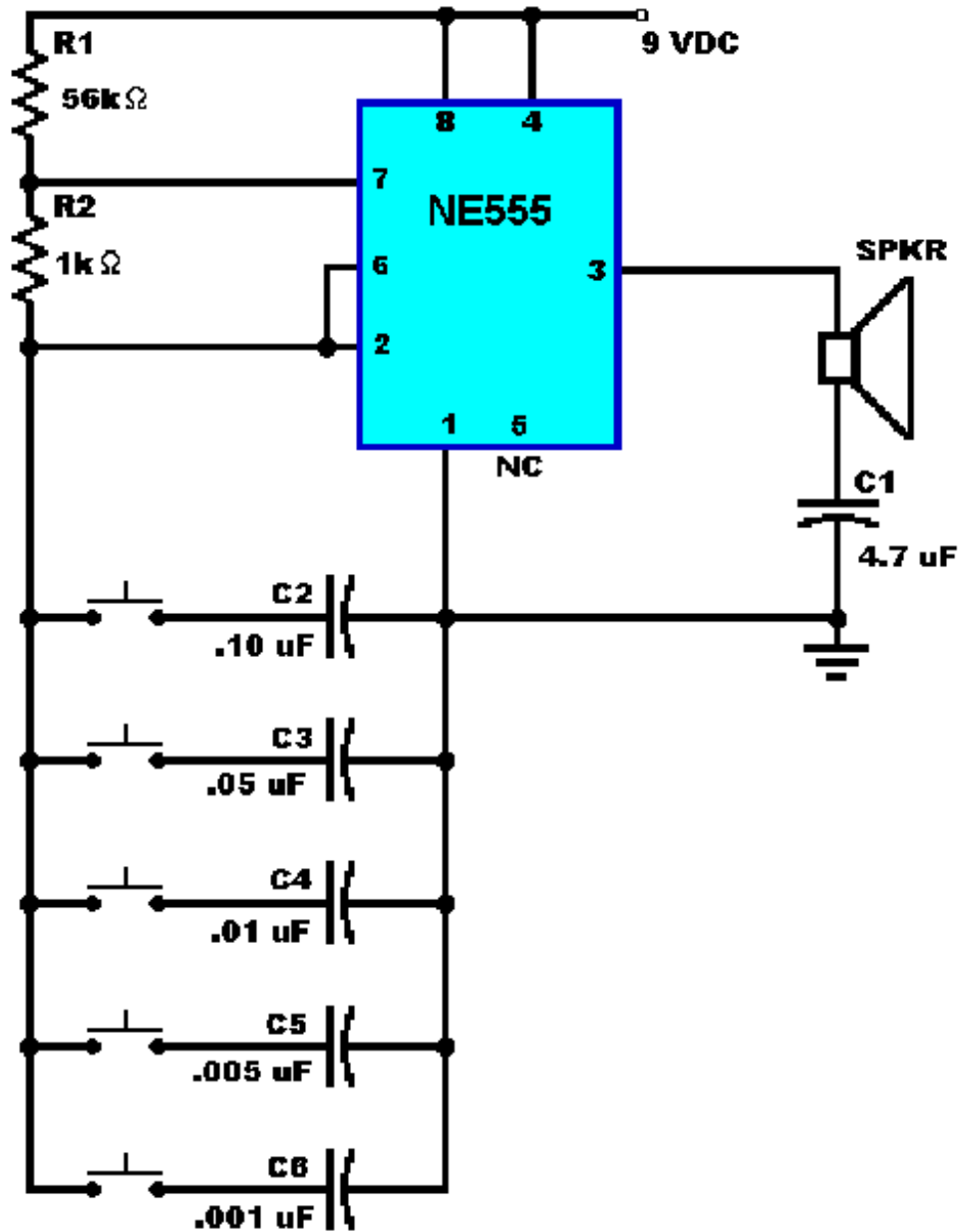


This is a very visually appealing project. Experiment with the C1/C2 and R1/R2 time constant. Can you make one side flash different from the other side?

**Cautions:** Observe the correct wiring of the transistors or know the location of the nearest Radio Shack. If the battery has low voltage only one of the LEDs strings will light.

# Project 5

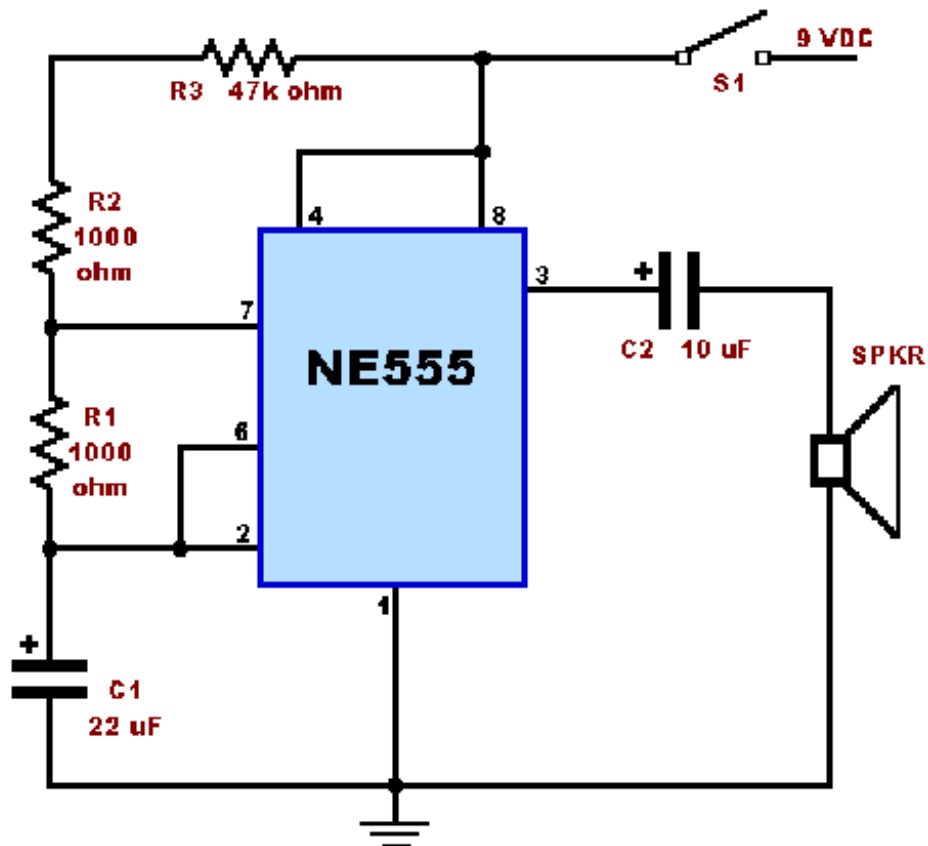
## NE555 Toy Organ



This circuit will produce a variety of musical notes. The exact values of C2 through C6 are not available so either series or parallel capacitors to get close to the indicated value.

## Project 6

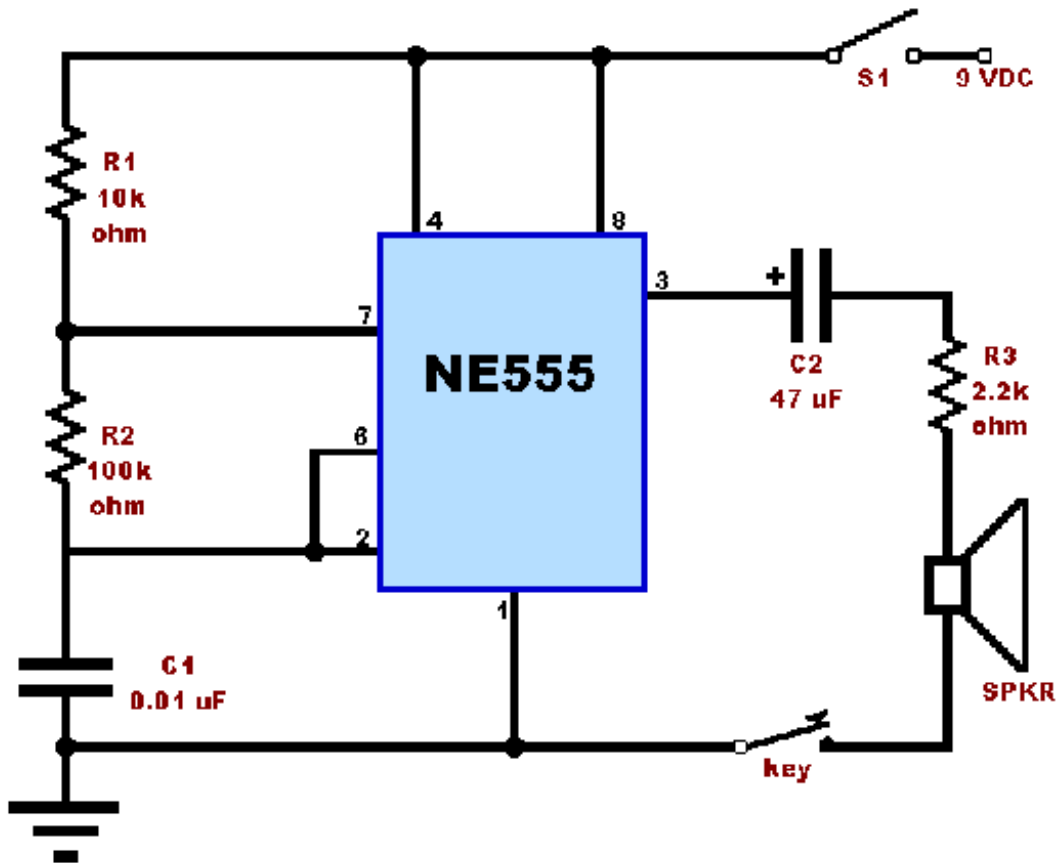
### NE555 Metronome



This circuit produces a “Tic-tic” sound. Experiment with C1 and R1 to adjust the duration between the “tic-tic.”

## Project 7

### Code Practice Oscillator

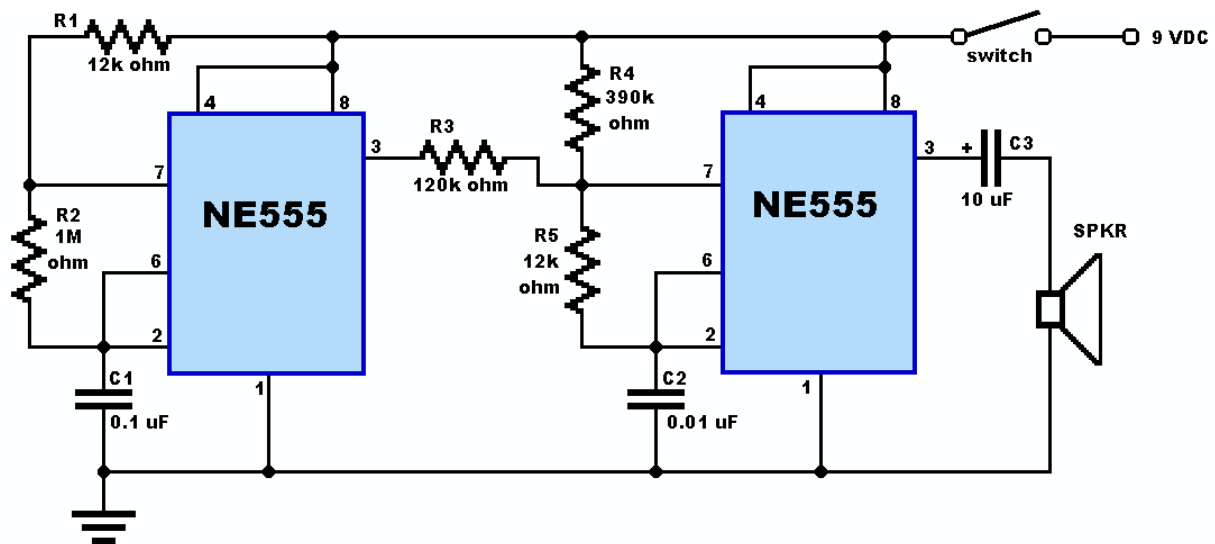


This circuit is designed to produce a tone similar to a Morse code signal you would hear from a short wave radio. Experiment with C1 and R2 time constant for changes in the tone. If you build this circuit, learn a few Morse code characters.

The volume of this circuit is very low. Which resistor can be eliminated to fix this? What is the intended function of that resistor?

## Project 8

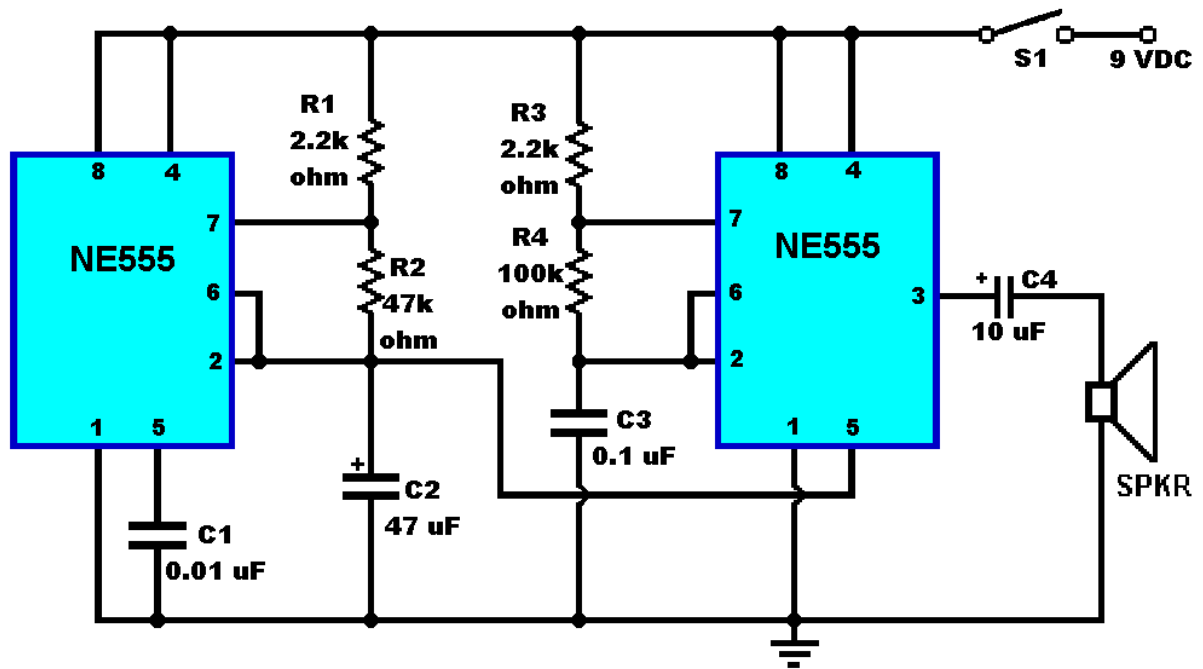
### HEE – HAW Tone generator



This circuit is supposed to produce a “Hee-Haw” tone. It has not been tested but examination of the schematic diagram indicates it should work. Good luck and have fun!

## Project 9

### NE555 Siren



This is a more advance circuit but it is fun to experiment with. The various capacitors and resistors will control the range of the pitch and duration and frequency of the range of the pitch.  
Enjoy!