

Police Sirene Circuit Design Using IC NE555

Description

Hello buddy, have you ever seen when you were on the road, then you heard such a vehicle with a loud sound like “ninu ninu ninu” then spontaneously people around you moved aside to give it a way? Yes, the vehicle is using a police siren to alert the person that there is a serious situation.

What is police siren ? And who can use it?

Siren is like an alarm that is loud and making device to warn of natural disasters or alert the people that there is a serious situation . Sirens are used on emergency service vehicles such as ambulances, police cars and fire trucks.

How to make police siren circuit? Here we go..

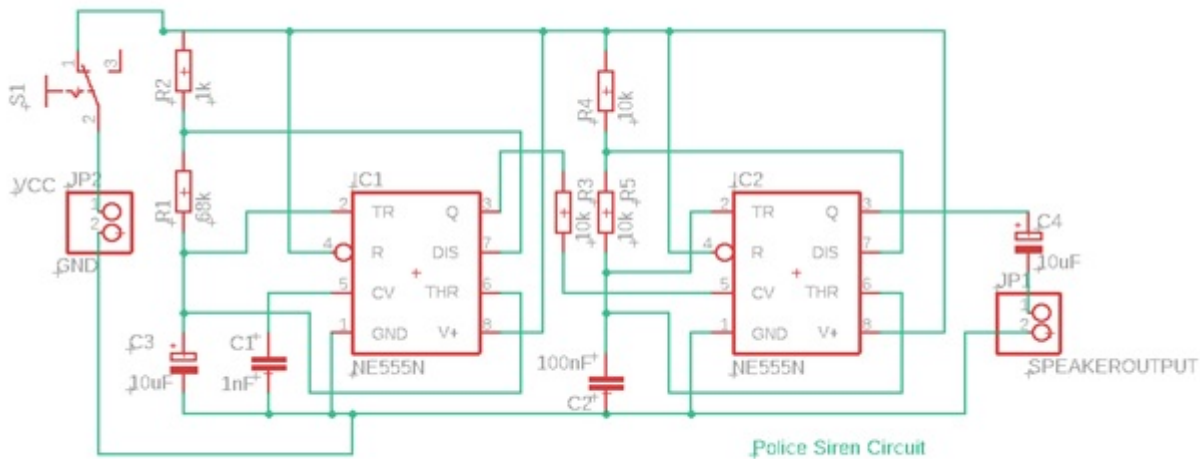
Component used

- 2 pcs IC NE 555
- 2 pcs Electrolytic capacitor 10uF
- Capacitor 1nF
- Capacitor 100nF
- Resistor 1k
- Resistor 68k
- 3 pcs Resistor 10k
- Switch
- Battery 9v
- Speaker

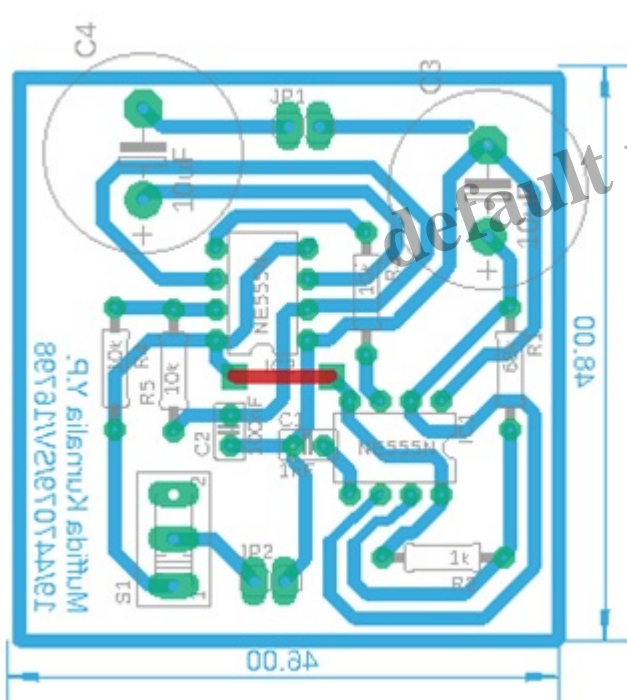
Step 1 Circuit Design with Autodesk EAGLE

To make a circuit you have to design it first on Eagle Schematic then Routing layout on Eagle board.

Schematic Layout



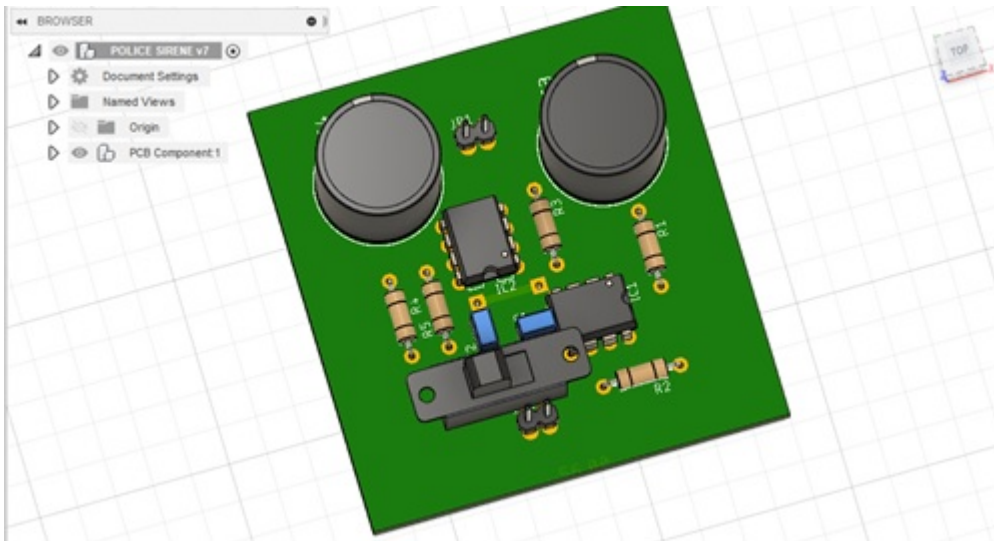
Board Layout



You can download it here https://drive.google.com/drive/folders/1HNBYmteO0_WEXZ8j9Q-xM5Pcss4rDW4u?usp=sharing

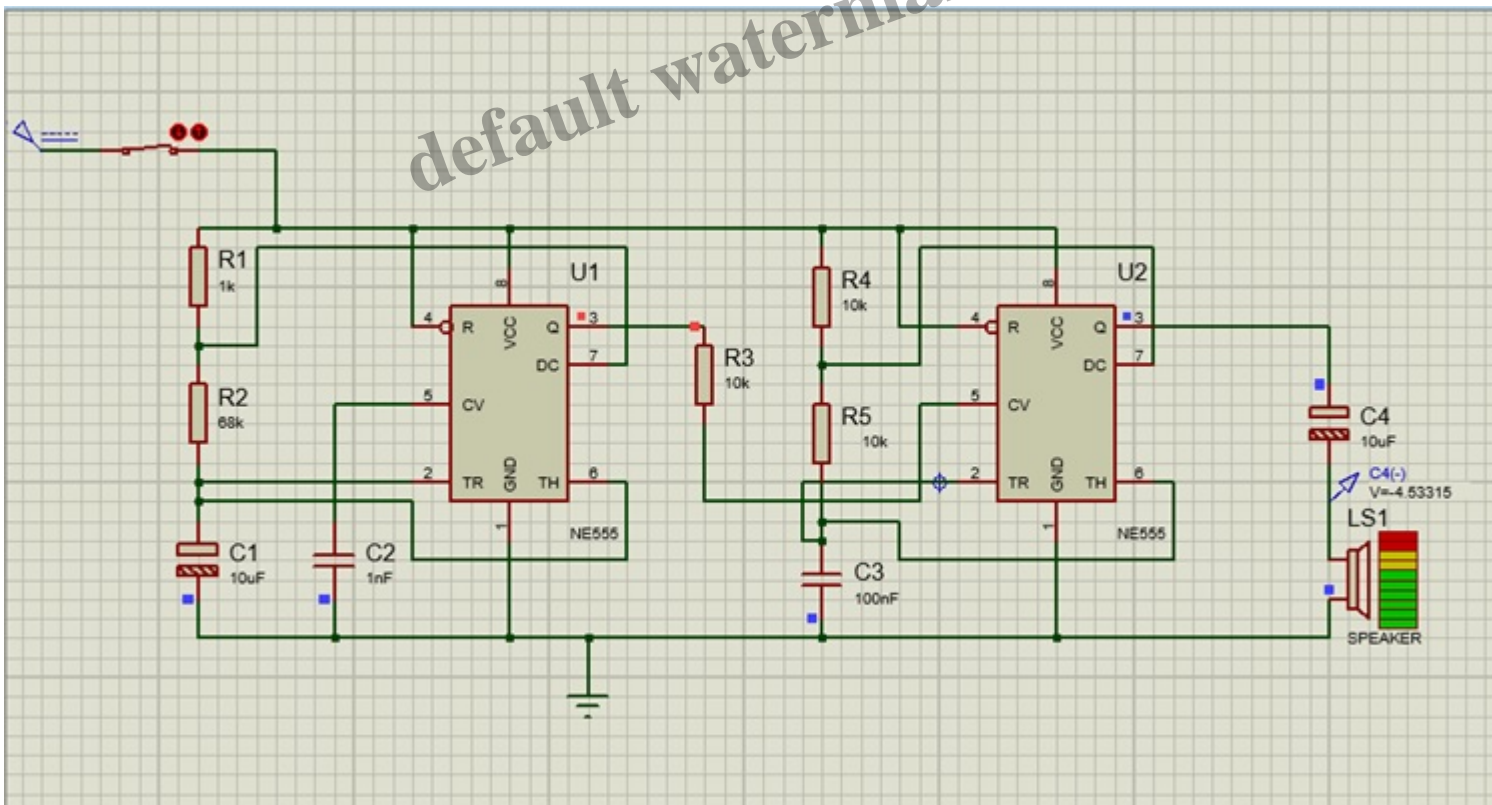
Step 2 Circuit 3D Design with Autodesk Fusion

After you finished the schematic and board layout on EAGLE, you should to convert it to 3D design on Fusion.



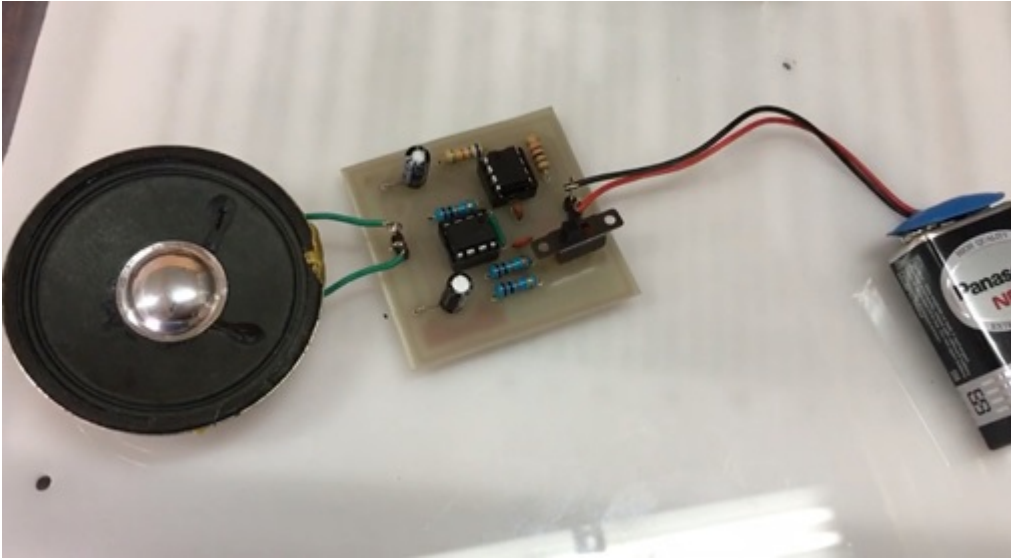
Step 3 Simulating on Proteus

You have to simulate it first before you turn to make a PCB, is that work or not? If the circuit works, the speaker should be colored like this and have a sound.



Step 4 Make a PCB

Step make a PCB Board can be watched on this <https://youtu.be/q6iu8Fe8UOY>



This circuit works by using a siren that has 2 different tones and alternates with double IC NE 555. Each IC is set as a different tone generator, IC 1 is lower and IC 2 is higher. IC 1 produces lower noise by adding smaller resistors than resistors on the larger IC 2. Then the tone is connected via pin 5 IC NE 555. The way of combining these 2 notes is work by superimposing the low notes to the higher notes. While the time interval that occurs is regulated by a capacitor.

So how fellas? So simple right? Thank you for reading my articles.

Designed by Muffida Kurnalia Yovika Putri (19/447079/SV/16798)

Category

1. Artikel

Tags

1. Police Sirene Circuit Design Using IC NE555

Date Created

December 25, 2019

Author

fahmizal