



Group #08 **Project Report**

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288
289
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Project:

DURESS BUTTON

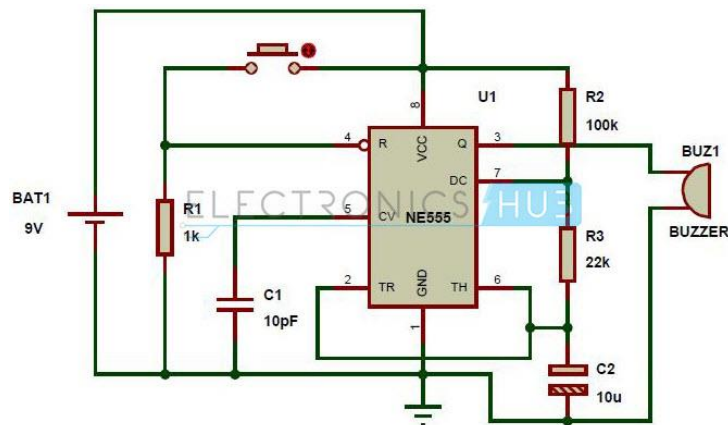
In this project, I will show how to design and build a simple Panic Alarm Circuit using 555 Timer IC and a few other easily available components. This circuit can be used to activate an alarm in case of any emergencies.

Introduction

There can be any sudden situation of panic. It could be because of an intruder entering our house or bad health status. Situations can be many for panicking and may vary from person to person.

During such emergencies, we might be unable to intimate to the people around us. In this article we shall see how to make a simple panic alarm, which can help us to intimate others regarding our bad situation without any delay.

Panic Alarm Circuit Diagram



Components Required:

- 555 IC
- Resistor – 1K Ω
- Resistor – 22K Ω
- Resistor – 100K Ω
- Capacitor – 10 μ F
- 9V Battery
- Push Button
- Mini Buzzer
- Breadboard
- Connecting Wires

Design:

This circuit is made with a low-cost hardware using IC 555 timer, buzzer, a few resistors and capacitors. It is made to be working reliably as it has simple to use and not so sensitive hardware like 555 timer, ceramic buzzer, capacitors, etc.

Although no exclusive arrangement is used to make any compensation for the variable parameters, the circuit by default is made to be robust and easy to use. It is very user friendly with a single button to be pressed to handle the panicking situation without any trouble.

Working:

The IC 555 is used in the Astable mode with the frequency depending on the values of resistors R2, R3 and C2. The values:

R2 = 100K Ω

R3 = 22K Ω

C2 = 10 μ F.

By substituting the given parameters in the respective formulas for IC 555 in a stable mode, we get the following values. The frequency of operation of the circuit is calculated to be 1 Hz. By finding the time period of the circuit by using the frequency information, we get the time period of the circuit as 1 second. This means the circuit has a on -off repeating period of about 1 second.