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Automatic Hand Sanitizer

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ABSTRACT: Hand Sanitizer was very important in Covid-19 and in this pandemic situation they invented the project name hand sanitizer. When we were using normal hand sanitizer the sanitizer need to be pump through hand and the sanitizer use to come out of the container but after coming automatic system human being change it from manual sanitizer to automatic sanitizer.

KEYWORDS: Hand Antiseptic, Safe Distance, Hygienic, Automatic, Covid-19

I. INTRODUCTION

The covid-19 which was first discovered in China, Wuhan city. Corona Virus was spread by China to all over world. The main reason of spreading virus was that it was able to transfer from one person to another person by speaking, hand shake and by meeting each other. And one of the main reason of spreading corona virus was that does sanitizer bottles were kept outside the shops and houses but they were manual But now in this project we found that some people during covid-19 they use to wash there hand with soap. Soap was not that effective that period. So alcohol base sanitizer were introduce. But the problem using sanitizer was that is was manual operated. In manually operated sanitizer we need to first press the pump then the liquid sanitizer used to come out. Now the sanitizer was used by many peoples and transfer from one person to another person by pressing the manual and sanitizer.

II. RELATED WORK

In Automatic hand sanitizer first hand is place near the sensor known as ultrasonic sensor HC-SR04. They should be placing about 5 cm so that the sensor could detect the hand if the sensor could not detect the hand it will not send the command to the Arduino.

If hand is detected then the ultrasonic sensor will command Arduino that hand has been sense .So ON the relay module of 5V which is connected to the water pump of 5V to 12V. When the pump is on a delay of 1 second is given and the motor is automatically turn off here is the working of automatic Hand sanitizer.

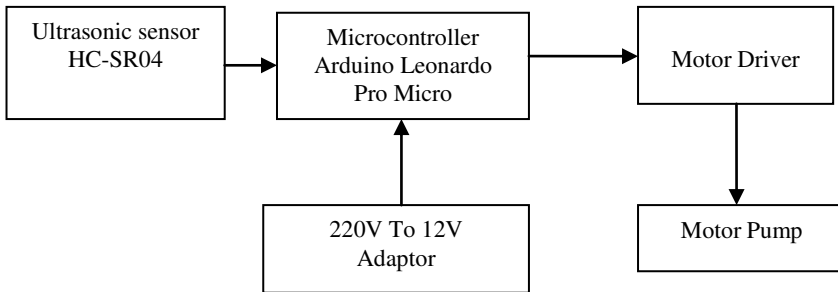


Figure1. Automatic Hand Sanitizer Block Diagram

III. METHODOLOGY

- WHY DID WE MADE THIS PROJECT:-

The purpose of this project was thatnot to spread disease from one hand to another hand. Before this project was made the people use manual hand sanitizer which can be use by pressing the pump. Because of that many disease like chicken pox, common cold, conjunctivitis and the Corona Virus Etc.

- How DID WE MADE THIS PROJECT:-

Firstly this project was started using plywood for the outer cover in the shape of a Box. So it can be light weight and transportable (24cm*22cm). Then we started the inner work was divide into two part:-

1. Hardware:- Arduino Uno R3
2. Software:-Arduino IDE

- 5v Single Channel Relay Module
- 6v To 12V Submersible Motor
- Spray Nozzle
- Level Pipe
- 12V Female Socket
- Ultrasonic sensor HC SR04
- 12V Adapter

- Advantage of Hand Sanitizer:-Low Cost
- Simple Design

Easy To Handle
Low Power consumption

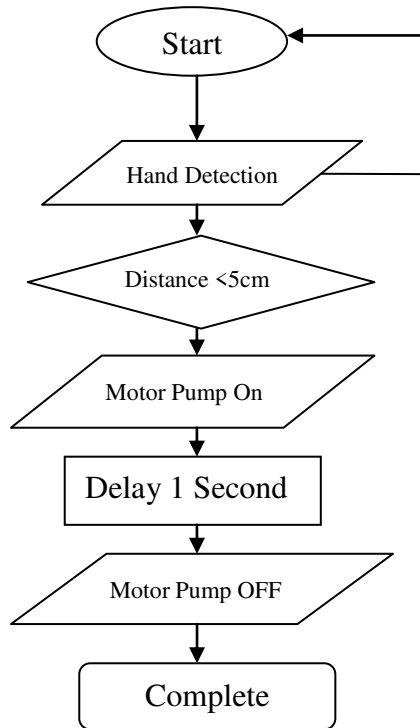


Figure2. Flow Chart of Automatic Hand Sanitizer

IV. EXPERIMENTAL RESULTS

We have designed an automatic hand sanitizer system. When one moves one’s hand close to the Ultra sonic sensor, the hand sanitizer container is Spray once. Show actual images of the proposed device.



Figure3. Inner Design Of Hand sanitizer



V. CONCLUSION

Using “**Automatic Hand Sanitizer**” People can upgrade their manual hand sanitizer To the Automatic hand sanitizer and at a low cost, cheaper prise. The main problem was to use the sanitizer with one hand press. To solve the problem we design Automatic Hand Sanitizer. With the help of this project we can save the people who are coming in contact with the manual hand sanitizer. Thus, it is economical and eco-friendly by decreasing waste emissions. The automatic hand sanitizer device proposed by this paper is ultimately expected to contribute to contactless hand disinfection in public places and virus infection prevention.

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