Zona Del Silencio

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PROBLEM

The Silent Zones are facing a severe issue of noise pollution, which is causing a humongous disturbance to the people. According to the World Health Organization (WHO), the sound level of 60 dB can cause a person temporary deafness, while sound levels of 100 dB can lead to deafness permanently. In heavily urbanized cities, it is becoming a serious issue. People tend to ignore the rules made for silent zones and use horns without reason. Many a time it is observed people make honking while on a signal which is wrong as it causes disturbance in surrounding areas.

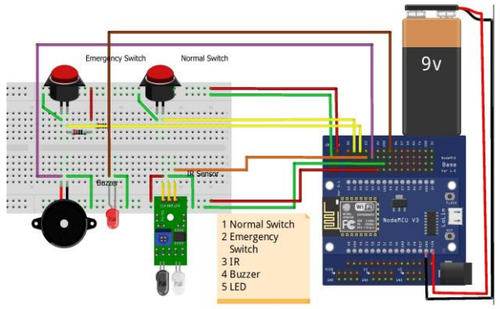
HYPOTHESIS

The proposed solution for the increasing problem of silent zones, “Zona Del Silencio” is an IoT based device that interacts with a targeted vehicle, which disables the horn by a centrally controlled microcontroller. The microcontroller works in presence of an active wireless ecosystem created in the areas covered by the silent zones using Wi-Fi technology. Our solution also consists of an emergency switch in case of an urgent traffic situation with added object detection feature to detect presence of a vehicle ahead, to distinguish notorious drivers from the legit ones.

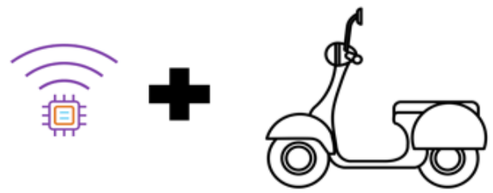
MATERIALS

- NodeMCU
- IR sensor
- Buzzer
- Tactical switch
- Wi-Fi router
- Arduino IDE
- MySQL
- PHP

PROCEDURE



1. Configure device with code and get running



2. Attach device with vehicle

3. Record notorious use, collect fine and analyse

ADVANTAGES

1. Integrity of silent zones is maintained.
2. NodeMCU is cheap and preconfigured with ESP 8266.
3. End customer has transparent access to his/her records.
4. Authorities get records at fingertips.
5. Modular API ecosystem, easier for software development lifecycle

CONCLUSION

“Zona Del Silencio” is an IoT based device, which suppresses the unwanted honking of vehicles in the Silent Zones. The vehicle being installed with the device detects the silence zones by sensing the Wi-Fi routers present in the zones. The driver is given an emergency switch to use in such scenarios, each time this switch is used, it is recorded in the database to check any mischievous behaviour. This way it can be easily made sure that notorious use of emergency switch is penalized.

Thus, achieving **The True Silent Zone!**