Stop Noise Pollution From Honking

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ABSTRACT

Noise is one of the environmental pollutants that are encountered by residents in day to day life. Noise pollution generates many health hazards and hampers the process of communication. The major noise is generated by the traffic. In India Honking is a common occurrence. So we need to consider numerous factors to monitor and access the traffic noise and noise planning for its reduction. Honking can be controlled by counseling the drivers. The System uses microcontroller, LCD Screen, RTC Module and GSM module. The LCD screen shows the day count, week count and moth count. The horn is pressed by the driver will increase the counter and when the honking limit exceed the controller will turn off the horn and the message is send to the driver through GSM. The message will send to the driver daily, weekly and monthly. The message consisting of the warning and the count limit. The next day the counter reset and start from zero, try to control the human tendency of unnecessary honking. The human habit of honking will not be suddenly change it needs time. The system will put limit to Honking habits of humans. The proposed system does not suggest the elimination of the current horn system, instead, it operates in coexistence.

Keyword *- Honking, Noise pollution, RTC module, LCD display, honking limit.*

1. INTRODUCTION

Because of unawareness of Road user in India there is problem of honking for example there is a custom in India in which trucks are painted with the message "Blow Horn". So, it has become a habit and people enjoy blowing horn time to time. This leads to noise pollution and create environment of chaos. Horn is only required at the time of emergency [1].
Noise can cause various problems like hypertension, tinnitus high stress level, hearing loss, disturbances in sleep etc. Sound is becomes unwanted when it interferes in between the normal schedule, such as sleeping, conversation.
Urban areas are the prime source of noise pollution due to honking, as there are numerous vehicles.
If the Problem of Honking is solved it would be the major contribution to the nature. The project will limit the honking habit of human beings. The product can be the most sun rising for government as well as for nature. It has tremendous scope to control noise pollution from honking.
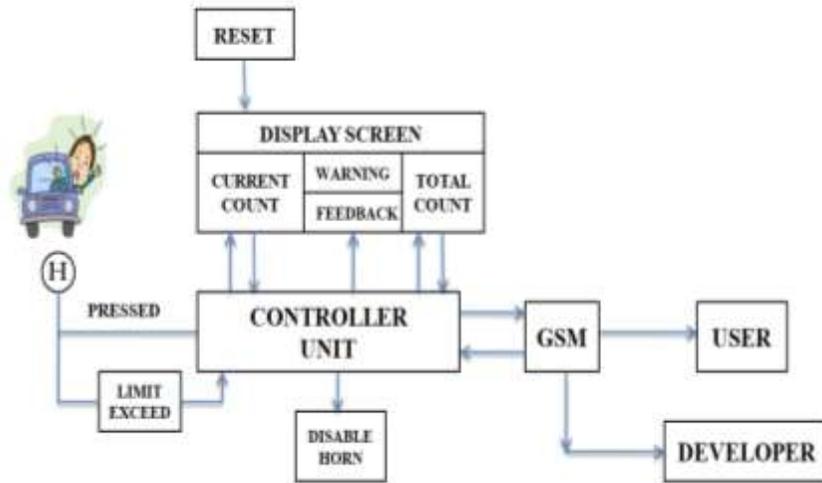
2. DESIGN

Fig -1 : Block Diagram

The Control Unit is the microcontroller. The LCD Display of 16X4, RTC, Horn and GSM Module is connected to microcontroller. The Screen Shows Timing, Day Count, Week Count, and Month Count. The limit switch is connected to microcontroller.
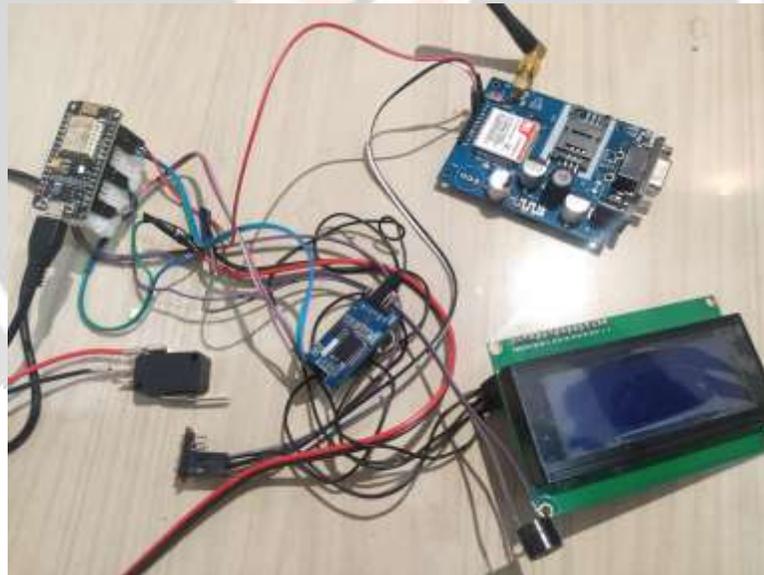

Fig -2 : Model

COMPONENTS	QUANTITY
Node MCU	1
Switch	1
I2C Bus	1
GSM Module	1
Horn	1
LCD Screen 16X4	1
RTC Module	1

Fig -3 : Hardware Require.

3. METHODOLOGY

The system is used to put a limit to the use of horn in order to reduce the Noise Pollution. When the horn is pressed, (here the horn is the limit switch) the controller (NODE MCU) gets triggered and it counts the number of times the horn is used. As soon as the predefined honking limit exceeds (It can be vary vehicle to vehicle), the controller disables the horn for that particular day. And the driver can no more use the horn. In this way we put a limit on the use of horn. The system consists of a LCD display which is connected to I2C bus, I2C Bus is used for serial communication so that the wire which are required for connecting are reduce [3]. The Display will show the daily count, weekly count and monthly count. The system also contains a RTC module which is used to provide accurate time and date. The controller will keep a record of the daily count and monthly count for the horn used so that he can change his habits and ultimately help to reduce noise pollution. As soon as the day changes the daily count gets added to the monthly count. And when the day changes the day count set to zero and when the month changes the data gets automatically gets reset (and start from zero). The data for the previous day, week and month all is stored in the EEPROM. The controller keeps the track of all counts of day week and month and store in its memory. Initially the honk limit is set to n counts for the purpose of demonstration. The horn switch is pressed n times and the horn blows but when the switch is pressed for n+1 time the horn will disable and message is sent to the driver through GSM. The system is also connected to the GSM module. The day count limit exceeds the GSM notify driver by texting the driver "Alert…. You Reached the Horn Count and your horn count is this" And also the monthly count recorded is sent to the vehicle driver as well as to the developer for further updates and development. The count for the previous month is compared with the count of current month, then the controller sends a to the driver a Congratulation message on account his limited use of horn and reduce noise pollution. Honking gets aggravate or intense because of impatience in driving, over accelerating, violating traffic rules and sudden braking. This feature encourages the user to further minimize the horn use on his behalf which is our ultimate target. This system makes an attempt to change the mindset of people regarding the use of horns and limits its use to control noise pollution.

4. DISCUSSION ON RESULTS

Considering the Horn limit is set to 5. By pressing horn switch 10 times the horn will blow. But on the 6th pressed the horn get turn off and driver gets the message. You reached the day count. Again on next day the counting from one is started and this process continues and driver gets message weekly and monthly. And here the driver will get all information regarding the daily, weekly and monthly use of horn.
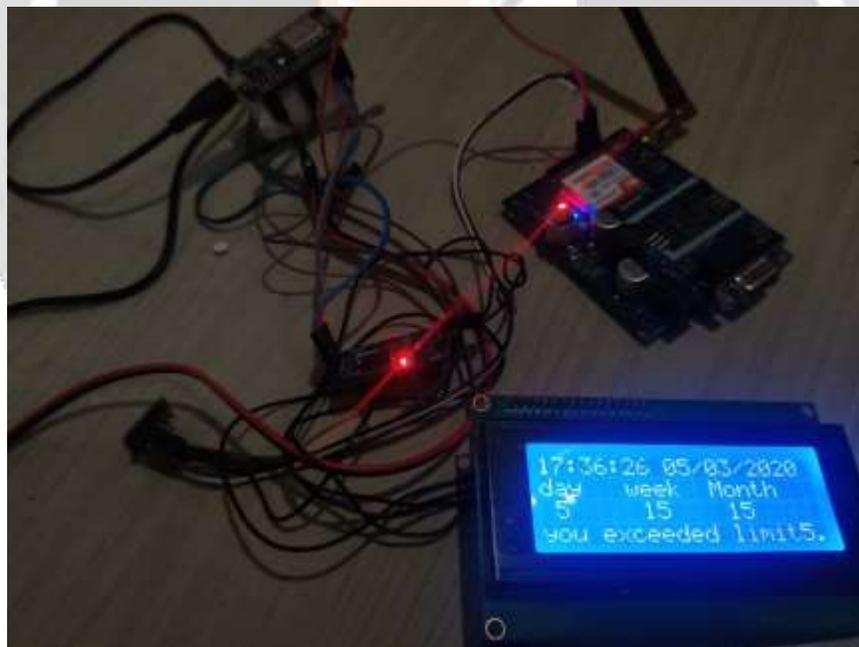
Fig -4 : Before limit Exceeds

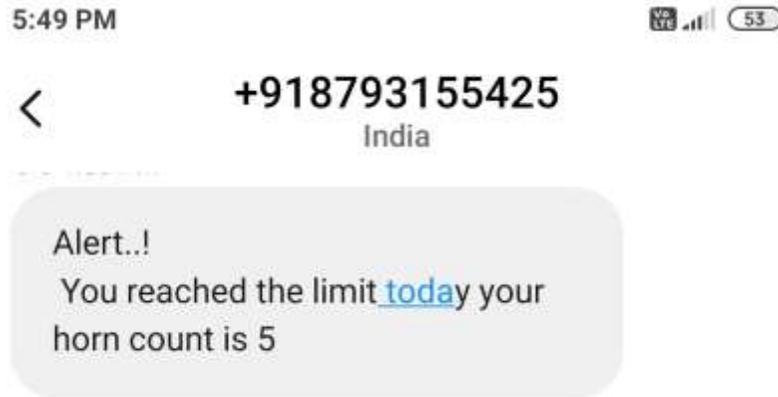

Fig -5 : After limit Exceeds.

Fig -6 : Text Message Alert

5. CONCLUSION

The system focuses on changing the human tendency, and will reduce human tendency of honking and ultimately reduce noise pollution from honking. The person or driver has limited number of horn counts in a day and thus works to control the unnecessary use of horn. Recording the number of times a horn is used and Monthly data analysis through GSM. The Technology aims to change human tendency of Honking.

6. REFERENCES

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[3]. Sound monitoring devices and systems by Central Pollution & Control Board (CPCB).