RF Based Automatic Speed Limiter for Vehicles

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Abstract: Today most extreme number mishap in often in light of individuals are driving the vehicle quick and uncontrollable. Statistic report is taken for most recent five years greatest measure of mischance are amid in the school zone, surge time slopes region. As indicated by Mr. Willie D. Jones in the IEEE SPECTRUM magazine (September 2001), a man kicks the bucket in a pile up each second. So they speed of the vehicle control by utilizing of RF Transmitter, beneficiary are utilized. Individuals are not take after the street wellbeing rules. Required flag of the speed not take after by the general population it will be increment the accident. RF Transmitter are put in the schools, bills, rush regions the transmitter segment are comprises of keypad, encoder, and RF transmitter the keypad is utilized to set as far as possible esteem. At that point the set esteem is given to encoder to interface the flag and given to RF transmitter obstruct in which the encoded flag is regulated with bearer recurrence and transmitted through RF transmitter. The beneficiary area comprises of microcontroller RF receiver, Decoder, Proximity sensor and driver circuit for relay. The recipient segment is joined in the vehicle. The nearness sensor is settled in the vehicle wheel to screen speed. USLOT sensor is utilized distinguish the speed of vehicle. The paper/protest is utilized. So where paper/question is crossed the sensor it creates the in addition to given to microcontroller. The microcontroller tally that in addition to and showed on the LCD show which is equivalent to speed of the vehicle. The RF collector is utilized to get as far as possible speed. The RF beneficiary expels the transporter recurrence and decoder is utilized to interpret the flag at that point given to microcontroller. In microcontroller the got speed constrained esteem is contrasted and acquired speed. If the speed is higher than confine esteem it actuates the transfer through hand-off driver circuit. The hand-off yield is associate oil valve. So it controls the oil stream to engine. Through thusly the vehicle speed is naturally restricted to speed level set the activity police office

Record Terms:- Automobile, RF Transmitter, Receiver, Microcontroller, Valve

I. INTRODUCTION

As indicated by the current study most extreme measure of mishap are in the school territory, surge time and slopes region do the over speed. They have strict tenets are executed from government the passing rate are not diminished. The city go speed not surpass 50km/hr the general population not took after movement police division does not controlled in the vehicle speed and they have mischance are taken. The base speed limits are 20km/hr, they have street mischance are decreased by execution of our venture the control move are made without human interfaced. As far as possible esteem are set by the police office vehicle speed over the zone set speed the driver not decreased the speed the radio wire working transmitted the flag to the recipient. The collector are settled in the auto and transmitter are settled in the regarded zone. They have crossed in the specific zone the speed are ordinarily expanded by the general population prerequisite. The speed not controlled by the driver consequently speed is diminished by utilizing recipient receiving wire get the flag and decoder change over to the parallel to decimal esteem send to the microcontroller and speed sensor identified the speed of vehicle and the sensor interface with flag molding unit to microcontroller. They are programed to the required application. Microcontroller associate with the transfer drive. The hand-off drive control by the hand-off circuit and they have petroleum stream are control to the set speed are achived. The beneficiary transmitter are radio recurrence it is utilized by the without authorization on the planet so they have less cost and best in the control the speed of vehicle. The collector settled the street in the focal point of the street for level with dissemination of flag and lessened damage. RFID extend are utilizing with our necessity the scope of speed control are high the particular transmitter and collector are utilized.

II. BLOCK DIAGRAM

1. RF Transmitter

2. RF Receiver

3. RF Transmitter Circuit Diagram
III. WORKING

To start with, the power supply given to the transmitter side are gazed and input flag are given to the alphabetic and decimal number to the keypad the send to the decoder. Decoder change over electrical flag into the coded esteem this esteem are send to RF transmitter the recurrence way are send to reception apparatus.

The plan of vehicle gets the recurrence route through the RF flag when transmitter recurrence is interfacing. The information accessible in the collector this information changed over back to the decoder which translates the information back to the decimal. The decoder information interfaced with microcontroller and the controller is so programed and its now driving framework drive the flag to reasonable level and they control move are made by the electro mechanical valve. The valve manage fuel rate by utilizing RF recurrence is interfacing with receiver. The fuel rate are supply the low level the speed of the vehicle are diminished so the mishap are avoided. The diverse sort of the speed fuel stream are control by the set the speed level of the police department. The IR sensor distinguished the before deterrent and auto are there they have been sense send the flag to the interfaced microcontroller. The speed of the vehicle blow or equivalent to the regarded zone the framework are not working. Speed of vehicle are over the set speed in the zone speed limiter circuit are working decreased control the speed of the vehicle. The LCD show demonstrates the speed of the vehicle in rpm. For various bends the information contrastingly encoded which is gotten by the RX and fuel rate can be balanced in an unexpected way. A similar sort of strategy is executed for the recognition of mounds and any obstruction on the streets with the assistance of IR LED and photograph diode method which goes about as a vicinity sensor when the IR signals transmitted from LED relying on the separation of the deterrent or protuberances there is impression of IR pillar from that, material the circuit gives the flag to the microcontroller and with a similar procedure of fuel lessening system the vehicle fuel has been decrease and diminish the speed of the vehicle and keeps the mischances. The transmitter is coded such that it emanates the radio waves in a recurrence specifically relative to the pivoting rate of the engine. The transmitter sends the radio waves at each specific interim; say 5 to 10 microseconds, and this radio waves perimeter keep going for few extents relying upon the sort of transmitter utilized. The Liquid Crystal Display is given to show the individual who is driving the vehicle about the over-speeding with the goal that the driver could have a superior control over the vehicle and along these lines this strategy ends up being sufficiently productive in controlling the vehicle's speed.
IV. FLOW CHART

For transmitter

Stage 1: The information are given to the alphabetic characters and decimal number keypad

Stage 2: The encoder changed over alphabetic characters and decimal number to coded flag

Stage 3: With the assistance of transmitter, flag are transmitted, the primary motivation behind radio wire are utilized communicated the flag to the specific zone.

For receiver

Stage 1: The transmitted flag is recognized and gotten by the Radio Frequency receiver.

Stage 2: This coded flag are changed over to the electrical flag with the assistance of decoder.

Stage 3: The present speed of the vehicle, power supply and decoded flag are offered contribution to the microcontroller and the yield of the microcontroller given to the LCD show where the speed of the vehicle is shown in rpm.

STEP 4: The condition in which program is explained “if” condition. The speed of the vehicle is greater than of the set speed in microcontroller, then the vehicle is decelerated with the help of fuel valve.
STEP 5: If actual speed is blow the set speed, then the fuel valve does not action. Loop is terminated.

V. APPLICATION AND ADVANTAGE
1. Easy implementation of the project.
2. Speed control at hump.
3. Speed control when the obstacle found.
4. U curves safety indication.
5. Low power transmitter is enough for operation.
6. Suitable for all kind of vehicle safety system.
7. Steep edges are detected.
8. Lot of accident avoid is possible.
9. Less man power are required.
10. They will be very useful for traffic department.
11. School, College, Hospital, Hills, Rush area. Inside the city control the vehicle speed.
12. It is low cost.

VI. SCOPE FOR FUTURE
This undertaking might be executed in the enterprises i.e. to impart between the staffs or workers notwithstanding this we may actualize it in the houses where there is a need. In future we can include substantially more control appliance. It is a delightful thing to the individuals who are good to go or in other activities is a more affordable one so every one of the general population can be checked and actualized this in day – today life. In future we can get to the information increasingly and also we can builds speed as indicated by the need.

VII. CONCLUSION
Consequently the speed of the vehicle is controlled in a productive way and furthermore in a practical way. This task could be actualized in zones like school zone, healing center zones, slopes zones, mischance zones, and walker intersection etcetera. This imaginative strategy was created for the most part in an intention of decreasing the demise rates that are lost amid mishaps. This task makes an acceptable answer for the since a long time ago kept going issue. All vehicles regardless of the cost, brand could be controlled utilizing this task.

REFERENCE