

Mileage Determining Prototype Device

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Abstract - The Device Using Microcontroller (Arduino), collects data from the odometer (distance travelled) and the flow meter (fuel consumed) and then calculates the mileage of the vehicle and displays to the motorist. The data from Odometer which is preinstalled in all vehicles is connected to Arduino for checking the distance travelled and the reading from the odometer is taken to check the fuel consumed by the engine, using this data the mileage is calculated and then displayed to the motorist.

Keywords – Mileage, Odometer, Flowmeter, Arduino Box, Prototype.

I. INTRODUCTION

This device is a very simple device that can be used by any motorist to have accurate information on the mileage the vehicle is giving. This is very important as the person driving the vehicle may not have accurate information what the efficiency of the engine is and so in case the person decides to go on a long budget ride, the person can calculate on what the fuel expenses are going to be. As we know all the company claims the vehicle gives good mileage which is only good, which we know is only impressive on the paper but the actual mileage given by the vehicle is different and very less compared to the claimed mileage. Keeping this in mind, we have come up with a project idea which can display the actual mileage of the vehicle using as simple logics, so that it can be used by a normal person with ease, also keeping in mind that every vehicle depending on the condition of the engine and the load on the vehicle (a person riding the vehicle alone, is less load on the engine hence more mileage is expected and person with luggage on the vehicle returns less mileage) returns different mileage also depending on the type of fuel, as there are different types of petrol's available to us, so also tells us what mileage the vehicle returns.

II. MATERIALS AND METHODS

- The prototype device uses two sensors and a microcontroller, for the device to function as shown in the Figure 1.
- Flow meter and odometer are the sensors.
- Flow meter measures the amount of petrol that flows from the petrol tank to the engine which tells us how much petrol the engine is consuming with respect to time.
- Odometer measures the distance travelled by the vehicle with respect to time.
- Arduino as the microcontroller.
- Arduino compiles the data from both the sensors (Flowmeter and Odometer) [1] and [2].
- And using the formula $\text{Mileage} = \text{distance}/\text{time}$.
- Calculates the mileage and displays the result to the rider via an LCD screen that is connected to the Arduino [3].

III. RESULTS AND DISCUSSION

- The main aim is to display the mileage of the vehicle to rider, so as to know the efficiency of the engine.
- There are more upgrades planned for this prototype.

IV. CONCLUSION

- The prototype is designed to display the mileage of the vehicle to the rider.
- There are future upgrades planned for the prototype.

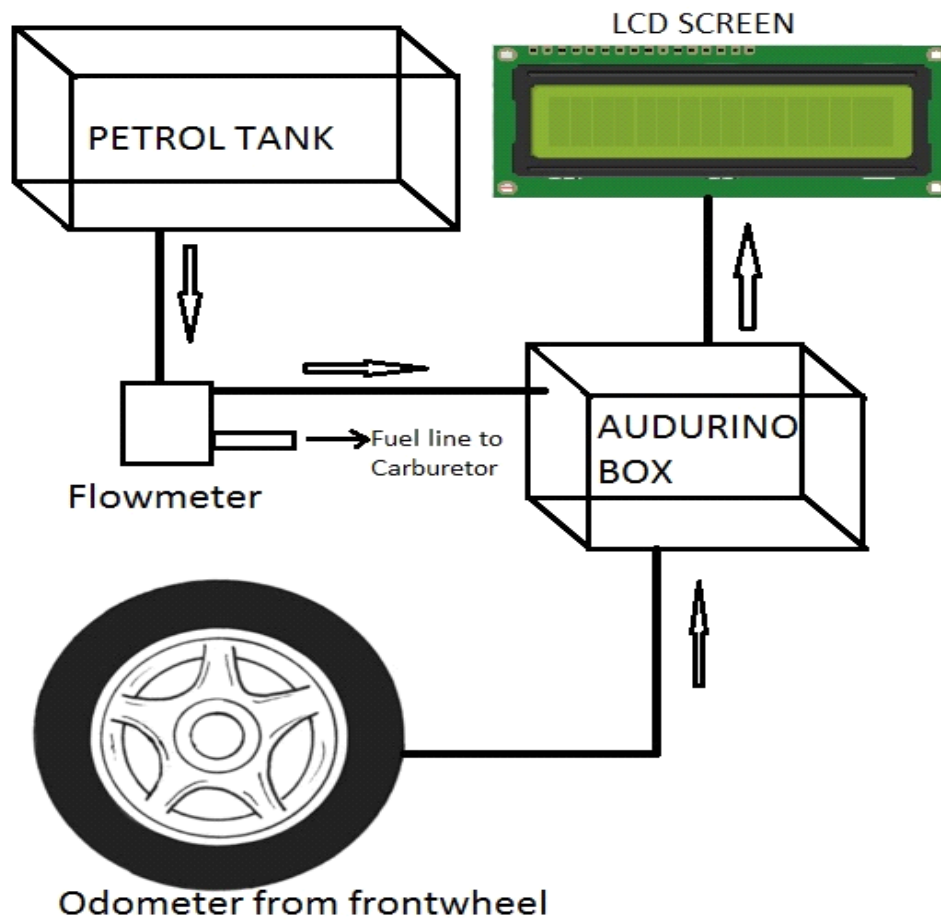


Fig. 1 Proposed Method

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REFERENCES

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