

# Design and implementation of alcohol detection system in vehicles

[Food & Diet](#), [Alcohol](#)



**ABSTRACT:** The number of drunken drivers in the have increased and the deaths due to drunken drivers is increasing day by day. The main reason is that the police cannot check each and every vehicle. So this system is a remedy for this problem. In this alcohol detection system the engine's ignition system is controlled by a circuit, with alcohol sensor. The sensor circuit is used to detect whether alcohol was consumed by the driver recently. **WORKING OF ALCOHOL DETECTION SYSTEM:** Our alcohol detection system consists of a set of sensors, logic circuit and a microcontroller.

Main idea is that when ever the driver turns on the key the display says to blow air in to a tube. The exhaled air reaches the sensor unit where its checked for alcohol and blown air. If alcohol is detected then the engine cannot be started. driver may try to fool the system by not blowing. To avoid that a blow sensor is made, that detects blown air. Only when the air is blown and alcohol is not detected the engine starts. **PARTS: ALCOHOL SENSOR:** This is alcohol detection sensor that senses the alcohol content in its surroundings.

This is kept in path of the tube and its probes are connected to the circuit. When it detects the alcohol, resistance decreases and this triggers the flif-flop. **BLOW SENSOR:** This is a simple sensor that is used to detect whether the air is blown or not. It is a simple arrangement with a small chamber containing water and two conductors immersed in it. When air is blown into the chamber the water level decreases the resistance across the two terminals increases, and this is sensed by the circuit. **CIRCUIT:**

The signals from both the sensors are compared and the relay is energized. The relay in turn drives the starter motor. ADVANTAGES •It helps in reducing road accident at a large extent. •It eradicates the inconvenience caused when a driver is pulled down by the police to check whether he has consumed alcohol. •The time taken for the test is very less. •The cost for installation is very cheap. •Huge alteration in design of the car is not required. CONCLUSION: Thus a design to efficiently check drunken driving has been developed.

By implementing this design a safe car journey is possible decreasing the accident rate due to drinking. By implementing this design drunken drivers can be controlled so are the accidents due to drunken driving. Government must enforce laws to install such circuit in every car which are already on road and must regulate all car companies to preinstall such mechanisms while manufacturing the car itself. If this is achieved the deaths due to drunken drivers can be brought to zero percent.