

# INTELMET

*Driving without a helmet is just walking on a sharp blade without knowing that when we will fall. Sometime knowingly or unknowingly accident will happen. First part to get impact is the head which caused more no of death and now a day's most of metropolitan city's police have made strict rule that rider must wear helmet. Drunk driving is very dangerous. It slows one's reflexes. Drunk drivers get into accidents because they cannot react fast enough. The recent report says that out of annual average of 700,000 road accidents, 10 percentages occur in India. The latest annual statistics revealed by the World Health Organization in its first Global status report on road safety, 80,000 people are killed on Indian roads due to speeding, drunken driving, less usage of helmets etc. Another latest report of National Crime Records Bureau says that 40 people under the age of 25 die in road accidents all around the world.*

*So here is an idea to avoid these problems by developing a system which is placed in the helmet which detects the alcohol in breath and switch off the vehicle and also a system which detects rider is wearing helmet or not depending on that it starts the vehicle. The main aim is to design and develop safety management systems for two wheelers for applications in the real time environment for the avoidance of the accidents.*

## *i) Alcohol detection*

*Here we are using an alcohol sensor, MQ-3 .When the target alcohol gas exist, the sensor's conductivity is higher along with the gas concentration rising. MQ-3 gas sensor has high*

*sensitivity to alcohol, and has good resistance to disturb of gasoline, smoke and vapor. The sensor could be used to detect alcohol with different concentration. It is with low cost and suitable for different application. It sense an amount of about 0.4mg/l alcohol. It placed near the mouth region inside the helmet and the amount of alcohol is detected from the breath of the user. If he is alcoholic it will produce an output of about 5V and else approximately 0.3-0.7V.*

*ii) Confirmation of helmet wearing*

*An IR transmitter LED is used to produce the IR rays at 38KHz which is placed near the earlobe region inside the helmet and an IR receiver, TSOP1738 is placed on the opposite earlobe region which detects the IR from the emitter. If the user has not worn the helmet TSOP outputs a voltage of about 5 V and else it outputs approximately 0V.*

*iii) LCD display*

*An LCD is also incorporated in our circuit to display the condition of the driver. It is driven by the PIC. If the user is alcoholic and is not apt for driving it will displays a message like "YOU ARE ALCOHLIC". And if he has not worn the helmet it displays "WEAR HELMET" and if the user is nonalcoholic and has the helmet he is ready for driving and we will display "HAPPY JOURNEY"*

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