Safety and Communication Device for Motorbike

Olufunminiyi, Isaac (School: Doregos Private Academy)
Lawal , Olaide (School: Doregos Private Academy)

The introduction of motorbikes as a means of transportation became more prominent in Nigeria as a result of the need to link up developing communities. However there are much fatality owning to non-usage of anti-crash helmet and difficulty in communication between the rider and the passenger. The rider switching on the ignition caused the red LED to flash continually on the dash board reminding the rider that he is not well kitted as the bike was yet to receive the desired signals expected from the anti-crash helmet. The anti-crash helmet contain colpitts oscillator which continually oscillates at 47MHz. The putting on of the anti-crash element made the skin of the forehead to touch the strip copper board, the skin completed the circuit. The Darlington transistor performed the switching on and off of the oscillator of the helmet. The supply of power to the oscillator sent radio signals at 47MHz which was received by the radio receiver in the bike as it was configured at the same frequency with the transmitter as a continuous wave. The regulator of the motor bike passed the current to the ignition coil and the flashing red LED goes off and the bike will respond positively. The driver and passenger helmets also consist of a transmisiver of 30 KHz, the demodulator consisting of a high frequency diode, 0.01uf and integrated circuit CD4069IC which eliminate the press to talk and release to hear, thereby enabling seamless communication between the bike drive and passenger despite the gushing of the wind at high speed. The project if well-developed will further enhance safety and effective communication in motorbike usage in transportation.

Awards Won: