

QUESTION 7: PURPOSE OF EXPERIMENT

a. The complete program of research and experimentation proposed including description of equipment and theory of operation.

Magna Electronics is developing an automotive 77GHz radar for use in the reduction of vehicular accidents through situational awareness. Research is underway to detect forward objects of interest that may cause an accident, to either warn the driver or autonomously brake the vehicle to reduce the impact energy. This is done through fusion with a forward looking camera. The ultimate goal is to reduce the chance of a false positive, emergency braking event. Magna intends to gather data from many different driving scenarios, from urban to rural, surface street to highway.

b. The specific objectives sought to be accomplished.

Magna Electronics plans to develop a Collision Mitigation by Braking system which uses this 77GHz radar as one of the sensors in the system.

c. How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion or utilization of the readio art, or is along line not already investigated.

Over 1.8 million rear end collisions are reported in the United States annually. This is more than 1/3 of all reported accidents and is the leading accident type. With thoroughly developed and tested CMB systems by Magna, we intend to reduce this number.