ABSTRACT

The recent rapid technology progress has emboldened the expectation of human beings on equipment or technology that can assist in maintaining their health. Indeed, equipment or technology has turned into basic necessity for human beings. This final assignment deals with a device that can perform distance measurement in automatic way.

This device is aimed to protect eyes from electronic lights of TV. The advantage that can be taken from the device is to decrease potential eye damage that otherwise will reduce vision capacity. The device uses ultrasonic sensor, LCD 16 x 2, buzzer. It works by transmitting order to arduino Uno to start up arduino driver that will switch LCD on and buzzer will release the specified sound.

This final assignment is to design, assembly and implement system components inclusive of Arduino Uno as controller, LCD (Liquid Crystal Display) to display the indicated distance, and buzzer to release sirens sound. The results of research show that this device is soundly functional and can be further developed as expected.

The device will activate the sirens when we watch TV at a distance less than 50 cm, otherwise, i.e. for watching TV at distance more than 50 cm it will deactivate.

Key words: Arduino Uno R3, ATMEGA 328, distance gauge, Ultrasonic sensor HC-SR04, Buzzer, LCD.