ABSTRACT

Distance Measurment using ATMega328P is used to measure the distance and display it on the LCD display . The circuit is developed by interfacing Ultrasonic Sensor “HCSR04” with AVR micro controller(ATMEGA328P) . The sensor uses ECHO to generate output signal . When a sound signal strikes a object wall or surface it reflects a signal which is called ECHO. As sound vibrations can not penetrate through solids . So, when a source of sound generates vibrations they travel through air at a speed of 220 meters per second. When they strike a surface they reflect back at the same speed to source.

The Ultrasonic sensor provides an output signal proportional to distance based on the echo. The sensor generates a sound vibration in ultrasonic range upon giving trigger , after that it waits for sound vibration to return. Based on the parameters , sound speed and time taken for the echo to reach the source it provides output pulse proportional to distance.