AR3A

AIM OF THE PROJECT

Arduino uno based system designed to compute surface area of a closed enclosure, when positioned in it.

SCOPE OF THE PROJECT

The are3a(system) can be used at construction sites, interior designing/furnishing as well as small things like refrigerator or trunk of cars to measure and convey/market the space present in the enclosure.

DESCRIPTION

- We are using 4 ultrasonic sensors placed/mounted in four different sides of a square.
- This way we can measure the distance between the system and surrounding walls to measure the enclosure of the area inside using area calculus formula.
- Our sensor sends out eight ultrasonic pulses travel through the air away from the transmitter. Meanwhile the Echo pin goes HIGH to start forming the beginning of the echo-back signal.
- The pulses are reflected back to the Echo pin goes low as soon as the signal is received. This produces a pulse whose width varies between 150 µS to 25 mS, depending upon the time it took for the signal to be received.

- The width of the received pulse is then used to calculate the distance to the reflected object.

HARDWARE REQUIREMENTS

Components
Arduino uno
Lcd display cables breadboard
HC-SR04 Sensors

Expected result is to produce surface area of a given enclosure.