

Project Radar System using Arduino

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Abstract – This project is about Radar System controlled via Arduino. This RADAR system consists of an ultra-sonic sensor and servo motor, these are the major components of the system. Basic working of the system is that it have to detect objects in its defined range. Ultra-sonic sensor is attached to the servo motor it rotates about 180 degree and gives visual representation on the software called processing IDE. Processing IDE gives graphical representation and it also gives angle or position of the object and distance of the object.

Key Words: Radar,Arduino

1. INTRODUCTION

This project aims on the use of Ultrasonic Sensor by connected to the Arduino UNO R3 board and the signal from the sensor further provided to the screen formed on the laptop to measure the presence of any obstacle in front of the sensor as well as determine the range and angle at which the obstacle is detected by the sensor.

2. Body of Paper

The development of the radar technology took place during the World War II in which it was used for detecting the approaching aircraft and then later for many other purposes which finally led to the development of advanced military radars being used these days24-7 availability – Unlike humans, chatbots once installed can attend queries at any time of the day.

- 1.The Radar system can be used in a stationary mode as well as moving mode.
- 2.The accuracy of the Radar system is very high.
- 3.The Radar system can work through the insulating material. It is a great advantage of Radar.

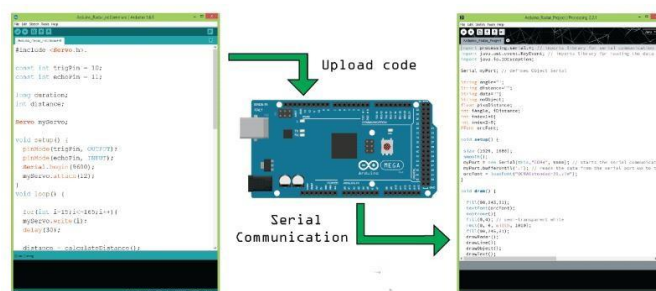


Fig -1: Figure

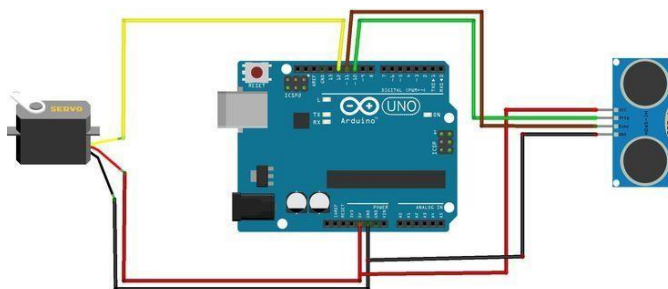


Fig -2: Figure

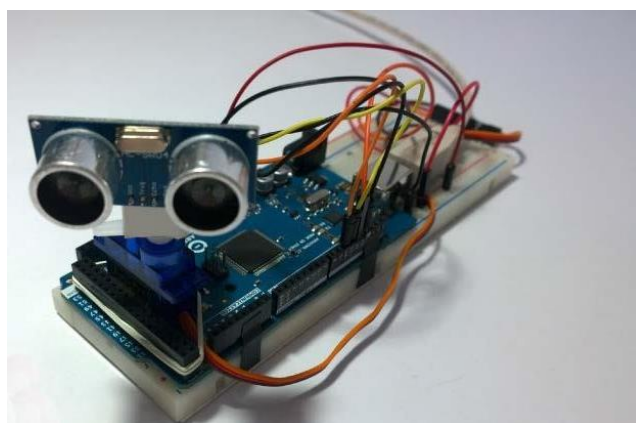


Fig -3: Figure

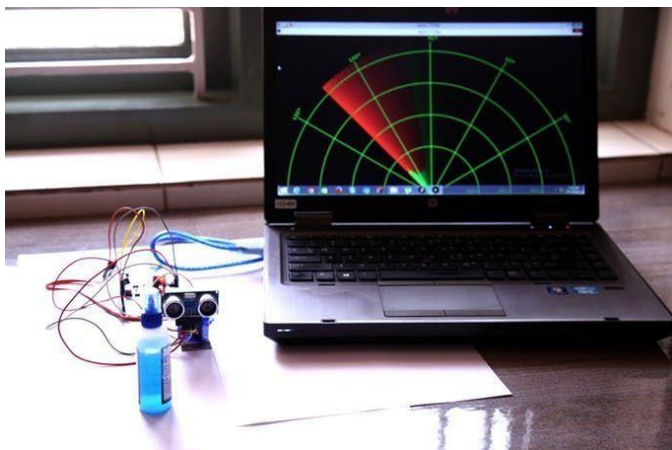


Fig -4: Figure

3. CONCLUSIONS

This project aims on the use of Ultrasonic Sensor by connected to the Arduino UNO R3 board and the signal from the sensor further provided to the screen formed on the laptop to measure the presence of any obstacle in front of the sensor as well as determine the range and angle at which the obstacle is detected by the sensor. Numerous advanced control methods gave designers to have more command over different advanced applications. In our paper, the recommended mapping method of whole system is assessed on small principles or scale . The field that we have chosen for our design “Radar System” is a very vast field and future scope of this technology is very high. We have tremendous applications in which radar system have been implemented or used.

4.ACKNOWLEDGEMENT

I hearby take this opportunity to express my profound thanks and deep sense of gratitude towards my guide **Prof. Lokare A.P.**,Department of computer engineering.They gave us precious time from his busy schedule and his valuable has been a constant encouragement.I would also like thank **Prof.Dharashive P.S.**,Principal and **Prof.Ambulge S.S.**,Head of the department of computer engineering and staff of the department of computer engineering whose constant encouragement and expert guidance was instrumental in the completion of project Let we , at the end ,express gratitude to

all those from whom we received co-operation,help and motivation during project work.

5.ADVANTAGES

- High Frequency
- Low Cost
- Easy to Design
- Self Cleaning System
- It is easy to use
- Human effort is less

6.DISADVANTAGES

- Detection range is low
- Does not work in vacuum.

7.FUTURE SCOPE OF PROJECT

In our paper, the recommended mapping method of whole system is assessed on small principles or scale. The field that we have chosen for our design “Radar System” is a very vast field and future scope of this technology is very high. We have tremendous applications in which radar system have been implemented or used . There is a lot of future scope of this design because of its security capacity.

8.REFERENCES

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