RESEARCH JOURNEY

International E-Research Journal

PEER REFREED & INDEXED JOURNAL

February-2019 Special Issue - 110 (H)

Electronics

This Journal is indexed in :
- University Grants Commission (UGC)
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- International Impact Factor Services (IIFS)

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'RESEARCH JOURNEY' ISSN
Impact Factor (SJIF) 6.261 (CIF) 3.452(2013) (GIF) 0.676(2013) February 2015
Special Issue 110 (II) Electronics
UGC Approved Journal

Microcontroller Based Techeye System for Obstacle Detection & Ranging To Assist Blind Person

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Abstract:

My device Techl ye which stands for Technology I ye enables the blind person to sense his/her surroundings. And he/she can act accordingly. Techl ye will prove to be the best assistant to that blind person.

Introduction:

Currently blind people are facing a huge problem when they are in a public place. They have stick in their hand which helps them a bit. But I modified that stick and installed some sensors along with necessary hardware in it. Which helps the blind person more as it lets him sense the surrounding up to a radius of 2 meters (which can be extended as per ...) and the device has proven as the best assistant for the blind person as per the real time survey blind schools.

The Techl ye enables the blind person the sense the surrounding and ... Ones he/she starts using it, they feel no need of human assistance.

My first objective is to provide an easy way of detecting obstacles to blind people walking. Secondly I had to design a low cost i.e. economical instrument for the blind people which they could afford. The design of the instrument should be simple to operate and easy to use for the blind people. The instrument must give fairly accurate results while detecting obstacles. The instrument must work for a long time on the portable and rechargeable battery. And lastly, the instrument must work long life and to the fullest possible utility.

Block Diagram

Block diagram of Techl ye System for Obstacle Detection & Ranging to Assist Blind Person

1) - dedicat Working of the System
2) The system works as given below:
3) So to help socially I designed a microcontroller based system. The system uses Ultrasonic Waves to detect obstacles around the blind person.

'RESEARCH JOURNEY' International E- Research Journal ISSN : 2348-7143
Impact Factor - (SJIF) - 6.261, (CIF) - 3.452(2015), (GIF)-0.676 (2013)
Special Issue 110 (H)- Electronics February 201
UGC Approved Journal

4) When there is any kind of obstacle in front of the blind person holding the [illegible] Ultrasonic Sensor will detect the presence of the obstacle or any object. Then it calculate the relative distance with the help of internal coding and will produce different [illegible] audio tones to give audible alarm to the blind person.

5) In this way a blind person can use this system very accurately and effective.

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