CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY

Name(s)
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Project Number
S0701

Project Title
Blind Aide

Abstract

Objectives/Goals
Blind people have limited resourses to help them in daily lives. Guiding dogs and white canes are the main ways forr blind people to get around at the moment. My device is designed to be worn by a blind person and is used to warn the blind if there is and object or obstacle in their way.

Methods/Materials
My device is composed of a microcontroller, an infrared ranger, a sonar range finder, and a buzzer. I wrote a program loaded onto the microcontroller that takes samples from the inrared ranger and the sonar range finder and if the data values form the sensors cross a certain threshold, then the buzzer will sound to warn the blind person that there is somethin in his way.

Results
After connecting the sensors to the microcontroller, i was successfully able to write code to make the buzzer sound when somethin came in the way of hte sensors. I set the threshold value so that the buzzer would sound when an object is about 2 feet from an object.

Conclusions/Discussion
After completing the final code, i tried the device on myself and found it to be a success. My device kept me form walkin into a wall and i feel that this can be used by blind people to warn them of obstacles whne they are carrying out normal activities.

Summary Statement
My device is designed to warn blind people of obstacles that are in their way.

Help Received