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(57) Abstract :

The Extra Sense for Blind and Deaf project has developed a wearable device that helps visually and hearing-impaired individuals navigate their surroundings with confidence and speed by detecting nearby objects and obstacles using ultrasonic waves. The device, which is designed to be worn as a spectacle, emits ultrasonic waves and alerts the wearer through sound and vibration when obstacles are detected. The device has several advantages over existing products in the market, including affordability, reliability, ease of use and operation, and wide range coverage. The device's working principle involves several components such as an Arduino Nano, ultrasonic sensor, vibrating motor, buzzer module, bread board, spectacle glass, red-colored LED, switches, connecting wire, male and female header pins, and a 3.3-volt. The unique features of the invention include the ability to detect obstacles in the front of the person, vibration alerts for deaf individuals, and wide range coverage. Accompanied Drawing [FIG. 3]

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