Ultrasonic C

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Product Description

INTRODUCTION:

According to estimates from the World Health Organization (WHO) Prevention of Blindness and Deafness Program: About **285 million people** are visually impaired worldwide: 39 million are blind and 246 million have low vision. To solve this problem we are going to make one of the best wearable technologies based innovative device which will detects nearby objects or obstacles and notify with buzzer. This devices is called "**Ultrasonic Glasses for the Blind"** Ultrasonic glasses for the blind are a technological solution designed to assist individuals with visual impairments in navigating their surroundings more effectively. The glasses utilize ultrasonic sensors to detect obstacles in the environment and provide sensory feedback, such as vibrations or auditory cues, to help users avoid collisions. This technology aims to enhance the independence and safety of visually impaired individuals by improving their spatial awareness and reducing the risk of accidents.

PRACTICAL IMPLEMENTATION:

The practical implementation of ultrasonic glasses involves integrating ultrasonic sensors, microcontrollers (such as Arduino Nano), vibrating motors, and buzzers into a wearable device. The ultrasonic sensor detects objects in the user's path by emitting high-frequency sound waves and measuring the time it takes for the waves to bounce back. The Arduino Nano processes this information and triggers the appropriate feedback mechanism, such as vibrating

motors to provide tactile cues or buzzers to provide auditory cues. The glasses can be customized to suit individual preferences and needs. They can be designed as a standalone device or integrated into existing glasses frames. The practical implementation also includes optimizing the sensor range, sensitivity, and feedback intensity to ensure accurate obstacle detection and effective communication of information to the user.

MARKET NEED OF ULTRASONIC GLASSES FOR THE BLIND:

The market need for ultrasonic glasses arises from the challenges faced by visually impaired individuals in their daily lives. People with visual impairments often encounter difficulties in navigating unfamiliar environments, detecting obstacles, and maintaining a sense of spatial awareness. Traditional mobility aids, such as canes or guide dogs, have limitations and may not provide comprehensive assistance in obstacle avoidance.

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Working Video

Disclaimer:

This is a handmade complete working Models, Projects & Activity kits supported by rough study material to make a suitable projects report by the student. It is using Cardboard/Wooden base, Paper, Foam based board, stationary items, Electronic-Electrical Components, Mechanical & Scientific goods as per the requirement of a particular model. Colour of product and decoration item may be varying according to availability of material but we make ensure that we will deliver the product with same working, structure and dimensions as describe in product description section.
