

MORSE CODE BASED ELUCIDATION AID FOR DEAF AND BLIND PERSON

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Abstract-Deaf and blind people find very difficult to communicate to other people. The latest technological development helps the people having disabilities particularly deaf and blind people to communicate to other people. These people can able to communicate with the help of their sense of their touch. In this paper, we are making an Elucidation aid for deaf and blind people. Here, Morse code based vibration is combined with the Artificial intelligence is demonstrated so that the deaf and blind people can communicate to other people in a big conference or any public places.

It is also proved that the kit we made was low cost when compared with other latest devices which is affordable to such a weaker section of people having disabilities. Arduino UNO, Bluetooth and Mobile device are mainly used to process and communicate. With the help of the device demonstrated in this paper people with disabilities specially deaf and blind can involve freely in day to day regular activities.

Keywords: Deaf and blind, Morse code, vibration, communication.

I. INTRODUCTION

Elucidation aid for the deaf and blinds using Morse code which is universally accepted. By this Morse code, vibration is created and that vibration is received by the disabled person. Deaf and blind people find very difficult to communicate to other people.

The latest technological development helps the people having disabilities particularly deaf and blind people to communicate to other people. These people can able to communicate with the help of their sense of their touch. In this paper, we are making an Elucidation aid for deaf and blind people. Here, Morse code based vibration is combined with the Artificial intelligence is demonstrated so that the deaf and blind people to other people in a big conference or any public places.

It is also proved that the kit we made was low cost when compared with other latest devices which is affordable to such a weaker section of people having disabilities. Arduino UNO, Bluetooth and Mobile device are mainly used to process and communicate. With the help of the device demonstrated in this paper people with disabilities specially deaf and blind can involve freely in day to day regular activities.

II. STATEMENT OF PROBLEM

The peoples who are affected by both deaf and blind can't communicate with another person. Still, they are depending on the third person for the communication.

III. OBJECTIVE OF THE STUDY

- In this project, we develop a device for the communication for deaf and blind people.
- Thus, these persons were not having the ability to communicate through speech and also not by written.
- Hence, by Elucidation we are converting speech into text.
- Then, vibration is provided to the text based on the Morse code which is universally accepted.

IV. METHODOLOGY

The methodology of our project is based on the following Block diagram. This block consists of all components and methods that we have followed.

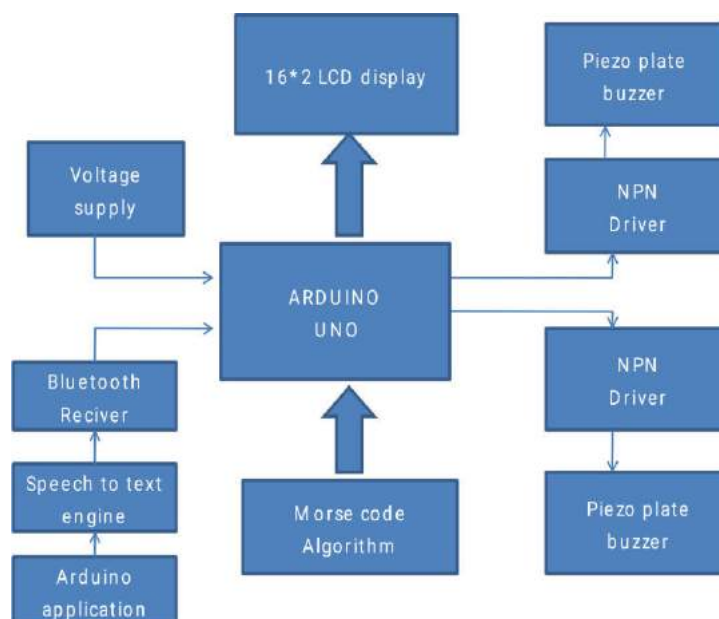


Fig1. Block diagram

IV. MATERIALS

ARDUINO- Arduino Uno is a microcontroller board based on the ATmega328P. It has 14 digital input/output pins, 6 analog inputs, a 16 MHz quartz crystal, a USB connection, a power jack, an ICSP header and a reset button

16x2 LCD DISPLAY- This is an LCD Display designed for E-blocks. It is a 16 character, 2-line alphanumeric LCD display connected to a single 9-way D- type connector. This allows the device to be connected to most E-Block I/O ports. The LCD display requires data in a serial format, which is detailed in the user guide below. The display also requires a 5V power supply.

BUZZER- A buzzer or beeper is an audio signalling device, which may be piezoelectric. Typical uses of buzzers and beepers include alarm devices, timers, and confirmation of user input such as a mouse click or keystroke

VIBRATION MOTOR- Vibration motor is a compact size coreless DC motor used to inform the users of receiving the signal by vibrating, no sound. This vibrating motor is essentially a motor that is improperly balanced. This unbalanced force displaces the motor. Its high speed displacement makes the motor to wobble, which is known as the vibrating.

BLUETOOTH MODULE- The HC05 Bluetooth module has 6 pins VCC, GND, TX, RX, key, and LED. It comes preprogrammed as a slave, so there is no need to connect the key pin, unless you need it change it to master mode. The major difference between master and slave modes is that, in slave mode the Bluetooth module cannot initiate a connection, it can however accept incoming connection.

TIP 122- It is darlington NPN transistor. The pin configuration are **BASE:** Controls the biasing of transistor, used to turn ON or OFF the transistor. **COLLECTOR :** current flows in through collector ,normally connected to lead. **EMITTER:** Current drains out through emitter normally connected to ground.

V. EXPERIMENTAL INVESTIGATION

Based on the Morse code, the vibration is given for the Alphabets.

A ● -	J ● - - -	S ● ● ●
B - ● ● ●	K - ● -	T -
C - ● - ●	L ● - ● ●	U ● ● -
D - ● ●	M - -	V ● ● ● -
E ●	N - ●	W ● - -
F ● ● - ●	O - - -	X - ● ● -
G - - ●	P ● - - ●	Y - ● - -
H ● ● ● ●	Q - - ● -	Z - - ● ●
I ● ●	R ● - ●	

Fig2:MORSECODEFORALPHABETS

PROCEDURE

- Placing fingers on the Vibration motors
- Connect the mobile device with Bluetooth module.
- After pairing the device, give a command in the mobile device.
- The given command can be viewed in the LCD display.

- For the command, the Morse code based vibration is received from the Vibration motor.
- Then the given command is analysed.

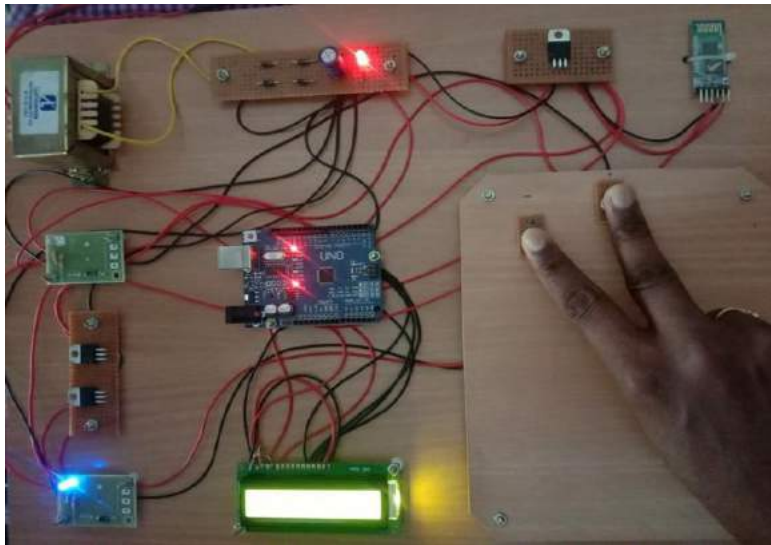


Fig3.PlacingfingersontheVibrationmotors

VI. CONCLUSION

Hence, we conclude that this proposed idea will be useful for the Deaf-Blind peoples to communicate with others Conveying the information through this method is easy to reach the information for them to understand quickly.

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