BONE CONDUCTION TRANSDUSER

Sakshi Santosh Kamble¹, Shubhada Raosaheb Taktode², Gayatri Ulhas Kadam³, Jitesh Vinod Mule⁴, Mr. Pratik Chopade⁵.

¹,²,³,⁴,⁵ (Computer engineering, Rajarshi Shahu College of Engineering, Pune (India))

Abstract:
Bone conduction transducer device is used for those people they cannot hear. Bone conduction transducer is attractive technology for voice communication system. In this project voice get converted into vibration through bone conduction device.

Keywords — Bone conduction device transducer, voice, vibration.

I. INTRODUCTION
Bone conduction is conduct the sound to the inner ear through the skull. Bone conduction device is an alternative to the normal hearing how have a problem in outer or middle ear. It transfer sound by bone vibration to the cochlea to passing the outer and middle ear. It transfer sound by bone vibrations directly to the cochlea, by passing outer and the middle ear. A Bone Conduction hearing device release on a working cochlea to ear. This means it is use full for conductive and mixed hearing losses send sound to the brain.

II. LITERATURE SURVEY
Because of some diseases there is a problem to a some people they cannot hear. For Bone Conduction Transducer we do a survey for existing system. That two system are Bone Bridge, Ponto system. In that two system we need a operation under a skin. To overcome these problems we are presenting an idea called Bone Conduction Transducer. There are several idea which can used for these problem. In our research we are trying to develop a one module that is used for those people they cannot hear through its eardrum. So we are introducing such system in which it tries to help those people who cannot hear.

III. SYSTEM ARCHITECTURE
The below fig. shows architecture and block diagram of system. In this system we use a bone conduction device, amplifier, Lithium polymer Rechargeable Battery (3.7v 180mAh), Lithium charging module, Mice, audio, amplifier.
The bone conduction transducer work as follows:

Mice take an input from the outside then Audio Amplifier, it sent to the bone conduction transducer then bone conduction device create a vibration and it sent to the brain then that person can listen everything.

IV. COMPONENT DESCRIPTION

IV.A.1.1 Bone Conduction Device: Bone conduction device is used for create a vibration on a skull.

IV.A.1.2 Charging Module: It is used for to charge the battery to continues working of project.

IV.A.1.3 Battery: In this we used a Lithium Polymer Rechargeable battery (3.7v).

IV.4. Amplifier: It is a D class amplifier. It operates on voltage 5.5v. In this module it is

IV.A.1.5 Mice: It is used for take input from the outside.

V Conclusion

With the help of this device those people cannot hear they can hear.

VI Future scope

Those people cannot hear they can hear with the help of device.

Acknowledgment

We express our sincere thanks to our Project Guide Prof. Mr. Pratik Chopade for his encouragement unwavering support during the entire course of this project work. We would like to thank Prof. Mr. V.P. Badhe (Head of Computer Engineering Department) for his Project and supported throughout for the success of this work. We also thank all the staff members for their help in making our project to work successfully.

References

1. --

2. --The Thermal conductivity and diffusivity of concrete write by “A.P.Carman”.

3. --
https://www.hearinglink.org/your-hearing/implants/bone-conduction-hearing-devices/