Nishanth Shastry
ECE

Rakshanda
ECE

57 PROJECT

BOCO.AID: BONE CONDUCTION-BASED HEARING AID FOR PARTIAL HEARING LOSS

Hearing aids currently available in the market is based on the principle of sound amplification and transmission through the ear canal. This project offers a better alternative using bone conduction technology to aid hearing. Bone conduction is the vibration of the basilar membrane in response to a pressure difference on either side of the membrane. The propagated wave that characterises this vibration of the basilar membrane can be initialised intentionally, when a bone vibrator is placed on the mastoid bone, or inadvertently when testing hearing of one ear by air conduction, while disregarding transmission of the sound to the other side. This is one of the most reliable ways of helping partial hearing loss. This principle is also very easy to adhere to as the working and implementation is simple yet effective in its own right.

Features

- BoCo.AID tackles the stigma of wearing ear implants. Implants cause both discomfort and infections in the ear. This clip and go design keeps the user from feeling any sort of discomfort.
- The BoCo.AID can be made for unilateral and bilateral hearing loss, making it more diverse and flexible basis the user's requirement.
- This device has the potential to open up a wide spectrum of hearing solutions in future as bone conduction is still a relatively new addition to hearing solutions