

***Bone and Air Conduction
Headphones***

Bone Conduction

Bonephones use a method called bone conduction audio technology. In this method, a transducer converts audio data to vibration, which travel along the user's bone structure to the cochlea, an inner ear structure that transmits the information along the auditory nerve as a signal to the brain.

Source: Techtarget.com

Air Conduction

Air conduction is where sound waves are transmitted through the air and into the ear canals, where they cause the eardrum to vibrate. This vibration transfers in to the tiny bones in the inner ear, which sends a signal to the brain that is interpreted as sound

Source: Shokz.com

Bone Conduction vs Air Conduction

Bone Conduction bypass all of the inner ear function, therefore are favored by deaf or hard of hearing.

A. Bone - Lacks lower frequencies.

B. Bone - Open ear design for normal hearing allows users to hear sounds or noises around them.

C. Bone - Most are water resistant and can be used in water sport

D. Air - Have better frequency response

E. Air - Blocks ambient sound and noise around the user.

Use of Bone and Air Conduction

Many States ban the use of Air Conduction Headphone while driving. While Bone are not.

These Headsets generally use Bluetooth protocols for transmitting and receiving the signal such as smartphone.

My testing; Bone Conduction

Most of the Bone Conduction Units use the Standard 5.1 Bluetooth Protocols and function with most generic phones or computers. Apple and Samsung use a proprietary bluetooth protocols, which can limit features, such as latency, clarity of calls.