

How To - Translating music to vibrations

Overview

This module transforms sounds into vibrations so that music can be experienced also by deaf people (vibrating music science).

Vibrations are made using devices that are integrated into a system. The output frequency spectrum is not as wide as the auditory one and the interpretation of sounds after certain value ranges may require prior training. The songs are simple, generated by musical devices.

How to implement

You need the following components:

- One single board computer (e.g. Raspberry Pi 3)
- One touch screen display compatible with above computer
- 5 - 7 vibration motors
- Audio system (external speakers)
- One hand palm (3D printed)
- One power supply.

Operating principle

1. The songs are loaded into the system

There are several songs to choose from. We use classical music and simple songs, without a high degree of noise.

2. The songs are analyzed and the content is parsed into 5 - 7 channels which are reproduced as vibrations.

Different frequencies from the audio file are used to activate different vibration channels.

3. Feeling the music

The user places his palm on the surface specially indicated for this. Start the desired song and the vibrations can be felt on the palm. The device uses a vibration transducer to help the user feel the music in a new way.