

## New type of audiometer and measuring equipment for comprehensive hearing examination

### Development status

#### Phase 4

**The transition from the prototype to the final and fully functional form.** At this stage, the prototype is already fully tested, or the technology is certified and ready for mass deployment.

### IP protection status

### Partnering strategy

*Collaboration, licensing*



### Institution

**Institute of Experimental  
Medicine CAS**

### Challenge

Commercially available audiometers depend on specific software equipment, which limits the possibilities of use and increases financial costs. They also have only subjective functions and do not offer the possibility of objective examination, specifically examination of otoacoustic emissions. Another disadvantage of commonly available audiometers is that they can only be calibrated for selected pure tone frequencies and intermediate frequencies are calculated. Cheaper commercial audiometers often do not allow separate calibration of the left and right channels.

### Description

New type of audiometer allows more tests and higher accuracy than current audiometers. It makes maximum use of standardized protocols and quality components available, but at the same time is not dependent on specific software. Equipment with an integrated audiometer provides a comprehensive hearing test. In addition to subjective audiometric functions, the new audiometer also enables objective testing, specifically otoacoustic emission testing. Using the full capabilities of this hardware, it is possible to create custom software to enable a range of hearing function tests that are not commonly available and that respond to the latest scientific knowledge on hearing disorders. - The components comply with common IT standards and protocols. The use of the device is therefore not dependent on specific software. - The possibility of objective examination, including otoacoustic emissions. - Significantly higher measurement accuracy due to improved calibration options, including separate calibration of left and right channels, as well as arbitrary frequency calibration. - Significantly improved technical performance. For example, while the harmonic distortion of conventional audiometers is around 2%, it is less than 0.01% for the present solution (see technical parameters for more info).

Vlastník

Commercial opportunity

Manufacture and sale of equipment for ear medicine.