

Annual Audiometer Calibrations all you need to know...

Every year your Audiometer must be calibrated. Have you wondered what is involved in the calibration?

Why calibrate?

An audiometer calibration ensures the level shown on your display is accurate to the stimulus your patient is subjected to through devices such as your headset or bone conductor. Over time a variance will creep in so to ensure measurements remain consistent an annual calibration must be carried out.

How is it done?

A standard air-conduction calibration involves an ear simulator or acoustic coupler that is open on one side to allow application of your headphones for testing. An internal microphone detects the sound pressure level that a real listener's eardrum would be exposed to in hearing tests and levels are fine tuned to ensure accuracy.

Bone-conduction testing involves a mechanical coupler or artificial mastoid. Using a series of rubber layers to couple the bone-vibrator to a force transducer, the vibrations applied when testing are measured and adjusted accordingly.

The calibration involves adjustment of levels between the audiometer and measuring devices. It is therefore **essential when calibrating the audiometer and measuring devices such as the headset and bone conductor they then remain for use together only**. If a new or alternate device is used such as another headset they must be re-calibrated to ensure levels are true.

For accurate results and Workcover Accreditation all audiometric calibrations must take place in a controlled environment such as an acoustic laboratory. Calibrations carried out on-site may be effected by existing environmental factors such as background noise, air movement or vibrations resulting in incorrect results. This is especially critical for bone conduction calibration as the test equipment itself is extremely sensitive to environmental change and must be allocated a minimum of two days to settle if transferred between locations.



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Some of the equipment used when calibrating your audiometer.

What you need to remember:

- Calibrations must take place in an Acoustic Laboratory for accurate results.
- Annual Calibrations ensure accurate test results for your clients.
- Headphones must remain with the audiometer they are calibrated with.