

ORDER OF MEASUREMENT

1

Otoscopy

Wax and foreign bodies removed · eardrum visible · no discharge, pain or perforation

2

Room and patient setup

Loudspeaker 0.5–1 m · 0° or 45° · away from reflecting surfaces · low ambient noise

3

Review the audiogram

Type and degree of loss · UCL record · transducer used (dB HL → dB SPL) · air-bone gap

4

Choose the prescription formula

NAL-NL2 (adult) / DSL v5 (child) · uni/bilateral · air-bone gap · device acoustics and vent

5

Probe-tube calibration

Tube tip in front of the reference mic · at every tube change and each morning · each ear separately

6

Probe-tube placement

3–5 mm from the eardrum · women 28 mm / men 30–31 mm · 0–6 mo 11 · 6–12 mo 15 · 1–5 y 20 · 5 y+ 25 mm

7

REUG: check the placement

Peak at 2.5 kHz · deviation from 0 dB at 6 kHz under 5 dB · smooth curve, no abrupt notch

8

REOG and open-fit calibration

Device in place and muted · if REOG ≈ REUG, calibrate for open fit · separately for each stimulus

9

REAR: measure and match target

65 → 50 → 80 dB SPL · repeat after every adjustment · read deviation from the delta values

CRITERIA FOR A GOOD FIT

50 dB SPL → above the hearing thresholds

65 dB SPL → parallel and close to target

80–90 dB → output below UCL

CONTRAINDICATIONS

Wax obscuring the eardrum

Discharge from the canal, marked pain

Perforated membrane

ERRORS THAT RUIN A REM

- Probe tube too shallow → a false dip/peak at 4–6 kHz
- Reference mic blocked or faulty → the whole curve shifts
- Vent / open-fit leakage → forcing the target at low frequencies
- Measuring at one level only → compression and MPO stay hidden
- MPO above UCL → the person stops wearing the device
- Uncalibrated system → every measurement is systematically shifted